Propositions and Same-Saying: Introduction

Philosophers often talk about the things we say, or believe, or think, or mean. The things are often called 'propositions'. A proposition is what one believes, or thinks, or means when one believes, thinks, or means something. Talk about propositions is ubiquitous when philosophers turn their gaze to language, meaning and thought. But what are propositions? Is there a single class of things that serve as the objects of belief, the bearers of truth, and the meanings of utterances? How do our utterances express propositions? Under what conditions do two speakers say the same thing, and what (if anything) does this tell us about the nature of propositions? There is no consensus on these questions—or even on whether propositions should be treated as things at all.

During the second Propositions and Same-Saying workshop, which took place on July 19–21 2010 at the University of Sydney, philosophers debated these (and related) questions. The workshop covered topics in the philosophy of language, perception, and metaphysics. The present volume contains revised and expanded versions of the papers presented at the workshop.

1. Background

The participants in this workshop shared the working assumption that there are propositions. Before delving into a discussion of what propositions are and what they do, it is worth establishing a *prima facie* case that there are such things.

Some arguments against the existence of propositions—most notably the ones advanced by (Quine, 1960; Quine, 1969; Quine, 1951)—appeal to general skeptical principles. Nominalists ask: why believe in spooky, abstract propositions when we can get by with eternal sentences—or perhaps even token utterances of sentences? Skeptics about the intensional ask: can we really make sense of *analyticity*, *synonymy*, *meaning*—or *proposition*—even though none of these is definable in terms of any of the others? Defenders of the slogan 'no entity without identity' insist that until we have a method for discovering when two sentences express the same proposition, we have no business talking about propositions at all.

These skeptical considerations, however, are at odds with sound linguistic and philosophical practise. Compositional semantics assigns functions to each syntactic unit, so that well-formed sentences are assigned propositions—construed as functions from (e.g.) worlds (or 'circumstances') to truth-values.

Furthermore, accounts of belief, knowledge, and metaphysical necessity typically assume that these operators all operate on propositions. The debate is not so much whether such things exist, but what the inputs to such functions are.

At any rate, it is not clear that propositions must violate skeptical principles. Numerous theories purport to give accounts of when two propositions express the same proposition. Furthermore, the modal realism of (Lewis, 1986) gives a theory of propositions that is extensional and, to a large degree, nominalistically acceptable. For Lewis, all possible worlds are equally real, so intensional constructions ('it is possible that . . . ') can be replaced with the extensional ('there is a possible world such that . . . '). Propositions are then sets of possible worlds. Thus for Lewis, propositions are set-theoretic constructions out of extensional entities, with which even Quine should be happy.

Participants in this workshop worked from the shared assumptions that skeptical challenges can be met, that there are such things as propositions, and that it is worthwhile to investigate their nature.

2. Issues

In this section, we introduce some of the more specific issues raised in the papers in this collection, and the background to them.

2.1. WHAT KIND OF ENTITIES ARE PROPOSITIONS?

Given that there are propositions, what are they? In particular, what is their *granularity*—that is, how should we determine when two sentences express the same proposition? Options range from the very fine-grained, on which distinct sentences never express the same proposition, to the very coarse-grained, on which any two sentences with the same truth value express the same proposition. Intermediate options include: S_1 and S_2 express the same proposition whenever they are metaphysically equivalent, whenever they are logically or a priori equivalent, whenever they are equivalent and identical in syntactic structure, whenever they are equivalent and about the same topic, or whenever they share the same set of potential truthmakers.

The 'possible worlds' approach to granularity, exemplified by (Stalnaker, 1976b; Stalnaker, 1976a), equates each propositions with the set of possibilities at which it is true. And advantage of the possible worlds approach is its ability to capture numerous modal and semantic relations among propositions. For instance, the possible worlds approach holds that A entails B whenever A is a subset of B, A is possible whenever A is non-empty, and A and B are incompatible whenever their intersection is empty.

