

DYADIC TRUTH

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## 1. Simplicity

G.E. Moore held the simple view that ‘good’ is a monadic predicate expressing a property. He writes: “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 ...”<sup>1</sup> But 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 this property.<sup>2</sup> Whatever the right semantics of ‘good’ is, it must be more complex than Moore thought.

When it comes to ‘true’ the analogous view fares better. Replace ‘good’ with ‘true’, ‘bad’ with ‘false’, ‘indifferent’ with ‘meaningless’ and ‘conduct’ with ‘report’ in the quote from Moore and you will find the point equally compelling. And the objection that sinks Moore’s proposal for ‘good’ does not arise for ‘true’. Someone could be a true heir and a friend without being a true friend, but neither an heir nor a friend can be true in the sense in which a sentence, a proposition, or a belief can.<sup>3</sup> When we focus on the sense of ‘true’ philosophers are concerned with, it seems clear that if something is a true *F* and a *G*, it is also a true *G*. There is no direct argument against classifying ‘true’ as a monadic predicate expressing a property.

Still, I think this simple view about truth is only halfway correct. There is indeed a monadic truth-predicate in English and other natural languages that expresses a property. But this monadic

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<sup>1</sup> Moore (1903): 2.

<sup>2</sup> The point goes back to Geach (1956).

<sup>3</sup> This is not a case of accidental ambiguity: in a vast number of languages there is an adjective that can modify both the word for belief and the word for friend. I will set aside the question how to account for the diachronic connection between the two meanings of ‘true’.

predicate 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 the propositions are not true *simpliciter* – they are true *of* situations. Thus, the fundamental notion of truth is relational – or, at least, so I will argue in this paper.<sup>4</sup>

My view opposes the first plank of the doctrine Herman Cappelen and John Hawthorne have recently dubbed *Simplicity*. I have no quarrel 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, such as beliefs, hopes, wishes; that propositions are the objects of illocutionary acts, such as assertions, suppositions, denials; and that propositions are the objects of agreement and disagreement.<sup>5</sup> I view these theses as definitive of what philosophers nowadays mean by the term ‘proposition’. I even agree with part of the first plank – I too believe that propositions instantiate the fundamental properties of truth and falsity. What I reject is nothing more than that these fundamental properties are monadic. I believe they are fundamental relational properties.

Cappelen and Hawthorn 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.<sup>6</sup> The view I defend differs from the usual relativist views in two 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. Rather, I claim that virtually all propositions expressed by our sentences are non-vacuously

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<sup>4</sup> 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 (2000). The Geachian alternative is that ‘good’ is not a predicate at all, but a predicate-modifier.

<sup>5</sup> Cappelen and Hawthorne (2009): 1. I do, of course, reject the claim that mental states or speech-acts are individuated in terms their objects.

<sup>6</sup> The broader notion is employed by Kölbel (2002), the narrower by MacFarlane (2005).

relativized 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 debated.

My positive argument is simple. Monadic truth-predicates are ill-suited for the purposes of semantics. Those who think semantic explanations are any good must provide adequate paraphrases for the various relational notions we employ in formulating those explanations. For most standard relative truth-predicates in semantics, adequate paraphrases in terms of monadic propositional truth can be given. 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. Since our best semantics arguably needs this truth-predicate, we have good reason to think that propositional truth is dyadic.

## 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 immediate syntactic constituents. This is just what semanticists seek to do.<sup>7</sup> The problem is that things don’t work this way in more complex languages.

$\mathcal{L}_{\forall}$ , the language of the predicate calculus, contains variables – uninterpreted expressions substitutable for interpreted ones. Unlike the individual constant *Fido*, the variable  $x$  is not assigned anything by the interpretation function but it can still replace *Fido* anywhere *salva beneformatione*. If *dog* is a one-place predicate in the language, the string *dog* ( $x$ ) is well-formed, yet uninterpreted, and hence neither true nor false. What the semantics ends up saying about it is that it is true relative to an assignment  $g$  if  $g$  maps  $x$  to a member of the set the interpretation function assigns to *dog*, and false relative to all other assignments. This relative truth-predicate is

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<sup>7</sup> 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 difference in truth-conditions is a sufficient for difference in meaning.

the only one used to articulate truth-conditions in  $\mathcal{L}_\forall$ . For example, *dog (Fido)* is true relative to an assignment  $g$  if whatever the interpretation function assigns to *Fido* is a member of whatever it assigns to *dog*, and false relative to all other assignments. Absolute truth has no role to play.

