

DYADIC TRUTH

Abstract: Philosophical orthodoxy holds that ‘true’ is a monadic predicate. I think this view is only halfway correct: there is indeed a monadic truth-predicate in English and other natural languages but this is not the fundamental truth-predicate we use. What can be true *simpliciter* are particular mental states (beliefs, hopes, wishes, etc.) a thinker might be in or particular speech acts (assertions, denials, suppositions, etc.) a speaker might perform. These mental states and speech-acts are truth-apt because they have propositional contents. But propositions are not true *simpliciter* – they are true *of* situations. Thus, the fundamental notion of truth is relational. My argument for this claim is simple. Monadic truth-predicates are ill suited for the purposes of semantics. If we take semantics seriously, we should either accept that truth is the relation the truth-predicate employed in our overall best semantic theory picks out, or provide some adequate paraphrase of that theory which employs only a monadic truth-predicate. For most truth-predicates employed by semanticists adequate paraphrases in terms of monadic propositional truth can be found. However, when it comes to ‘sentence *S* is true at context *c* and situation *s*’ we can only provide a paraphrase in terms of dyadic propositional truth. I will argue that an adequate semantic theory does need this truth-predicate.

1. Simplicity

G.E. Moore held a simple view about the adjective ‘good.’ He took it to be a monadic predicate expressing a property:¹

For ‘good conduct’ is a complex notion: all conduct is not good; for some is certainly bad and some may be indifferent. And on the other hand, other things, beside conduct, may be good; and if they are so, then, ‘good’ denotes some property, that is common to them and conduct ...”

Compelling though Moore’s observation may sound, the simple view is too simple: there are good violinists who are pianists without being good pianists and if goodness were a property shared by all and only what is correctly said to be good, these people would have to both have and lack goodness.² This cannot be right, so – appearances notwithstanding – ‘good’ is not a monadic predicate.

Moore held the same simple view about ‘true’: he considered it a monadic predicate expressing a property. This is no surprise, for if we replace ‘good’ with ‘true’, ‘bad’ with ‘false’, ‘indifferent’ with ‘meaningless’ and ‘conduct’ with ‘report’ in the quote above we find the point equally compelling. Alas, it also faces the same objection. A double agent sends a report about a person

¹ Moore (1903): 2.

² The point goes back to Geach (1956).

of interest who happens to be an American to both Moscow and Washington, describing him as ‘a foreigner’. Here we have a true report sent to Moscow, which is also a false report sent to Washington. Does this show that ‘true’ is not a monadic predicate expressing the property of truth?

Yes and no. The example indeed shows that applied to reports ‘true’ is relational: the double agent’s report addresses different audiences and is true relative to the Moscow context but false relative to the Washington context. However, the standard explanation of this fact brings back monadic truth: the report expresses a true proposition in the former context a different false proposition in the latter. The usual view in philosophy of language today is that there is a monadic truth predicate in English and other natural languages applicable to all and only propositions, and that everything else we correctly call true (sentences, beliefs, theories, reports, etc.) is true *because* it has propositional content, relative to a context, that is true absolutely. Thus, truth is fundamentally monadic.

I think this view is incorrect. There is indeed a monadic truth-predicate in English and other natural languages but it does not apply to propositions. What can be true *simpliciter* are particular mental states (beliefs, hopes, wishes, etc.) that a thinker might be in or particular speech acts (assertions, denials, suppositions, etc.) that a speaker might perform. These mental states and speech-acts are truth-apt because they have propositional contents. But the propositions themselves are not true or false *simpliciter* – they are true or false *of* situations. The fundamental notion of truth is thus relational – or, at least, so I will argue in this paper.³

My view opposes the first plank of the doctrine Herman Cappelen and John Hawthorne have dubbed *Simplicity*. I won’t quarrel here with the other four planks: that the semantic values of declarative sentences relative to contexts of utterance are propositions; that propositions are the objects of certain mental attitudes; that propositions are the objects of illocutionary acts; and that

³ I hold a similar view about ‘good’ – in its core sense it is a predicate expressing a relational property of being good in a way; cf. Szabó (2000a). The Geachean alternative is that ‘good’ is not a predicate at all, but a predicate-modifier.

propositions are the objects of agreement and disagreement.⁴ I even agree with part of the first plank – I too believe that propositions instantiate fundamental truth and falsity. What I reject is that truth and falsity are properties; I believe they are relations to situations.

Cappelen and Hawthorne spend most of their book warding off challenges against Simplicity coming from those who maintain that a limited number of linguistic devices (epistemic modals, predicates of personal taste, terms of aesthetic or moral approval) are used to build sentences that express propositions whose truth is relative to something (a body of knowledge, a standard of taste, or prevailing opinion). They call such proposals *relativist*, and this is certainly one of the standard ways to use this loaded term. The other standard use is narrower: it requires that propositional truth be sensitive to contexts of assessment.⁵ The view I defend differs from the usual relativist views in two important respects. I do not think that the need for relativization is tied to special vocabulary, and I do not propose that truth is relative to something mental or subjective.⁶ Rather, I claim that *all* propositions expressed by our declarative sentences are true or false relative to situations. At the same time, I maintain that the proposed view provides a common framework in which these special forms of relativism can be fruitfully debated.

My positive argument has a Quinean flavor despite its distinctly non-Quinean conclusion. It goes as follows. Monadic truth-predicates are ill-suited for the purposes of semantics. If we take semantics seriously, we should either accept that truth is the relation the truth-predicate employed in our overall best semantic theory picks out, or provide some adequate paraphrase of that theory which employs only a monadic truth-predicate. For most standard relative truth-predicates employed in semantics these days such paraphrases can be found. But when it comes to ‘sentence *S* is true at context *c* and situation *s*’ we can only provide a paraphrase in terms of dyadic propositional truth. I will make a case that an adequate semantic theory does need this truth-predicate, and also that we should accept the paraphrase. If I am right we have good reason to think that propositional truth is dyadic.

⁴ Cappelen and Hawthorne (2009): 1. I do, however, reject the claim that mental states or speech-acts are individuated in terms of their objects.

⁵ The broader notion is employed by Kölbel (2002), the narrower by MacFarlane (2005).

⁶ What opponents of relativism find objectionable tends to be not relativism *per se* – it is the more specific doctrine that truth is relative to what people happen to think or want.

This sort of argument has obvious limitations. Even if our physical theories make reference to numbers and functions it wouldn't follow that there are such things – our theories might be false. Literal falsehood needn't be a fatal flaw: the right sort of falsehood can make a theory more perspicuous and more explanatory than any of its available true competitors. Obviously, this could be true for semantics as well: it may well be that semantic theories are committed to propositions being true or false relative to situations and that in virtue of this very commitment they are false, despite providing insightful accounts of the semantic facts. Moreover, unlike physics, semantics is not an established science – it is not beyond the pale to suggest that it is simply on the wrong track. I take both the general fictionalist challenge and the particular concerns about the relatively undeveloped state of semantic theorizing seriously, so I will put my conclusion carefully: to the extent that we think our currently best semantic theories are literally true we have reason to think that propositional truth is dyadic. I hope the thesis is of interest despite the qualification.