Many critics of the possible worlds approach, including Rabern, Weber, Jago, and Ripley in this volume, adopt hyperintensional approaches, on which distinct propositions can be true in all the same possible worlds. One common argument for hyperintensional approaches is as follows: It seems that someone could believe the proposition expressed by 'Samuel Clemens had a moustache' without believing the proposition expressed by 'Mark Twain had a moustache', even though these propositions are necessarily equivalent. Since necessarily equivalent propositions can have different properties (for instance, one can be believed by Alice, while the other is not) it follows that they are distinct entities.

Hyperintensional approaches can be divided into two camps. The 'structured entities' approach, exemplified by (Soames 1987), treats propositions as structured aggregates of semantically significant parts. According to 'Russellian' versions of the approach, the semantically significant parts include properties and entities—so that, for instance, the proposition *that Fred is happy* is a structured aggregate composed of Fred himself and the property *happiness*. In this volume Kit Fine argues that a structured entities approach propositions captures features of counterfactual reasoning that a possible worlds approach cannot. Since propositions with the same truth conditions embed differently in counterfactuals, he argues, we should replace possible worlds approaches with approaches that discriminate more finely on the basis of propositional structure.

The second, 'circumstantialist' approach, exemplified by Lycan (1997) and Nolan (2000) holds that propositions are sets of possible *and impossible* worlds. (Some authors use 'circumstances' to encompass both possible and impossible worlds.) In this volume, Mark Jago discusses a way of constructing circumstances within an actualist framework, according to which all that is exists is what actually exists. Dave Ripley argues for the circumstantialist approach over the possible worlds approach.

2.2. What Roles Do Propositions Play?

Many of the debates about propositions concern not what they *are* but what they *do*. In contemporary philosophy, the term 'proposition' is often used to talk about the things that are (in the first instance) true or false (the 'primary' bearers of truth and falsity); the objects of belief, desire and other psychological (or 'propositional') attitudes; the the referents of 'that'-clauses; the bearers of alethic modal properties (*being possible* and *being necessary*); and the relata of the various *entailment* relations. Propositions are also often said to be the *semantic content*, *meaning* or *compositional semantic values* of declarative utterances or sentences; or *what is said* in making such utterances.

Given so many theoretical roles associated with the term 'proposition', it is hardly surprising that philosophers are sometimes unsure exactly what

propositions are. David Lewis, for example, says that 'the conception we associate with the word 'proposition' may be something of a jumble of conflicting *desiderata*' (1986, 54). One task for the philosophy of propositions, therefore, is to clarify each of these theoretical roles and to assess whether any single kind of entity can play them all, or even most of them, simultaneously. In this volume, Weber and Rabern discuss *propositional multitasking*, the idea that (some notion of *proposition*) can play all or most of these roles.

Here, we'll say a little about each of the roles commonly associated with the term 'proposition' in the literature, and indicate a few of the points of potential conflict between them.

Bearers of truth and falsity: Many philosophers argue that propositions are the primary bearers of truth and falsity. This is not to deny that other entities or events—utterances, sentences, beliefs etc.—are also capable of being true or false. But, by saying that propositions are the *primary* bearers of truth or falsity, one is saying that the truth or falsity of an utterance or belief depends on the truth or falsity of the proposition expressed by that utterance or on the proposition believed (*what* is believed).

Here is a version of the argument for taking propositions to be the primary bearers of truth and falsity, formulated in terms of belief. We can distinguish between a specific act of believing (a specific mental state or event) and *what* is thereby believed. Whether that belief is true or false depends only on what is believed. It does not depend, for example, on the particular neural realisation of that mental state or event (unless the belief happens to be one about its own particular realisation—but then, this is reflected in the proposition that captures what is believed). Assuming that what is believed is a proposition, we can explain the truth or falsity of a particular belief in terms of the truth or falsity of the proposition believed.