Terminology can mitigate discomfort: we can introduce the term ‘formula’ to refer to a category of expressions that include both *dog (Fido)* and *dog (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  $\phi$  is a formula without free variables then  $\phi$  is true iff  $\phi$  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 idle.

$\mathcal{L}_\Box$ , 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 indefinable by truth-tables. Ascription of truth-conditions to  $\Box (dog (Fido))$  relies on the truth or falsity of *dog (Fido)* 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 *dog (Fido)* as well: the sentence is true relative to a possible world  $w$  if whatever the interpretation function assigns to *Fido* in  $w$  is a member of whatever it assigns to *dog* in  $w$ , and false relative to all other possible worlds.

Once again, there is a terminological move that can make the departure from the 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  $\mathcal{L}_\Box$  is concerned, this predicate is a fifth wheel – it does not help in any way to explain the truth-conditions of complex sentences in terms of the truth-conditions of their syntactic parts.

If we have both individual variables and intensional operators – as in the language of quantified modal logic,  $\mathcal{L}_{\forall\Box}$  – we need a truth-predicate that is relativized both to both assignment functions and possible worlds. The reason the two relativizations cannot be collapsed into one is simple:

variables don't shift their semantic value when they occur within the scope of operators. Whether  $\Box (dog(x))$  is true relative to an assignment depends on the truth or falsity of  $dog(x)$  relative to the *same* assignment relative to all the *different* possible worlds.<sup>8</sup> We are faced with two independent sources of variation in the truth-value of  $dog(x)$ .<sup>9</sup>

Natural languages contain expressions that may be taken to be free variables or intensional operators. Third person singular pronouns are fairly uncontroversial examples of the former, modal auxiliaries of the latter.<sup>10</sup> 'He is a dog' isn't true *simpliciter* – it is true only relative to assignments that map the pronoun 'he' to a male dog. The truth-conditions of 'Fido must be a dog' are not fixed by the truth or falsity of 'Fido is a dog' – they are determined by the truth or falsity of 'Fido is a dog' relative to possible worlds.

There are also expressions in natural languages that are not ordinary variables or 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.<sup>11</sup> 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*.<sup>12</sup> The expression 'necessary' is not an operator, for it combines with a *that*-clause, not a sentence.<sup>13</sup> 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

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<sup>8</sup> Cf. Lewis (1980).

<sup>9</sup> Truth-predicates are also relativized to models. Models are necessary to define logical consequence, but not for the semantics – they provide alternative interpretations. Thus, I will ignore relativization to models in what follows.

<sup>10</sup> 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).

<sup>11</sup> 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).

<sup>12</sup> 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 introducing an ambiguity in the semantics of pronouns. Contemporary semantic approaches typically view 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.

<sup>13</sup> And 'it is necessary that' is certainly not an operator because it is not an expression of English. Of course, 'It is necessary that Fido is a dog' is an English sentence but the string of words 'it is necessary that' is no more a syntactic part of this sentence than 'is necessary that Fido'. It is a mistake to try to semantically categorize random sequences of words.

for their tight semantic connection. It is customary 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.

### 3. Defining the relativized truth-predicate

If monadic truth is fundamental it must provide the explanatory basis for relative truth employed in semantics. The key for doing so is the notion of a proposition. Sentential truth is supposed to be context-sensitive but only because some sentences express different propositions in different contexts. Thus, ‘sentence *S* is true relative to context *c*’ is definable as ‘in context *c* sentence *S* expresses a true proposition’. When we only consider only the fundamental bearers of truth and falsity – propositions – there is simply no such thing as context-sensitivity. Propositional truth is still supposed to be index-sensitive but capturing this in terms of relative truth is supposed to be a mere *façon de parler*. Defenders of Simplicity assume that indices comprise a possible world and perhaps a time, but nothing else. Talk of propositional truth relative to worlds and times is captured using the appropriate indexicals and subordinate clauses. Thus, ‘proposition *p* is true relative to possible world *w*’ is defined as ‘if possible world *w* were actual proposition *p* would be true’ and ‘proposition *p* is true relative to time *t*’ as ‘if time *t* were present proposition *p* would be true.’ The doubly relativized truth-predicate of semantics can then be defined as follows:<sup>14</sup>