2. Context and index

Why can't we use a monadic truth-predicate in semantics? Such a predicate works well as long as we are concerned with the language of the sentential calculus: in saying that $\neg p$ is true just in case p is not, or that $p \wedge q$ is true just in case both p and q are, we are entirely successful in specifying the truth-conditions of certain complex sentences in terms of the truth-conditions of their syntactic constituents. Indeed, I think we can regard semantic theory here as providing an *explanation* why $p \wedge q$ has the truth-value it has. If $p \wedge q$ is true, it is true because both p and q are true, and if $p \wedge q$ is false, it is false because it is not the case that both p and q are true.⁷ This is just what semanticists seek to do: they explain why certain complex expressions have the semantic values they do in terms of the semantic values of their constituents and their structure.⁸

⁷ For a defense of this view about the explanatory power of semantic theories, see Szabó (forthcoming).

⁸ I'd like to stay clear of the debate whether this is *all* semantics should do. There are familiar arguments to the effect that the meaning of a sentence is not exhausted by its truth-conditions, including considerations relating to attitude reports, presupposition, discourse dynamics, and conventional implicature. What matters here is the relatively uncontroversial claim that for declarative sentences difference in truth-conditions is sufficient for difference in meaning.

The problem is that to provide this sort of explanation in the case of more complex languages semanticists need relative truth-predicates.

\mathcal{L}_\forall , the language of the predicate calculus, contains variables – uninterpreted expressions substitutable for interpreted ones. Unlike the individual constant *Viktor*, the variable x is not assigned anything by the interpretation function but it can still replace *Viktor* anywhere *salva beneformatione*. The string *corrupt* (x) is well-formed yet neither true nor false *simpliciter* – it is true relative to an assignment g if and only if g maps x to a member of the set the interpretation function assigns to *corrupt*. This relative truth-predicate is the only one used to articulate truth-conditions in \mathcal{L}_\forall . For example, *corrupt* (*Viktor*) is true relative to an assignment g if and only if whatever the interpretation function assigns to *Viktor* is a member of whatever it assigns to *corrupt*.

Terminology can mitigate discomfort: we can introduce the term ‘formula’ to refer to a category of expressions that include both *corrupt* (*Viktor*) and *corrupt* (x) and reserve the term ‘sentence’ for formulae without free variables. Then we don’t have to say that sentential truth in \mathcal{L}_\forall is relative to assignment. Absolute truth can be introduced through a meaning postulate: if φ is a sentence then φ is true iff φ is true relative to all assignments. But verbal magic does not change the facts: insofar as our concern is to account for the truth-conditions of sentences of \mathcal{L}_\forall , this new monadic truth-predicate is completely idle. The explanation of why a sentence has the truth-value it does proceeds as follows: first we give a complete explanation of why the sentence has the truth-value it does relative to all assignments, and then we tuck the definition of monadic truth to the end.

\mathcal{L}_\Box , the language of the modal sentential calculus, has intensional operators – expressions whose syntactic profile is to yield sentences when combined with sentences, and whose semantic profile is undefinable via truth-tables. Ascription of truth-conditions to \Box (*corrupt* (*Viktor*)) relies on the truth or falsity of *corrupt* (*Viktor*) relative to possible worlds: the sentence is true relative to a possible world w just in case it is true relative to all possible worlds accessible from w . This relative truth-predicate is employed in ascribing truth-conditions to *corrupt* (*Viktor*) as well: the

sentence is true relative to a possible world w if and only if what the interpretation function assigns to *Viktor* at w is a member of what it assigns to *corrupt* at w .

Once again, there is a terminological move that can make the departure from our usual talk of absolute truth seem less drastic. We can distinguish a world among all the possible ones, and call it actual. With this extra machinery in hand we can define absolute truth as truth relative to the actual world. But again, as far as the semantics of \mathcal{L}_\square is concerned, the absolute truth-predicate is a fifth wheel. The explanation of why a sentence has the truth-value it does proceeds as follows: first we give a complete explanation of why the sentence has the truth-value it does relative to an arbitrary possible world, and then we apply this general explanation to the actual world.

If we have both individual variables and intensional operators – as in the language of quantified modal logic, $\mathcal{L}_{\forall\square}$ – we need a truth-predicate that is relativized both to assignment functions and possible worlds. The reason the two relativizations cannot be collapsed into one is simple: variables don't shift their semantic values when they occur within the scope of intensional operators. Whether $\square(\textit{corrupt}(x))$ is true at an assignment and a world depends on the truth or falsity of *corrupt* (x) at the *same* assignment at all the *different* worlds; whether $\forall x(\textit{corrupt}(x))$ is true at an assignment and a world depends on the truth or falsity of *corrupt* (x) at the *same* world at all the *different* assignments.⁹ We have independent sources of variation in the truth-value of *corrupt* (x).¹⁰

Natural languages contain expressions that may be considered as variables or intensional operators. Third person singular pronouns are fairly uncontroversial examples of the former, modal auxiliaries of the latter.¹¹ 'He is corrupt' isn't true *simpliciter* – it is true only relative to assignments that map the pronoun 'he' to a male person who is corrupt. The truth-conditions of 'Viktor must be corrupt' are not fixed by the truth or falsity of 'Viktor is corrupt' – they are

⁹ Cf. Lewis (1980).

¹⁰ Truth-predicates are also relativized to models. Models are necessary to define logical consequence, but not for the semantics – they provide *alternative* interpretations for the same expressions. Thus, I will ignore relativization to models it in what follows.

¹¹ This is not to say that treating pronouns as variables or modal auxiliaries as intensional operators is obligatory. There are successful semantic theories on the market that interpret pronouns as identity-functions (cf. Szabolcsi (1987) and Jacobson (1999)) and modal auxiliaries as quantifiers (cf. Percus (2000) and Keshet (2008)).

determined by the truth or falsity of ‘Viktor is corrupt’ relative to possible worlds accessible from actuality.

There are also expressions in natural languages that are pretty clearly not variables or intensional operators, but share enough with them to warrant analogous semantic treatment. First and second person singular pronouns are not variables, for normally they cannot be bound by a quantifier.¹² Yet they are variable-like insofar as linguistic conventions alone fail to determine their referent. It is customary to think that all variable-like expressions receive their semantic value somehow or other from the *context of utterance*.¹³ The expression ‘necessary’ is not an operator, for it cannot directly combine with a sentence. But if we choose to interpret ‘must’ as an operator, we should probably seek an operator-like interpretation for ‘necessary’ as well, so as to account for their tight semantic connection. It is customary to lump all the information needed to interpret operator-like expressions into an *index of evaluation*. Semantic theories of sufficiently large fragments of natural languages use a truth-predicate relativized to both context and index. They do not employ unrelativized truth-predicates at all.

If truth is fundamentally monadic, the relational truth-predicates of semantics must somehow be analyzed in terms of a monadic one. If that cannot be done we would have good reason to believe that truth is the very relation picked out by the irreducible truth-predicate employed in explaining the truth-conditions of sentences of our languages in our best semantic theories.

3. Defining the relativized truth-predicate

How can we analyze ‘sentence *S* is true at context *c* and index *i*’ using a monadic truth-predicate? First, we need something monadic truth-predicates might plausibly apply to.

Sentences won’t do – ‘He is corrupt’ is not true or false *simpliciter* only relative to some value

¹² There are bound readings much discussed in the linguistic literature, such in ‘You are the only one who eats what you cook’. For an extended discussion of the state of the art on these “fake indexicals”, see Kratzer (2009).