The story is similar in the case of the truth or falsity of particular utterances. In general, the truth or falsity of an utterance depends on only on the content of what is uttered (or *what is said* in making that utterance). The magnitude of the sound waves produced by the utterer, or the particular timbre of her voice, is irrelevant (again, with the exception of utterances about such matters—in which case, such matters are reflected in *what is said* in making that utterance). What is said in making the utterance is a proposition. So again, we explain the truth or falsity of a particular utterance in terms of the truth or falsity of the proposition thereby expressed.

Similar versions of the argument can bet formulated for sentences and other truthbearers. Notice, however, that all these arguments must appeal to certain antecedent theoretical identifications: of *what is believed* and *what is said* (and so forth) with propositions. If it turns out that no entity can play all of these theoretical roles, this casts some doubt on the entire strategy.

The conclusion that propositions are primary bearers of truth or falsity invites further questions about the nature of truth. To be a bearer of truth is to correspond, somehow, to the way things are, and we might ask how this correspondence works. A popular way of cashing out this correspondence idea is truthmaker theory: a proposition corresponds to a part of the world insofar as the part of the world makes the proposition true.

A recurring problem for truthmaker theory, however is the seeming paucity of truthmakers; it is particularly difficult to find truthmakers for negative and universally quantified facts. According to the popular doctrine of truthmaker necessitarianism, a truthmaker's existence should entail the truth of whatever it makes true. In this volume, Rachael Briggs outlines a theory of truthmaking that replaces necessitarianism with a closely related counterpart principle. Also in this volume, Mark Jago defends a theory of truthmaking that keeps necessitarianism, and invokes negative and universal facts. Jago argues that in addition to grounding all the truths of the actual world, his truthmakers can be used to represent possible and impossible situations.

Bearers of alethic modal properties: If one takes propositions to be the primary bearers of truth and falsity, then it is an attractive option to take propositions to be the bearers of the alethic modal properties *being possible* and *being necessary*. In saying that *being necessary* applies to some proposition ⟨p⟩, we are saying that that proposition is *necessarily true* (and not, for example, that the proposition necessarily exists). The reason for thinking that the alethic modal properties attach to propositions and not states of affairs (for instance) is that we want to be able to talk about what is necessarily or contingently *not* the case (e.g., the existence of round squares, or a female American president in 2011). Yet there exist no states of affairs (or at least, no actual states of affairs) to bear these alethic modal properties. What do exist, however, are the necessarily/contingently false propositions ⟨there are round squares⟩ and ⟨there is a female American president in 2011⟩.

Objects of belief and assertion: Beliefs are in some sense shareable: Anna can believe what Bill believes. But Anna's and Bill's shared belief will not be realised in the same way. (For one thing, Anna's and Bill's brains are in different places.) Anna can also doubt or disbelieve what Bill believes, and her doubt or disbelief will be a different sort of disposition from Bill's belief. So philosophers tend to distinguish between the specific mental state or event token and its *content*—what is thereby believed, desired, feared etc.—and identify the latter with a proposition.

In an even more obvious sense, assertions are shareable: Anna can assert what Bill asserts; she can also accept what Bill asserts and thereby make it part of the common ground, or challenge what Bill asserts and thereby make it a topic for debate. Notice that uttering the same words is neither necessary

nor sufficient to assert the same thing. If both Anna and Bill utter the words 'I am terrified of snakes' (in a suitably assertoric tone), each of them conveys different information. Anna's utterance is an assertion that *Anna* is terrified of snakes, whereas Bill's utterance is an assertion that *Bill* is terrified of snakes. What each speaker says (or what the utterance expresses) differs from speaker to speaker.

Conversely, different strings of words can be used to assert the same thing. As Frege noted,

> If someone wants to say the same today as he expressed yesterday using the word "today", he must replace this word with "yesterday". (Frege, 1956, 296)

Utterances of 'today was fun' and 'yesterday was fun', if the latter is made a day after the former, express the same information. In at least one good sense of 'saying the same thing', the speakers of those utterances say the same thing as one another.