- (1) Sentence *S* is true at context *c* and index  $\langle w, t \rangle$  if and only if *S* expresses a proposition in *c* that would be true if *w* were actual and *t* were present

There are two obvious ways one may object to this defense of Simplicity. The first is to say that the proposed definition of sentential truth in terms of propositional truth is inadequate because propositions don’t exist. The second is to say that definitions of truth at a time and truth at a world in terms of tensed predication and counterfactuals get explanatory priority backwards. I

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<sup>14</sup> Rejecting transient truth for propositions is a popular view; those who hold it should replace ‘index  $\langle w, t \rangle$ ’ in the definiendum with ‘index *w*’ and drop ‘and *t* were present’ from the definiens. Rejecting contingent truth for propositions is an unpopular view; those who hold it should replace ‘index  $\langle w, t \rangle$ ’ in the definiendum with ‘index *t*’ and replace drop ‘*w* were actual and’ in the definiens.

will stay clear of these objections. I take it that propositions are what we say and believe and if we ever say and believe anything they better exist. And when it comes to explanatory priority between two fairly technical locutions, I think agnosticism is the best attitude.

The real weakness of (1) is that it assumes that indices of evaluation comprise nothing beyond worlds and times. Taking a stand on such matter seems dangerous, since indices are supposed to include all features shiftable by intensional operators within the language under consideration and we can certainly imagine languages with all sorts of intensional operators. There are no operators in English that shift currency but it seems like we might be able to simply introduce such a device. Let's say that 'somemoney' as a one-place sentential operator whose semantic clause goes as follows:<sup>15</sup>

- (2) If  $\sigma$  is a sentence then, *Somemoney*  $\sigma$  is true at context  $c$  and index  $\langle w, t, \mathfrak{x} \rangle$  if and only if there is a currency  $\mathfrak{x}'$  legally convertible from  $\mathfrak{x}$  such that  $\sigma$  is true at  $c$  and  $\langle w, t, \mathfrak{x}' \rangle$

Since there seems to be no real hope of paraphrasing 'sentence  $s$  is true at context  $c$  and index  $\langle w, t, \mathfrak{x} \rangle$ ' in terms of monadic propositional truth, defenders of Simplicity have to deny that (2) can be used to bestow meaning upon 'somemoney'. *Prima facie*, this isn't a very plausible denial. Somehow, by writing down (2) I have successfully conveyed to you truth-conditions of all sorts of strings you previously could not interpret. If you know that a dollar is legally convertible to .81 Euros and you know that the latte you just bought in a Starbucks in Manhattan cost you \$3.26 you can also tell (perhaps using a calculator) that according to my proposal 'Somemoney, a latte in New York costs 2.63' is true. You also know that 'Somemoney, a latte in New York costs 3.26' is false and that 'Somemoney, snow is white' is true. How do you know all this if you never understood (2) in the first place?

I don't expect this argument to convince defenders of Simplicity. They can maintain that the strings I mentioned are understood because we simply ignore the stipulation that 'somemoney' is an operator. Here is one way the interpretation might go. First, we check whether the sentence following 'somemoney' is meaningful. If it is, we say that the whole string is equivalent to that

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<sup>15</sup> As I learned writing this paper, ' $\mathfrak{x}$ ' is the currency symbol, used when the specific symbol of a particular currency is unavailable.

sentence. If it is not, we see whether the sentence could become meaningful if we inserted a currency symbol in front of one or more numerals. If it is not, the string is meaningless. If it is, we replace ‘somemoney’ with ‘there is some currency in which’ and add put ‘units’ after the numerals and declare the string equivalent to the resulting sentence. This algorithm yields the right results in the strings I mentioned, and is fully compatible with the hypothesis that we don’t really apply (2) when we understand them. A defender of Simplicity can dig in her heels and maintain that we literally don’t understand what it would be for a sentence to be true relative to a currency.