¹³ It is not customary to say that the assignment function is a feature of the context of utterance. Kaplan (1977) treats indexicals (including demonstratives) as constants and regards the assignment function as a parameter distinct from both context and index. This has the disadvantage of flouting the ideal of uniform interpretation for pronouns. Contemporary semantic approaches typically view all pronouns as variables and regard the assignment function as a parameter of the index; cf. Heim and Kratzer (1998). It is the context of utterance that initiates the assignment function of the index, which can then be shifted when quantifier expressions are evaluated.

context provides for the pronoun. However, we might conjecture that by assigning an individual to the pronoun (e.g. Viktor) context associates a proposition with the entire sentence (e.g. the proposition that Viktor is corrupt) and that the truth of the sentence relative to the context can be defined as the truth of the associated proposition. Propositional truth is still index-sensitive but that can be captured using a subjunctive conditional and an appropriate indexical. ‘Proposition p is true relative to possible world w ’ can be defined as ‘if possible world w were actual proposition p would be true.’¹⁴ The doubly relativized truth-predicate of semantics can then be defined as follows:

- (1) Sentence S is true at context c and index w if and only if S expresses a proposition in c that would be true if w were actual

The main line opposition to (1) in contemporary philosophy of language comes from those who maintain that propositions are never, or hardly ever, expressed in language.¹⁵ In their view, what most declarative sentences express are *incomplete* entities, things that become propositions only when properly supplemented. A variety of terms have been floated for these entities:

‘propositional fragments’, ‘propositional skeletons’, ‘propositional radicals’, ‘propositional frames’, etc. So, for example, one might hold that the sentence ‘Andy is rich’ expresses a propositional function f from amounts of money to propositions, such that for any amount a , $f(a)$ is the proposition that Andy has wealth in excess of a . There are many other examples cited in the literature – ‘Árpád is subservient’ might express a propositional function that assigns to a class of individuals c the proposition that Árpád is subservient to members of c , ‘Lőrinc’s contract is illegal’ might express a propositional function that assigns to a relation r the proposition that the contract that bears r to Lőrinc is illegal, and so on.

I think this view rests on an overly restrictive conception of context. I will illustrate my point using the sentence ‘László’s mustache is huge’ but the considerations apply generally.¹⁶ Imagine someone uttering ‘László’s mustache is huge’ in the course of a conversation about László’s

¹⁴ The wording in Soames (2010) is different: he defines ‘proposition p is true relative to possible world w ’ as ‘ p would be true if w were instantiated’. But since Soames thinks possible worlds are properties and since he would cash out ‘ w is actual’ as ‘ w is instantiated,’ this is an equivalent definition.

¹⁵ For classic examples of this view, see Bach (2001) and Carston (2002).

¹⁶ The considerations in the next three paragraphs are spelled out in more detail in Szabó (2010).

latest clash with nosy reporters shown on television. Let's suppose by uttering this sentence this speaker manages to assert the proposition that László's mustache is significantly larger than size s . If so, she asserted this without any obvious indirectness, and accordingly, it seems theoretically parsimonious to say that on this occasion in this speaker's mouth this sentence expressed the very proposition the speaker asserted. Why say instead that the speaker expressed something less, to wit, the propositional function that maps arbitrary sizes to the proposition that László's mustache is larger than that size? The idea must be that the relevant size is not fixed by the context, only by the relevant intentions of the speaker. But why think that those intentions cannot be part of the context? If the speaker managed to assert that László's mustache is significantly larger than size s then she must have made her intentions to talk about s manifest somehow, and if she did, the fact that she has a particular size in mind became part of the common ground relative to which the sentence must be interpreted.¹⁷ As long as we think of context as common ground it is reasonable to maintain that context determines the comparison class left unarticulated in the sentence 'László's mustache is huge'.¹⁸

One might doubt that the description of the scenario I gave is plausible. Maybe by uttering 'László's mustache is huge' a speaker can never really assert anything as specific as the proposition that László's mustache is significantly larger than size s . This is a fair concern, but it does not save the objection against the idea that 'László's mustache is huge' is true in a context just in case it expresses a true proposition in that context. If we think it is hard, or even impossible to assert a determinate proposition uttering 'László's mustache is huge' because the sentence lacks sufficient specificity then, we should also think it is hard or impossible for the sentence to be determinately true.¹⁹

¹⁷ See Stalnaker (1998) for a discussion of the fact that indexical expressions must be interpreted not against the context as it was prior to the utterance but as it is after the context is already updated with the information that the utterance has already been made.

¹⁸ I assume that the fact that many philosophers represent context, à la Kaplan, with an ordered n -tuple has also contributed to the idea that context cannot provide all the information necessary for identifying the proposition people normally express by uttering various context-sensitive sentences. As Lewis (1980) has observed a long ago, context-sensitivity in natural languages goes way beyond 'I', 'here' and 'now' and so its sources cannot be captured by a simple list of parameters.

¹⁹ One might concede that if we use a sufficiently generous conception of context, declarative sentences do express propositions relative to context, but insist that they don't express them *semantically*. Thus, the relational truth-predicate 'sentence S is true at context c and index i ' would belong not to semantics, but to a broader enterprise – truth-conditional pragmatics; cf. Recanati (2010). While I will continue to call this theory 'semantics' those who prefer to think of it under a different label are welcome to rephrase my argument accordingly.

I think the standard view in semantics that assumes that sentences express propositions relative to contexts is perfectly reasonable. The problem with (1) is not that it is not that it is false, but rather that it is not sufficiently general. It defines ‘sentence S is true at context c and index i ’ only if we assume that indices of evaluation comprise nothing beyond a possible world. What if we have intensional operators in natural languages that are not modal? ‘Soon’ and ‘nearby’ are possible candidates – if they are operators, this is what their semantic clauses might look like:

- (2) If σ is a sentence then, *Soon* σ is true at context c and index $\langle w, t, l \rangle$ if and only if there is a time t' in the near future of t such that σ is true at c and $\langle w, t', l \rangle$
- (3) If σ is a sentence then, *Nearby* σ is true at context c and index $\langle w, t, l \rangle$ if and only if there is a location l' in the vicinity of l such that σ is true at c and $\langle w, t, l' \rangle$

To define truth relative to a context and an index comprising a world, a time, and a location, defenders of Simplicity can extend the blueprint provided by (1). At first, this seems easy:

- (1') Sentence S is true at context c and index $\langle w, t, l \rangle$ if and only if S expresses a proposition in c that would be true if w were actual, t were present, and l were local

But there is a problem with this suggestion. We have a clear grip on what would be the case if October 25, 1963 were present. The US and the Soviet Union would be entangled in the Cuban Missile Crisis and people in the know would be wondering whether they live another day. By contrast, it is not clear what would be the case if Melbourne were local. Would it be fall, as it is in Melbourne or would it be spring, as it is locally? (Yes, I am writing this in May in the Northern hemisphere.) There seems to be an indeterminacy here, yet it is determinate that ‘It is fall’ is true at $\langle w, t, \text{Melbourne} \rangle$, as long as w is the actual world and t the present time. Thus, (1') is by no means a satisfying paraphrase for ‘sentence S is true at context c and index $\langle w, t, l \rangle$ ’.

The problem gets worse if we leave English behind and consider its extensions. Let’s say that ‘somemoney’ as a one-place sentential operator whose semantic clause goes as follows:²⁰

²⁰ As I learned writing this paper, ‘ ¤ ’ is the currency symbol, used when the specific symbol of a particular currency is unavailable.