The role of propositions as contents of belief is closely related to the granularity question from section 2.1. Anna and Bill say (believe, desire, doubt, etc.) the same thing when their utterances (beliefs, etc.) express the same proposition. So the question of how finely to individuate propositions is closely bound up with the question of when two speakers say (believe, etc.) the same thing.

There is a problem facing possible worlds approaches to granularity, as well as 'Russellian' structured propositions approaches. These approaches entail that utterances of '*a* is *F*' and of '*b* is *G*' say the same thing whenever $a = b$ and $F = G$. The following argument calls this commitment into question. Suppose that, unbeknownst to Bob, $a = b$ and $F = G$, and Alice says that *a* is *F*. Bob believes what Alice says. Cath then says that *b* is *G*. Since Bob doesn't know that $a = b$ and that $F = G$, he needn't believe what Cath says. Suppose he doesn't. Then, since he believes what Alice says, but not what Cath says, Alice and Cath can't have said the same thing, and views that say otherwise are false.

One way to block the argument is to deny the premise that Bob can disbelieve what Cath says, but grant that for pragmatic reasons, it is preferable to characterise Bob as believing that *a* is *F*, rather than as believing that *b* is *G*. An alternative way to block the argument is to distinguish between belief contents and what is said. One might, for instance, align what is said with a coarse-grained entity, such as a set of possible worlds or Russellian structured proposition, but to align belief with finer grained entities, such as a Fregean thought.

Those who find the argument persuasive might instead respond by rejecting the theories in question adopting the circumstantialist approach defended by David Ripley in this volume. Alternatively, they might adopt a Fregean view that alligns what is said (a Fregean proposition, or thought) with an

utterance's *sense* rather than its reference. The Fregean approach immediately raises a new question: what makes for sameness of Fregean sense? Schellenberg, in this volume, discusses the issue.

These samesaying problems have proved difficult to resolve. Schroeter, in this volume, suggests a novel approach. Typically, philosophers try to determine whether Anna says the same thing as Bill by finding the content of Anna's utterance, finding the content of Bill's utterance and comparing them. Schroeter argues that instead, we should begin by determining whether Anna and Bill intend to samesay. When Anna and Bill intend to samesay, we are entitled to presume that they do samesay, and to find a single entity that serves as the content of both utterances.

Compositional semantic values: Human beings have a remarkable ability to produce and understand completely novel sentences. This phenomenon can be explained by *compositionally*—the claim that the meaning of a sentence is fully determined by the meanings, or 'semantic values', of its semantically significant parts, and by how those parts are put together. Propositions are often said to be the semantic values of sentences; for instance, we understand the sentence 'snow is white and grass is green' by combining two propositions: the semantic semantic value of 'snow is white' and the value of 'grass is green'.

A set of rules for generating the semantic values of of sentences based on the semantic values and arrangement of their parts is a *compositional semantics*. We can illustrate this idea with a toy semantic theory. Suppose we have a language containing singular terms, monadic predicates, and Boolean connectives $\wedge$, and $\neg$. Then, given a domain of objects D, we can assign to each term t an *extension* $[\![t]\!]$ which serves as its semantic value, as follows:

Where 'a' is a singular term, $[\![\text{'}a\text{'}]\!]$ is an object $a \in D$.

Where 'F' is a monadic predicate, $[\![\text{'}F\text{'}]\!]$ is a set of objects.

$$[\![\text{'}Fa\text{'}]\!] = \begin{cases} 1 & \text{if } [\![\text{'}a\text{'}]\!] \in [\![\text{'}F\text{'}]\!] \\ 0 & \text{else} \end{cases}$$

$$[\![\text{'}A \wedge B\text{'}]\!] = [\![\text{'}A\text{'}]\!] \times [\![\text{'}B\text{'}]\!]$$

$$[\![\text{'}\neg A\text{'}]\!] = 1 - [\![\text{'}A\text{'}]\!]$$

So here, our 'propositions' are truth values, and there are two of them: the True and the False.