Arguing for parameters of indices beyond worlds and times using actual words whose meaning is not up to us to stipulate is even more difficult. Take the case of ‘nearby’, which some might reasonably take to be an intensional operator shifting locations:<sup>16</sup>

- (3) If  $\sigma$  is a sentence then, *Nearby*  $\sigma$  is true at context  $c$  and index  $\langle w, t, l \rangle$  if and only if there is a location  $l'$  close to  $l$  such that  $\sigma$  is true at  $c$  and  $\langle w, t, l' \rangle$

A proponent of Simplicity may respond by articulating an alternative view, according to which ‘nearby’ is not an operator, but a quantifier that binds a location variable within its scope. This, of course, raises a host of questions about location variables. Are they base-generated or traces left behind in 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 one in other natural languages?<sup>17</sup>

It is sometimes suggested that we should try to avoid postulating variables in syntax, whenever possible. But those who believe this should probably 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. The empirical questions surrounding quantification in natural languages are complex and largely open. While I do believe that they are of utmost importance

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<sup>16</sup> Kaplan’s indices do include locations.

<sup>17</sup> For a thorough discussion of the question whether we should postulate location variables in natural languages, see chapter 3 of Recanati (2010).

for theorizing about truth, we should try to resolve some basic questions without taking a very firm stand on which expressions of generality bind variables.

If we do agree with proponents of Simplicity that declarative sentences express propositions relative to contexts of utterance, as I suggest we should, we might be able to run direct arguments against the view that propositional truth is monadic. There are considerations that suggest that propositions can be true or false relative to some parameter, irrespective of whether we can generalize over these parameters. I will turn to such an argument in the next section.

#### **4. Topic situations**

There is an old idea, going back at least to J.L. Austin's 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.<sup>18</sup> The benefits of thinking along these lines are illustrated by an example due to Barwise and Etchemendy:<sup>19</sup>

We might imagine, for example, that there are two card games going on, one across town from the other: Max is playing cards with Emily and Sophie, and Claire is playing cards with Dana. Suppose someone watching the former game mistakes Emily 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 Sarah and let's assume that she makes her statement by uttering the sentence (4):

(4) Claire has the three of clubs.

Sarah's statement appears to be untrue. Now imagine that across town Hannah is watching Claire's game and at the same time also utters (4). 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, Sarah and Hannah stated the same thing (i.e. expressed and assented to the same

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<sup>18</sup> "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.

<sup>19</sup> Barwise and Etchemendy (1987): 122 – 3.

proposition) but made different statements (i.e. performed different speech-acts). 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.

What determines the topic situation? Austin thinks it is a demonstration of some sort, albeit typically not any overt gesture. Both Sarah and Hannah have the situation they are looking at in mind and this fact should be obvious to anyone they are talking to. If they wanted to talk about a distant situation, they should have made their intentions clear. Thus, we might think of topic situations as just another parameter of the context of utterance determined by the speaker's communicative intentions.<sup>20</sup>

Can we define 'sentence *S* is true at context *c* and situation *s*' in terms of monadic propositional truth? Certainly not in the way truth at a world and time can. Recall that the proposed definitions run as follows:

- (5) (4) is true at context *c* and possible world *w*
- (5') The proposition expressed in *c* by (4) would be true if *w* were actual
- (6) (4) is true at context *c* and time *t*
- (6') The proposition expressed in *c* by (4) would be true if *t* were present

To follow this blueprint we would need an indexical to pick out the topic situation of a context to play the role 'actual' and 'present' play in (5') and (6'), respectively. But we have no such indexical. Moreover, even if had one it would not help unless it behaved like 'actual' and 'present' within the antecedents of subjunctive conditionals. Not all indexicals do. Take, for example, 'local' and ask yourself whether the proposition that it never snows in December would be true if Australia were local? I take it that the question makes little sense, which suggests that

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<sup>20</sup> It is sometimes suggested that contexts of utterance should not include any parameter whose value depends on speaker-intentions; cf. Gauker (1998) and Bach (2001). I believe this to be an overly restrictive conception of context. Speaker-intentions play a role in fixing the referent even indexicals like 'here' and 'now' – there is typically nothing in the mind-independent environment where these words are used that would determine the size of spatial and temporal regions they are used to refer to. I think this applies to 'I' as well: whether 'Someone touched me' is true when someone touched the coat on my shoulders depends on the context, and this is plausibly due to the fact that the referent of the occurrence of the first person pronoun may or may not include the coat.