- (4) If σ is a sentence then, *Somemoney* σ is true at context c and index $\langle w, t, l, \varkappa \rangle$ if and only if there is a currency \varkappa' legally convertible from \varkappa such that σ is true at c and $\langle w, t, l, \varkappa' \rangle$

It seems plausible that such a stipulation can bestow meaning upon ‘somemoney’. If you know that one dollar is legally convertible to .89 euros and you know that the latte you just bought in a Starbucks in Manhattan cost you \$3.65 you can also tell (perhaps using a calculator) that ‘Somemoney, a latte in New York costs €3.25’ is true. You also know (without knowing anything about exchange rates) that ‘Somemoney, a latte in New York costs \$3.65’ and ‘Somemoney, snow is white’ are also true and that ‘Somemoney, a latte in New York costs £0’ and ‘Somemoney, snow is black’ are false. All this knowledge suggests that you have acquired competence with this new word. Yet, it seems clear that defining propositional truth relative to currency cannot follow the blueprint. The obvious suggestion – proposition p is true at currency \varkappa just in case p would be true if \varkappa were a local currency – fails spectacularly. Plausibly, if the Euro were a local currency in New York then the US would be a member of the EU, yet there is nothing in clause (4) that would suggest that ‘Somemoney, the US is a member of the EU’ is true just because the latte you just bought in a Starbucks in Manhattan cost you \$3.65. There seems to be no hope to paraphrase the relative truth-predicate ‘sentence S is true at context c and index $\langle w, t, l, \varkappa \rangle$ ’ in terms of absolute truth.

To fend off these objections, defenders of monadic truth have to deny the need for indices beyond worlds and times. They would have to argue that despite the explicit stipulation, we understand ‘somemoney’ as a quantifier over currencies. Thus, instead of trying to use (4) to interpret ‘Somemoney, a latte in New York costs €3.25’, we paraphrase this sentence as ‘There is some currency \varkappa such that the price of a latte in New York in \varkappa is legally convertible to €3.25’ which we can understand perfectly well. Our ability to provide such a paraphrase comes from understanding (4) by analogy and from our general capacity to articulate sentences in English which manifest this understanding. No need then to assume that indices could include currencies. Of course, these are hefty claims about the way we in fact parse strings containing ‘somemoney’ – that is, bold hypotheses about human psychology.

Making psychological assumptions is enough when it comes to made-up words, like ‘sOMEMONEY’ but to defend the simplicity of indices in light of our proposed semantics for ‘nearby’ defenders of monadic truth will have to descend into the trenches of linguistic semantics. They would argue that (3) is not a correct semantic clause because ‘nearby’ is a quantifier that binds location variables. This claim raises a host of questions about location variables. Are they base-generated or traces left behind after movement? What happens to them when there is no expression like ‘nearby’ to bind them? What is their semantic type? Why is there no expression that is used to articulate them phonologically in English? Is there such an expression in other natural languages?²¹ These are substantive empirical questions about which there is considerable disagreement among the experts.²²

Here is where we stand. I argued that semantics needs the relational truth-predicate ‘sentence *S* is true at context *c* and index *i*’. If truth is fundamentally monadic, we should be able to analyze this predicate in terms of monadic truth. I claimed that relativity to contexts is indeed analyzable in this way: if we set aside controversial cases, the claim that a declarative sentence is true at a context just in case it expresses a true proposition at that context is quite plausible. Relativity to indices is more problematic. If indices contain nothing more than a possible world and perhaps a time, truth at an index can be analyzed by means of an appropriate counterfactual, but such an analysis is not available for richer indices. Thus, defenders of the idea of that truth is fundamentally monadic are forced to say that natural languages contain no operators, except perhaps modal and temporal ones. It is a mark against the traditional view that it is forced to take a strong stand on unresolved empirical questions but I concede that this is not a decisive argument against it. In the next section, I consider a different line of attack.

²¹ For a thorough discussion of the question whether we should postulate location variables in natural languages, see chapter 3 of Recanati (2010).

²² It is sometimes suggested that we should try to avoid postulating variables in syntax, whenever possible. This would not fully resolve the operator vs. quantifier debates but it would give the upper hand to proponents of operators. But those who are willing to follow this methodological principle should eschew variables altogether – after all, we do have variable-free semantic theories that fare rather well in accounting for the truth-conditions of English sentences.

4. Topic sensitivity

There is an old idea, going back at least to J.L. Austin's 1950 paper on truth, according to which the statement one makes in uttering a sentence is true just in case the situation the statement is about is of the type identified by the meaning of the sentence.²³ The benefits of thinking along these lines are illustrated by an example due to Jon Barwise and John Etchemendy (with names changed slightly for ease of cognitive load):²⁴

We might imagine, for example, that there are two card games going on, one across town from the other: Xavier is playing cards with Anna and Beth, and Claire is playing cards with Dana. Suppose someone watching the former game mistakes Anna for Claire, and claims that Claire has the three of clubs. She would be wrong on the Austinian account, even if Claire had the three of clubs across town.

Let's call the bystander Yolanda and let's assume that she makes her statement by uttering the sentence (5):

(5) Claire has the three of clubs.

Yolanda's statement appears to be untrue. (I leave the question open whether it is false or simply lacks a truth-value.) Now imagine that across town Zoe is watching Claire's game and at the same time also utters (5). That statement is undoubtedly true. This pair of observations is the data to account for. The Austin-inspired line is as follows: in uttering the same sentence, Yolanda and Zoe stated the same thing (i.e. expressed and assented to the very same proposition) but made different statements (i.e. performed different assertions). What they both stated was the proposition that Claire has the three of clubs. They made different statements because they were concerned with different situations (call these the *topic* situations) when they stated that Claire has the three of clubs. If this is the right way to think about the case, the proposition that Claire has the three of clubs is *topic-sensitive* – its truth-value depends on which situation is the topic the speaker asserting the proposition is talking about.

²³ "A statement is said to be true when the historic state of affairs to which it is correlated by the demonstrative conventions (the one to which it 'refers') is of a type with which the sentence used in making it is correlated by the descriptive conventions." Austin (1950): 122.

²⁴ Barwise and Etchemendy (1987): 122 – 3.

The Austinian view gives up the simple assumption that we can individuate speech-acts and mental states by their contents. Yolanda and Zoe assert and believe the same thing – the proposition that Claire has the three of clubs. Yet Zoe’s assertion and belief is true, while Yolanda’s is not. To say what their assertions and beliefs *are* besides their contents, one must rely on their topics as well. Yolanda asserts and believes that Claire has the three of clubs regarding the game Anna and Beth are playing, Zoe asserts and believes that Claire has the three of clubs regarding the game Claire and Dana are playing.

There are more conventional alternatives to the Austinian line and I am fully aware of the fact that they are *prima facie* more attractive to many. I will try to argue that these alternatives face difficulties that make them in the end less appealing. But before I try to do that I’d like to make the case that *if* the Austinian account of the example is correct then we are stuck with an irreducibly dyadic propositional truth-predicate.