*if*-clauses cannot be used to shift the location of evaluation in the way in which they can shift the world or the time. Let's stipulate that 'topical\*' is an indexical that refers to the topic situation of the context. To the extent that I can wrap my mind around this word, it seems to me to pattern with 'local', not with 'actual' or 'present'.

Of course, the fact that 'sentence *S* is true at context *c* and situation *s*' cannot be defined in terms of monadic truth in exactly the way 'sentence *S* is true at context *c* and possible world *w*' or 'sentence *S* is true at context *c* and time *t*' can does not show that it cannot be defined in terms of monadic truth at all. Indeed, there is a *prima facie* plausible definition, which exploits the intuition that situations are *parts* of the world. The idea is that truth at a situation amounts to nothing more than truth at a situation-sized world:

- (7) (4) is true at context *c* and situation *s*
- (7') The proposition expressed in *c* by (4) would be true if *s* were the actual world

(4) is true in Hannah's context because if the card game she has in mind were all there is to actuality Claire would indeed have the three of clubs and false in Sarah's context because if the actual world were just the card game the proposition that Claire has the three of clubs would not be true.

While this might be acceptable in the case at hand, it is not a basis for a general definition. Consider the sentence 'I do not exist' and imagine that Sarah utters it while she is talking about a card game in which she is not a participant. A definition along the lines of (7) and (7') predicts that she is speaking the truth: after all, if that card game had been all there is to actuality, Sarah would indeed fail to exist. But surely one is not speaking the truth when one utters 'I do not exist' no matter what situation one is talking about. The problem cannot be fixed by stipulating that the speaker is always part of the topic situation. Not only would this be unmotivated, it would also fail to get to the heart of the problem: we don't want to say that Sarah would speak the truth if she uttered 'Claire does not exist' either.

At this point one might worry whether the intuitions we seek to preserve are coherent. Does it make sense to say that the statement that Claire has the three of clubs is untrue if made about a

card game where Claire is not present and at the same time insist that the statement that Claire exists is true if made about the same card game? I think it does. It seems plausible that if a proposition is true at a world then it is also true at any situation that is a part of that world. In our hypothetical case, it is true at the actual world that Claire exists so this is true at all actual situations as well. But intuitively, it isn't true at the actual world that Claire has the three of clubs – she has the three of clubs at some part of the actual world and she does not have the three of clubs at another, so neither the proposition that she has the three of clubs and the proposition that she does not have the three of clubs is true at the actual world as a whole. Thus, while being true at a world is a *sufficient* condition for being true at a part of that world, it is not a *necessary* condition. To adopt such a view is to abandon bivalence – a costly but coherent move.

Is there some other way to define truth at a situation in terms of monadic truth? I cannot prove that there isn't but I think these considerations make a strong case that we should not expect that there is. Thus, if we really need the truth-predicate 'sentence *S* is true at context *c* and situation *s*' in the semantics of natural languages we have a case against monadic truth. The question is whether we really need such a truth-predicate. Is the Austinian account of the statements made by Sarah and Hannah correct?

The example of Claire and the three of clubs has been around for a while and it has apparently failed to convince most philosophers. There are two main lines of resistance: the *invariantist* and the *contextualist* one. The invariantist denies the existence of topic-sensitivity, claiming that (4) has the same truth-value as uttered by Sarah and Hannah. The contextualist accepts topic-sensitivity and accounts for it by claiming that Sarah and Hannah express different propositions. There are strong reasons to reject both of these views.

The invariantist might point out that while Sarah's claim is undoubtedly infelicitous it does not seem outright false. Perhaps we find it infelicitous because we are told about her mistaking Emily for Claire and conclude that perhaps she did not mean what she said. If this is all, we can still maintain that as long as Claire has the three of clubs in the game across town, the sentence (4) as well as the proposition it expresses are true *simpliciter*.