Recall that we can define ‘proposition p is true at possible world w ’ as ‘ p would be true if w were actual’. To define ‘proposition p is true at situation s ’ analogously we would need to replace ‘actual’ by an appropriate indexical for situations. In fact, we have no such indexical in English but we could perhaps introduce one by *fiat*. Let’s stipulate that ‘topical*’ refers in any context to the topic situation of the context. (The star is there to distinguish this freshly minted word from the English ‘topical’.) Then we could try the following definition:

(6) The proposition p is true at the situation s iff p would be true if s were topical*

Does this work? It might if ‘topical*’ behaves just like ‘actual’ does within the antecedents of subjunctive conditionals. But not all indexicals do – ‘local’ seems like a counterexample, given the fact that ‘It would be winter here if Melbourne were local’ does not seem to be determinately true or false. This suggests that antecedents of subjunctive conditionals cannot shift the location against which the consequent is evaluated in the way in which they can shift the world.

Is there a definition in English? I can think of one plausible candidate which exploits the intuition that situations are *parts* of the world. The idea is that truth at a situation is nothing more than truth at a situation-sized world:

(7) The proposition p is true at the situation s iff p would be true if s were the actual world

According to (7) the proposition that Claire has the three of clubs is true at the card game between Claire and Dana because if that card game were all there is to actuality Claire would indeed have the three of clubs. But the proposition is not true at the card game between Anna and Beth because if the actual world were just that card game, Claire would not have the three of clubs (indeed she would not even exist).

While this might be acceptable in the case at hand, it fails in general. Consider the sentence ‘I do not exist’ and imagine that Yolanda utters it while she is talking about a card game in which she is not a participant. (7) predicts that she is clearly speaking the truth: after all, if that card game had been all there is to actuality Yolanda would indeed fail to exist. But that is counterintuitive – maybe she speaks falsely, maybe her statement is neither true nor false, but it is surely not straightforwardly true. Could we say that topic situations must always be big enough to contain everything the speaker is referring to? That might explain why ‘I do not exist’ cannot be used to make a true statement. But the explanation isn’t particularly plausible – if Yolanda uttered ‘Only four people exist’ or ‘An hour ago there was nothing’ or ‘Any two things are at most a few yards apart’ she would not be speaking truly despite the fact that she would not be referring to anything outside the card game.

Is there some way other than (6) or (7) to define truth at a situation in terms of monadic truth? I cannot prove that there isn’t but I certainly don’t know of any. If we need to use ‘sentence S is true at context c and situation s ’ in the semantics of natural languages then I think we should concede that we are employing a truth-predicate that we cannot define in terms of a monadic propositional truth-predicate.

5. Against invariantism and contextualism about topic-sensitivity

The question remains whether we really need the truth-predicate ‘sentence S is true at context c and situation s ’ in the semantics of English and other natural languages. Is the Austinian account of the statements made by Yolanda and Zoe correct?

The example of Claire and the three of clubs has been around for a while and it has failed to convince most semanticists that propositional truth is relative to topic situations. There are two main lines of resistance: the *invariantist* and the *contextualist* one. The invariantist denies the existence of topic-sensitivity, claiming that (5) has the same truth-value as uttered by Yolanda and Zoe. The contextualist accepts topic-sensitivity and accounts for it by claiming that Yolanda and Zoe express different propositions. I think there are strong reasons to reject both of these views.

The invariantist will point to the fact that while Yolanda’s claim is infelicitous it does not seem outright false. Perhaps we find it infelicitous because we are told about her mistaking Anna for Claire and hypothesize that she did not really mean what she said. (When she recognizes her mistake, she may indeed say ‘Oh, I didn’t mean that – Ann has the three of clubs.’) If this is the reason we find Yolanda’s utterance odd, its infelicity is independent of its truth-value. So, maybe (5) is actually true when uttered by Yolanda.

This response can be disarmed by changing the example. Suppose that Claire is simultaneously playing two on-line card games and she has the three of clubs in one but not the other. Yolanda follows the second game on a screen and knows nothing about the first. She does not know what cards Claire holds but makes a bet uttering (5). It seems perfectly clear that Yolanda loses this bet. Her bet concerns the game in which Claire does *not* have the three of clubs, it is not based on any misidentification, and there is no plausibility to the claim that she somehow failed to say what she meant.

Still, invariantists could insist that we should distinguish between the proposition expressed by Yolanda’s utterance and the proposition asserted by her. The idea would be that the job of

semantics is nothing more than to associate, based on linguistic conventions in a context-independent way, a proposition with sentences. So, (5) expresses the proposition that Claire has the three of clubs, even though what Yolanda meant *and* said was a different proposition, to wit, that Claire has the three of clubs *in the game she is following*. This latter proposition is obtained from the proposition expressed through a pragmatic process called *enrichment*.²⁵

The trouble is that there is an element of ineliminable *arbitrariness* in the semantic project thus construed, as long as we take propositional truth to be monadic. Is the proposition that Claire has the three of clubs true or false when Claire has the three of clubs in one on-line card game but not the other? Many would say it's true, on the account that she does have the three of clubs in *some* ongoing game. But why not say instead that it's false because she does not have the three of clubs in *every* ongoing game? If our semantic project is supposed to abstract away from the vagaries of context there seems to be no good reason to prefer the first option to the second. The pure linguistic meaning of 'Claire has the three of clubs' seems neutral on how many games she is supposed to have the three of clubs in – the sentence does not encode existential, universal, or any other kind of quantification over card games. The sensible way to avoid the arbitrary choice is to concede that the proposition that Claire has the three of clubs is true at one game but false at the other.²⁶ But once we come this far, the motivation for denying that the proposition expressed by the sentence Yolanda uttered is exactly what she said and meant evaporates.

Contextualists accept that (5) is topic-sensitive but argue that this is so simply because it expresses different propositions on different occasions. In their view, in uttering (5) Yolanda and Zoe both asserted the proposition the sentence expresses in their respective contexts. In the context Yolanda was in this was the proposition that Claire has the three of clubs in *s*, where *s* is the situation Yolanda was talking about; in the context Zoe was in, it was the proposition that Claire has the three of clubs in *s'*, where *s'* is the situation Zoe was talking about. Thus, the

²⁵ The debate on modulation is voluminous. For a classic attack on the idea, see Stanley (2000) and (2002); for a classic defense, see Recanati (2002) and (2004).

²⁶ One might avoid arbitrariness by pleading ignorance: the proposition that Claire has the three of clubs is determinately true or false when she has that card in one game but not in another, we just don't know which. This is the sort of view advocated by Cappelen and Lepore (2005). But if we really understand this proposition why can't we tell whether it is true in the simple case described? Is there some information we are missing? The proposal has much in common with the view that vague sentences express propositions whose truth-value we cannot know. Except that in the vagueness case there is a story about the source of the ignorance and here there is none.

proposition Zoe asserted is true *simpliciter* while the one Yolanda asserted is not. One reason this line may appear promising is that (5) contains the definite description ‘the three of clubs’. On the Russellian view, this is a quantifier phrase which, in a plausible semantic theory, is associated with a domain. If you think what situation a speaker talking about fixes the domain of the description, you immediately predict that Yolanda and Zoe expressed different propositions.²⁷

The semantics of definite descriptions and the pragmatics of domain choice are complicated and philosophers of language have strong feelings about them. I do too and I’d rather not go into this here.²⁸ Fortunately, we can change the example and bypass the issue. Suppose that instead of (5) Yolanda and Zoe had uttered (8), and suppose that in the game Zoe is observing Claire indeed has a strong hand:

(8) Claire has a strong hand.