This response can be disarmed by changing the example. Suppose that Claire is simultaneously playing two on-line card games, that she has the three of clubs in one but not the other, that Sarah follows the second game on a screen, and that she knows nothing about the first. Then if Sarah makes a bet uttering (4) she loses, and if upon hearing about the other game she challenges her loss in a court of law she loses again. There is no question that Sarah's statement is false – no defense that she did not mean what she said would be taken seriously.

Still, couldn't one insist that the proposition expressed by the sentence she uttered is true, even if this proposition was neither what she said nor what she meant? That would detach the technical notion of proposition expressed by a sentence in a context from the larger project of accounting for linguistic communication. 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, (4) expresses the proposition that Claire has the three of clubs, even though what Sarah meant and said was a different proposition, to wit, that Claire has the three of clubs in the game she follows. This latter proposition is obtained from the proposition expressed through a pragmatic process called *enrichment*.<sup>21</sup>

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? Most people 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 nothing whatsoever to settle the question. 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 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

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<sup>21</sup> The debate on enrichment is voluminous. For a classic attack on the idea, see Stanley (2000) and (2002); for a classic defense, see Recanati (2002) and (2004).

other.<sup>22</sup> But once we come this far, the motivation for denying that the proposition expressed by the sentence Claire uttered is exactly what she said and meant evaporates.

Contextualists accept that (4) is topic-sensitive but argue that this is so simply because it expresses different propositions on different occasions. In their view, in uttering (4) Sarah asserted the proposition that Claire has the three of clubs in *s*, where *s* is the situation Sarah was talking about. The proposition Hannah asserted was different because she was talking about a different situation. What Sarah said was false *simpliciter* and what Hannah said was true *simpliciter*.

Contextualism about topic situations has a really bad consequence. In the original example, the topic situation is the one Sarah is looking at – a situation involving Emily and the particular cards she holds in her hands. Since Emily isn't 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 computer screen Sara is looking at – 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 Sarah said cannot be true.<sup>23</sup> But this is intuitively wrong: in both examples, what Sara said was false but could have been true.

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 Sarah is talking about in the original example is a particular card game where Emily plays but *that very card game* could have been one where Claire plays instead, and that the situation Sarah is talking about in the modified

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<sup>22</sup> There are two other options I am ignoring here. One is to plead ignorance: we just don't know whether the proposition that Claire has the three of clubs is true or false when she has that card in one game but not in another. The other is to preempt the question: 'Claire has the three of clubs' does not express a proposition, only a propositional radical, so it is not the sort of thing that could be true or false. The former option is advocated by Cappelen and Lepore (2005), the latter by Bach (1994). They both seem to me to give up too much of what we want from propositions in a theory of meaning.

<sup>23</sup> It's no good to insist that in some epistemic sense Emily 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 Sarah said could be true in some epistemic sense. Still, it is still predicted to be metaphysically necessary, which is bad enough.

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 Sarah utters ‘A card game is going on’ about 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 said would be necessarily true. And this is still deeply counterintuitive.

I believe the Austinian account of our key example is correct. In claiming that propositions are topic-sensitive, 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 propositions, and unlike contextualists we won’t have to deny their contingency. But accepting topic-sensitivity for propositions isn’t a semantic theory; it’s just a constraint of how semantic theories should be built. The way topic-sensitivity is normally built into semantic theories 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) and the *Austinian proposition* (something that comprises both the infor and the topic situation of the context).<sup>24</sup> The Austinian proposition is supposed to be true *simpliciter* just in case its infor is true relative to its topic situation. I reject Austinian propositions because I don’t think anything could be both content (as opposed to representation that *has* content) and true *simpliciter* (as opposed to true relative to a situation). 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  $s$ . But this proposition isn’t true *simpliciter* – it is true at all situations, which means its truth is no less relative to situations than the truth of  $p$ . Then there is Hannah’s assertion and the belief it expresses when she utters ‘Claire has the three of clubs’ talking about  $s$ . These are both true *simpliciter* but they are representations, not contents of any sort. Representations can be true *simpliciter*, provided their contents are true at the situation they are about.

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<sup>24</sup> See Barwise and Etchemendy (1987) and Barwise (1989).

The central objection against the sort of view I recommend is often 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.<sup>25</sup> 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 I think we are better off respecting them.<sup>26</sup> However, 'Claire has the three of clubs' appears 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*.<sup>27</sup> If this is all objectors mean by completeness I am, of course, more than happy to maintain that there are no complete propositions.

## 5. Worlds, times, events, and propositions

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

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<sup>25</sup> 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.

<sup>26</sup> Chapter 5 of Cappelen and Lepore (2005) contain skeptical arguments against appeals to incompleteness.

<sup>27</sup> 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.

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 suggest using 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 – then we can say that in making a situation a topic we abstract away from the rest of the world and act as if that situation were all there is. Thus, we deem the proposition that Claire cheated everyone true at a situation if everyone in that situation was cheated by Claire, ignoring all those not in the situation who were not.<sup>28</sup> I think this is basically right, 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

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<sup>28</sup> Topic situations, as I understand them do not give us the resources to handle all quantifier domain restriction. 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  $s$ .

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, 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 them 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. Suppose you think that the proposition that the butler might have killed the duchess is true relative to some information but not to others – you can say that this proposition is true at situation where that information is available and false where it is not. 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. I take here no stand on these. What I claim is that debates about various forms of relativism can all be seen as debates about what sorts of topic situations there are how they are to be determined.

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 (8') as logical form to (8), where the variable was supposed to range over events.<sup>29</sup>

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

This analysis can account for the validity of an inference from (8) 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 (8) is valid. What Davidson's proposal does not predict is the validity of the inference from (8) 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 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 the argument. (*Ag* stands for the relation between an agent and an event, *Th* for the relation between a theme and an event.)

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

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<sup>29</sup> Davidson (1967).

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 lived comfortably’ and ‘Claire lived in Maine’ without being entailed by their conjunction, it still sounds odd to suggest that these sentences quantify over living events by Claire. What they quantify over are states or processes. Semanticists often call all such entities events, while they acknowledge 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 (8) in light of its proposed logical form (8''). A natural response would be that it 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 (8) 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 (8) is false at  $s$ . But it’s hard to see why it would be false 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.

I suggest adding an extra situation variable to the logical form of (8), binding it simply with a lambda operator. The extra situation variable is for the topic situation – the event described (which, as I suggested, is also situation) is part of it.<sup>30</sup> (I use ‘ $\leq$ ’ for the parthood relation between situations.)

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

If declarative sentences are predicates of events, events are situations, and declarative sentences express propositions, then propositions are properties of situations. And if that is what propositions are, we can make perfect sense of how the proposition expressed by (8) can be true at some situations but not others: even if there are some slow dealings of the cards by Claire to

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<sup>30</sup> These sorts of logical forms are quite standard in semantics since Berman (1987) and Kratzer (1989). 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, we can pick the topic situation in such a way that it no longer has such a part. 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 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 – if a situation contains both a dealing of the cards by Claire to Dana and a slow dealing of the cards by Claire, it does not follow that it will also contain a slow dealing of the cards by Claire to Dana.

To say that propositions are properties may sound like a category-mistake – I propose to think of it as a reductive 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.<sup>31</sup> 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. How could 'deal' and 'Claire dealt the cards to Dana' have the same kind of meaning? There are two reasons one may feel this way; 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

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<sup>31</sup> Lewis (1979).

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.<sup>32</sup> 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 words and 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 to be both propositions, yet no complement of one can be substituted for a complement of the other. 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.

A semantic theory that relativizes propositional truth to situations and nothing else and assigns propositions to sentences relative to a context (or a pair of contexts, if the topic situation is sometimes set by the context of assessment) can work remarkably well. I think we should tentatively adopt such a conception of semantics and see how far we can go with it.

## 6. Closing

In a recent article, Scott Soames presented the following argument in favor of the thesis that fundamental truth is monadic:<sup>33</sup>

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.

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<sup>32</sup> For detailed arguments, see Stainton (2006).

<sup>33</sup> Soames (2011):125.

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. ‘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 probably 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. They represent not only in virtue of having content, but in virtue of predicating that content of situations they are about. As Austin put it: “It takes two to make truth.”<sup>34,35</sup>

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<sup>34</sup> Austin (1950): 124, n.1.

<sup>35</sup> [Acknowledgements.]

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