Since the predicate is an idiom, there is no overt element in this sentence that could be construed as a quantifier in need of a domain. Of course, there might be covert elements; contextualists have every right to hypothesize that (8) expresses the proposition that Claire has strong hand in *s*, where *s* is a contextually supplied situation. But there is no *independent* motivation for this, beyond the desire to keep propositional truth monadic. I will discuss contextualism using (5) but if the presence of the definite description distracts you, feel free to replace it with (8).

I was a contextualist about topic sensitivity for a long time. But then I noticed that the view has a really bad consequence. In the original example, the topic situation is the one Yolanda is observing – a situation involving Anna and the particular cards she holds in her hands. Since Anna couldn’t be Claire, it appears that this particular situation couldn’t be one in which Claire has the three of clubs. In the modified example, the topic situation is the one represented on the

²⁷ One should not think that topic situations *always* fix quantificational domains. Normally when one utters a sentence like ‘The researchers monitored everyone’s sleep’ one is talking about a situation that includes some sleeping experimental subjects and some wide-awake researchers. Yet, the statement can be true. The obvious suggestion is to let context assign to ‘everyone’ a restricted domain, thus guaranteeing that the sentence in context expresses the proposition that the researchers monitored the sleep of every experimental subject. This proposition will then be true at a situation *s* where the researchers in *s* monitor the sleep of every experimental subject in *s*.

²⁸ See Stanley and Szabó (2000) and Szabó (2000b), (2005).

computer screen Yolanda is observing – a situation involving Claire and the particular cards she has in a game. Since none of those cards is the three of clubs, it seems that this particular situation also couldn't be one in which Claire has the three of clubs. So, in both cases, what Yolanda said cannot be true.²⁹ But this is intuitively wrong: in both examples, what Yolanda said was false but could have been true. The problem with contextualism is that it construes the proposition that Claire has the three of clubs as the proposition that *s* – the particular situation the speaker is talking about – is such that Claire has the three of clubs in it, and this proposition is not a contingent one.

This argument relies on a metaphysical assumption, to wit, that a situation involving someone and some cards couldn't be identical to a situation involving someone else or some other cards. This can be challenged. One might say that the situation Yolanda is talking about in the original example is a particular card game where Anna plays but *that very card game* could have been one where Claire plays instead, and that the situation Yolanda is talking about in the modified example is a particular card game where Claire does not have the three of clubs but *that very card game* could have been one where she does. Maybe so. But no matter who the players are and what cards they hold, these situations would still be *card games*. Thus, if Yolanda utters 'A card game is going on' concerning either of the situations, she speaks the truth. And if the proposition she asserts in uttering this sentence is that a card game is going on in *s*, where *s* is the topic situation in the context of utterance, then what she asserted would be necessarily true. And this is still deeply counterintuitive.

Contextualists could avoid the troubling modal commitments by going *descriptivist* about the topic situation. Thus, they could say that the proposition Yolanda expresses is not the proposition that Claire has the three of clubs in *s*, where *s* is just a variable whose value is the particular game she is observing but rather the proposition that Claire has the three of clubs in *d*, where *d* is a definite description picking out the situation she is observing. Then, assuming the

²⁹ It's no good to insist that in some epistemic sense Ann could be Claire, and a card that isn't in fact the three of clubs could be the three of clubs. This is true, and consequently it is also true that what Yolanda asserted could be true in some epistemic sense. It is still predicted to be metaphysically necessary, which is bad enough.

description is well chosen, there will be possible worlds where d picks out a different situation or no situation at all, and the contingency of the proposition expressed is secure.

But I don't think this approach can capture the relevant intuitions. Consider some suggestions about what the missing description might be. It could be something like 'the game I am observing' or 'the game going on at that table'. Is the proposition Yolanda expressed contingent because she could have been observing a different game, or because the game she is talking about could have been going on at a different table? Hardly. The intuition is that her statement is *de re* – its topic is a particular situation, the one she is attending to, not some situation or other that fits the way in which she might describe this situation. The puzzle is how it can be still contingently false, given that it characterizes that situation as being a way it could not be. The Austinian view solves the problem by separating topic from content: Yolanda's statement is *de re* but the content of this statement is contingent (true at some situations but not of others).

I accept the Austinian account of our key example. And while this is just a single example, I also believe it is fairly clear that topic-relativity is a general phenomenon. Usually when someone makes an assertion we can ask them to identify the situation they are talking about.³⁰ When such a request sounds most unreasonable (e.g. when someone utters 'Snow is white' or 'Unicorns don't exist' or 'There is no largest prime') it can still be answered by saying that the topic of one's assertion is the whole world. In claiming that propositional truth is dyadic, we avoid the problems invariantists and contextualists are stuck with. Unlike invariantists we are not forced to make an arbitrary choice about the truth-value of certain propositions, and unlike contextualists we don't have to deny their contingency.

Accepting topic-sensitivity for propositions isn't a semantic theory; it's just a constraint of how semantic theories should be constructed. The particular way topic-sensitivity is usually built into semantic theories by those who believe in it is contrary to my own view. Situation semantics, motivated in part by the very example I cited, distinguishes two levels of content for a sentence in context: the *infor* (roughly, what I called the proposition the sentence expresses in the context)

³⁰ Of course, uttering 'What situation are you talking about?' may not be the best way to ask this question. We can think of follow-up questions involving 'where' or 'when' or 'which' as aiming at specifying the topic situation.

and the *Austinian proposition* (something that comprises both the infon and the topic situation of the context).³¹ The Austinian proposition is supposed to be true *simpliciter* just in case its infon is true relative to its topic situation. However, it does not seem like semantics is in need of two different entities playing the role of content for each declarative sentence. Once you have the infon, you have everything you need for explaining truth-conditions. Austinian propositions have nothing to do except to ensure that there is some content that can be true or false *simpliciter*.

But don't we have content that is true or false *simpliciter* anyway? Let p be the proposition that Claire has the three of clubs and let s be the situation across town including Claire holding the three of clubs. Then p is true at s . There is also the proposition p' that p is true at s . Isn't p' a proposition that is true *simpliciter*? I don't think so. Unlike p , which is true at some situations and false at others, p' is true at all situations (or at least, it is not false at any). The difference between p and p' is that the former is contingent and the latter is not, but this does not affect the fact that their truth is equally relative to situations. There is, of course, Zoe's assertion and the belief she expresses when she utters 'Claire has the three of clubs' talking about s , and these are indeed both true *simpliciter*. But these are representations, not contents of any sort. Representations can be true *simpliciter*, provided their contents are true at the situation they are about.

A common objection against the sort of view I recommend is that it fails to respect the intuition propositions must be *complete*. The charge is that whenever we find ourselves lured into thinking that a proposition is true relative to something or other, that's a clear sign that we are not really thinking of a proposition, only a propositional function.³² But what is the relevant notion of completeness? We do have intuitions about certain sentences being syntactically incomplete: 'Claire does too' is a well-formed sentence, but without knowing the antecedent of 'too' we perhaps cannot know *which* sentence it is. We also have intuitions about certain sentences being semantically incomplete: 'Claire is ready' is a meaningful sentence, but without knowing what Claire is ready for we perhaps cannot know *what* it means. These intuitions can be criticized but

³¹ See Barwise and Etchemendy (1987) and Barwise (1989).

³² Recanati (2008) advocates a version of standard situation semantics against the view I defend (which he labels "radical relativism") on the basis of this objection.

I think we are better off respecting them.³³ However, ‘Claire has the three of clubs’ and ‘Claire has a strong hand’ appear to be complete in both of these senses. The complaint that this sentence fails to express a complete proposition bottoms out in the observation that without knowing which of the simultaneous games we are talking about we cannot know whether it is true *simpliciter*.³⁴ Since I don’t think they are true *simpliciter*, this does not move me.

Let me summarize the main argument of the paper. In this section, I have argued that declarative sentences are topic-sensitive and semantic theory should employ a relativized truth-predicate ‘sentence *S* is true at context *c* and index *i*’, where *i* includes a topic situation. In the two sections before this one, I argued that while this predicate can be analyzed as ‘sentence *S* expresses at context *c* a proposition that is true at index *i*’, if index *i* includes a situation this cannot be further analyzed in terms of monadic propositional truth. The conclusion is that unless our semantics is on the wrong path, we have reason to think that truth is not a property of propositions but a relation they bear to situations and to whatever else is included in the indices. In the next section, I will argue that indices needn’t contain anything other than situations. This rounds up the case for my central claim: that truth is a relation between positions and situations.

6. Worlds, times, events, and propositions

I favor a conservative way of building topic sensitivity into the semantics: simply replace possible worlds with possible situations in giving truth-conditions for logically simple declarative sentences. This is a minimal change as far as the basic structure of the theory is concerned. There are different ways to expand such a semantics to logically complex declarative sentences.³⁵

³³ Chapter 5 of Cappelen and Lepore (2005) contain skeptical arguments against appeals to incompleteness.

³⁴ The classic place for voicing such concerns is Evans (1985). Evans argues against temporally neutral propositions and points out that assertions made in uttering a tensed sentence “would not admit of stable evaluation as correct or incorrect.” (349) To my mind, this conflates two senses of ‘assertion’. What one asserts in uttering ‘Socrates is sitting’ can be true at one situation yesterday and false at another today, so they can indeed not be evaluated *tout court*. But the act of assertion (or the particular belief expressed when that act is performed) which is about a particular situation is true or false *simpliciter* depending on whether that situation is one where Socrates is sitting or one where this isn’t the case.

³⁵ Fine (2017) distinguishes three different approaches, which he calls loose, inexact, and exact. These approaches agree on the basic semantic apparatus but disagree on the interpretation of Boolean connectives and quantifiers.

What are situations? I won't be able to give a particularly informative answer, for I think situation is a basic ontological category. What I can do is argue that our understanding of 'situation' is no worse than our understanding of 'object'.

The technical term 'object' designates all the paradigm objects (tables, chairs, coffee cups), things people would occasionally call objects (mountains, animals, people), and then also some things people would never call objects (clusters of galaxies, centuries of time, theorems of mathematics). It is doubtful that these things share some language-independent characteristic. We can say, following Frege, that objects are the things we designate with singular definite descriptions. And since singular definite descriptions are built from count nouns (possibly modified by adjectives and relative clauses) we can say that objects are the things to which count nouns apply.

Situations can be topics, that is, they are the sorts of things that comprise what we are talking about. Claire's playing a game of poker is a paradigm situation, Claire's betting \$5 in a poker game is something people would occasionally call a situation, and Claire's cheating in her Thursday evening poker games over the course of a decade would probably never be called a situation. Yet, I want to use the word 'situation' in such a broad way as to cover all these and much else. The possessive constructions I listed are usually treated in semantics as singular definite descriptions built around a gerund, so if they designate anything, they designate objects (in the broad Fregean sense). I suggest that situations are the things to which gerunds apply.

It's tempting to think of situations as parts of the world. We can do that, as long as we don't think of parthood in a spatial way. Suppose you and I are playing two simultaneous games of chess in our heads (just assume we are that good). It would be very hard to maintain that the two games occupy separate regions of space. Yet, they are distinct situations: it could easily be that with regard to one it is true that white can win in three moves but with regard to the other it isn't. If we are willing to count both of these chess games as parts of the actual world, we are appealing to a notion of parthood according to which the mereological sum of all situations is nothing more or less than the world as it is right now.

If you are a presentist, you think the world as it is right now *is* the world. If you believe in the past and the future as well, you could say that the world as it is right now is simply the present time. The world as it was five minutes ago is a past time, the world as it will be a year from now is a future time. The world itself is then the sum of all past, present, and future times, which are all sums of past, present, and future situations. If you believe that besides the actual world there are also merely possible worlds, you can think of those too as sums of possible situations. Obviously, if we have merely past, merely future, and merely possible situations and appropriate ways of restricting mereological summation, we have all the worlds and times we need for interpreting modal and temporal operators.

Believing in possible worlds is not the same thing as having a particular take on their nature. Some (actually, very few) think they are concrete particulars on a par with the universe, some think they are properties the universe is apt to instantiate, some think they are states the universe might be in, some think they are pictorial or linguistic representations of the universe, and I am sure there are other options as well. All of these views can be extended with an appropriate mereology and thus accommodate situations. I argued that to adequately account for what we think and say, semantics should countenance situations; I did not say semantics needs to take a firm stance on their nature.

Situation is a broad enough ontological category to model all the other parameters relativists have proposed. Suppose you are convinced that that the proposition that roller coasters are fun is true relative to some standards of taste but not others – you can then say that this proposition is true at situations where certain standards of states are at play and false where others are. (What it is for a standard of taste to be at play is a meta-semantic question, not a question for semantics.) Suppose you think that the proposition that the butler might have killed the duchess is true relative to some information but not relative to other – you can say that this proposition is true at situations where that information is available and false where it is not. (What it is for information to be available is, again, a meta-semantic question.) And if you think genuine relativism requires not only the relativity of propositional truth, but relativity of propositional truth to contexts of assessment, all you need to do is to employ in your semantics two contexts – one for utterance and the other for assessment – and let target situations be determined by the latter, not the

former. Whether any of this is *needed* to account for our thought and talk is a substantive question much debated in the literature. Here I take no stand on these. What I claim is that debates about various forms of relativism could be seen as debates about what sorts of topic situations there are and how they are to be determined in a conversation.

Situations are also what semanticists following Davidson have been calling events. Originally, Davidson suggested that action verbs have an extra event-argument, that adjuncts are predicates of events, and that action sentences contain an existential quantifier to bind event variables. Ignoring tense and bracketing the semantics of plural definite descriptions, Davidson assigned (9') as logical form to (9), where the variable was supposed to range over events.³⁶

- (9) Claire slowly dealt the cards to Dana
 (9') $\exists e. deal(e, Claire, the\ cards) \wedge slow(e) \wedge to(e, Dana)$

This analysis can account for the validity of an inference from (9) to 'Claire dealt the cards to Dana' or to 'Claire slowly dealt the cards' (as instances of conjunction elimination within the scope of an existential quantifier) without incorrectly predicting that the inference from the conjunction of these sentences to (9) is valid. What Davidson's proposal does not predict is the validity of the inference from (9) to 'Claire dealt slowly', to 'Claire dealt to Dana', to 'Claire dealt the cards', and to 'Claire dealt'. To fix this problem, followers of Davidson suggested treating all the arguments of the verb – with the exception of the event argument – the way adjuncts are normally treated. This can be done if we assume that verbs assign thematic roles to their arguments and if we interpret thematic roles as binary relations between the event the verb describes and the object picked out by argument. (*Ag* stands for the relation between an agent and an event, *Th* for the relation between a theme and an event.)

- (9'') $\exists e. deal(e) \wedge Ag(e, Claire) \wedge Th(e, the\ cards) \wedge slow(e) \wedge to(e, Dana)$

The pattern of inference Davidson sought to account for is quite general – it certainly extends beyond action sentences. But even if 'Claire lived comfortably in Maine' entails both 'Claire

³⁶ Davidson (1967).

lived comfortably’ and ‘Claire lived in Maine’ without being entailed by their conjunction, it still sounds odd to suggest that these sentences quantify over events. What they quantify over are states or processes. Semanticists often call all such entities events while acknowledging that this is an extended use of the term. Events in this technical sense are the sorts of things gerunds apply to – in other words, just the sorts of things I called situations.

Proponents of event-semantics are usually not fans of propositions. Since I am, I would like to raise the question how we should think of the proposition expressed by (9) in light of its proposed logical form (9''). A natural response would be that it is something like the proposition that there is a slow dealing of the cards by Claire to Dana. But this leads to trouble. Suppose Claire dealt multiple times to Dana, sometimes slowly, sometimes not. Suppose (9) is uttered talking about a situation *s* in which Claire’s dealing was not slow. We would like to say that the proposition expressed by (9) is false (or, at least, not true) at *s*. But it’s hard to see why it would be untrue at *s* that there is *some* slow dealing of the cards by Claire to Dana, as long as we don’t require that this be *s* itself. So, we should ditch the existential quantifier and bind the situation variable by a lambda abstractor.³⁷

(9''') $\lambda s. deal(s) \wedge Ag(s, Claire) \wedge Th(s, the\ cards) \wedge slow(s) \wedge to(s, Dana)$

If declarative sentences are predicates of events, events are situations, and declarative sentences express propositions, then propositions are properties of situations. Truth-at thus turns out to be truth-of: when an act of assertion or a state of belief is true *simpliciter* that is because the proposition it expresses is truly predicated of the situation the assertion or belief is about.

The inferences that motivated the Davidsonian semantics can still be accounted for, assuming we employ a conception of validity that is apt for dyadic truth. Let’s say that an inference is valid iff whenever each premise is true of some situation the conclusion is also true of that situation. Then, the inference from ‘Claire slowly dealt the cards to Dana’ to ‘Claire dealt the cards to

³⁷ Similar logical forms are quite standard in semantics since Berman (1987) and Kratzer (1989), although typically they involve extra complexity. For a fairly detailed compositional semantics, see Elbourne (2005). I stress that the ontological assumptions these authors embrace as well as many of the semantic details are negotiable.

Dana' and 'Claire slowly dealt the cards' is valid – if a situation is a slow dealing of the cards by Claire to Dana then it is also a dealing of the cards by Claire to Dana and a slow dealing of the cards by Claire. But the inference from 'Claire dealt the cards to Dana' and 'Claire slowly dealt the cards' to 'Claire slowly dealt the cards to Dana' is not valid – there could be a situation where Claire dealt the cards to Dana and another where she slowly dealt the cards without there being a situation where she slowly dealt the cards to Dana.

To say that propositions are properties may sound like a category-mistake – I propose to think of it as a substantive analysis. Lewis initially characterized propositions as properties of possible worlds, but in light of *de se* attitude ascriptions he ultimately settled with the broader view, according to which they are properties of possible objects.³⁸ Since situations are objects, this proposal is in the same ballpark as my own view. Lewis was also committed to another reductive analysis: the claim that properties are just sets. I say no such thing. I hold open the possibility that to provide an adequate account of mental state and speech act ascriptions we must ultimately individuate properties of situations more finely than the set of their possible instances.

One might complain that it is unnatural to assign the same kind of semantic value to full sentences and bare verbs, adverbs or prepositional phrases. In my view these are all propositions. How could 'deal' and 'Claire dealt the cards to Dana' have the same kind of meaning? There are two reasons one may feel this to be unnatural; to my mind, neither is particularly persuasive. One reason for insisting on a special semantic value for sentences is their connection with illocutionary force. It is sometimes suggested that we can't make assertions uttering sub-sentential expressions. But, apparently, we *can*: we can hold up a letter and utter 'From Spain' thereby asserting that the letter is from Spain.³⁹ The other reason for wanting a special semantic value for sentences is their particular pattern of syntactic distribution. Sentences can certainly not be substituted *salva beneformatione* for mere verbs and verb phrases. Still, we *do* assign the same type of semantic value to lots of expressions whose syntactic distribution is wildly different: the complements of 'believe' and 'want' are supposed by nearly everyone to be both propositions, yet most complements of one cannot be substituted for complements of the other.

³⁸ Lewis (1979).

³⁹ For detailed arguments, see Stainton (2006).

In the end, what is special about sentences is that they are *syntactically complete* – they contain a verb and all the obligatory thematic arguments lexically associated with expressions within them are saturated. It is not clear that syntactic completeness is a mark of a distinctive kind of meaning.

7. Closing

In a recent article, Scott Soames presented the following argument in favor of the thesis that fundamental truth is monadic:⁴⁰

For a sentence *S* (which is used to make assertions and express beliefs) to have a meaning, or semantic content, is for *S* to express a proposition that represents something as being some way or other. In virtue of this, we speak derivatively of *S* representing things. ‘Snow is white’ represents snow as white, while ‘The U.S. President is male’ represents the property being U.S. President as uniquely instantiated, and being male as instantiated by whatever instantiates being U.S. President. A meaningful sentence of this sort represents the universe (or parts of it) as being a certain way (or ways). Its truth conditions follow from this; if *S* (simply) represents A as being B (and nothing else), then *S* is true iff A is B. We have no idea what it is to be representational, and hence meaningful, apart from having such (monadic) truth conditions.

I agree that for a meaningful sentence to represent, it must represent something as being a certain way, and that if *S* (simply) represents A as being B (and nothing else), then *S* is true iff A is B. What I disagree with is the way Soames identifies the A and B in the particular cases he mentions. ‘Snow is white’ does not represent *snow* as being white – it represents, in use, a *situation* (perhaps as large as the whole world) as being one where snow is white. And ‘The U.S. President is male’ does not represent a *property* as being instantiated in any way – it represents, in use, a *situation* as being one where the U.S. president is male.

The central point of contention is, I think, the one Soames touches upon at the very beginning of the argument. He says propositions represent things as being some way. I say propositions are ways things can be represented as being. Fundamental representations – the things that represent and without which nothing would represent – are mental states. Some of these have propositional content. The ones that do represent not only in virtue of having that content, but also in virtue of

⁴⁰ Soames (2011):125.

predicating that content of situations they are about. As Austin put it: “It takes two to make truth.”^{41,42}

⁴¹ Austin (1950): 124, n.1.

⁴² I thank audiences at the 8th GAP Conference at Konstanz, at NYU, and at Lewis and Clark for comments, objections, and general discussion. Special thanks to David Chalmers, Troy Cross, Matti Eklund, Kit Fine, Tamar Szabó Gendler, Zoltán Molnár, Jim Pryor, Jonathan Schaffer, and Bruno Whittle for making me rethink some of my arguments.

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