We can use our toy theory to determine the semantic value of the sentence

(1) Obama is president of the USA in 2011.

We have:

⟦'Obama is president of the USA in 2011'⟧

$$= \begin{cases} 1 & \text{if } ⟦\text{'Obama'}⟧⟦\text{'being president of the USA in 2011'}⟧ \\ 0 & \text{else} \end{cases}$$

$$= \begin{cases} 1 & \text{if Obama } \in \{\text{presidents of the USA in 2011}\} \\ 0 & \text{else} \end{cases}$$

$$= 1.$$

So the theory tells us that sentence (1) is true—a welcome result.

Likewise, our theory lets us determine the semantic value of

(2) Obama is president of the USA in 2011 or Obama is not president of the USA in 2011.

We have:

⟦'Obama is president of the USA in 2011 or Obama is not president of the USA in 2011'⟧

$= \max\{⟦$'Obama is president of the USA in 2011'$⟧, ⟦$'Obama is not president of the USA in 2011'$⟧\}$

$= \max\{1, ⟦$'Obama is not president of the USA in 2011'$⟧\}$

$= 1.$

So our theory tells us that (2) is true too.

Modal operators, however, create trouble. Consider two more example sentences.

(3) Necessarily, Obama is president of the USA in 2011.

(4) Necessarily, either Obama is president of the USA in 2011 or Obama is not president of the USA in 2011.

Intuitively, (3) is false, while (4) is true. Our toy semantic theory, however, cannot explain why (3) and (4) have different truth values: both result from applying the 'Necessarily' operator to sentences with semantic value 1. According to the principle of compositionality, applying the same operator to same-valued clauses should yield sentences with the same meaning.

We can refine the toy theory by building more structure into our compositional semantics. We might build this structure into the propositions themselves, letting them be functions from possible worlds to truth values. (Notice

that this refinement yields a possible-worlds conception of propositions: saying that a proposition is a set of possible worlds is a notational variant on saying that it is the *characteristic function* of a set of possible worlds, which maps worlds in the set onto the value 1 and other worlds onto the value 0.) We can then write the semantic value of (1) as '$[\![$'Obama is president of the USA in 2011.'$]\!]^{w}$'. (The superscript signifies that this semantic value is a function which takes worlds as arguments.) We will need a slightly more complicated account of truth—propositions will be true or false at worlds, instead of true or false simpliciter.

Alternatively, we might keep our commitment to the claim that there are only two propositions (the True and the False) but claim that which proposition a sentence expresses depends partly on the value of some contextually-determined parameter. One way to accomplish this is to build more structure into the semantic values of predicates, letting them be functions from worlds to sets of objects, rather than simply sets of objects. We could then write the value of 'is president of the USA in 2011' as '$\langle$'being president of the USA in 2011'$\rangle^{w}$'. This second strategy would require us to pull the concept of a compositional semantic value apart from the concept of a proposition— although (1) and (2) express the same proposition, they must have different semantic values in order for (3) to be false while (4) is true.

It is not only modal operators that us to complicate our semantics; tense operators such as 'It will be the case that...' raise similar problems. The solutions are also similar: we can relativize propositions to times, or we can to introduce a contextually-determined time parameter that helps fix which proposition a sentence expresses. In this volume, Schaffer, Weber, and Rabern discuss the temporal analogue of our modal operators. Schaffer argues for uniform treatment of modal and tense operators: we should either relativize propositions to both worlds and times, or say that there are only two necessary, eternal propositions–the True and the False. Weber and Rabern argue that because of the way sentences embed under temporal operators, we have good reason to distinguish between the objects of belief and assertion on one hand, and the semantic values of sentences on the other—no one object can play both roles.

3. Papers

In this section, we briefly introduce each of the papers in this collection.

Briggs provides an account of truthmakers which includes truthmakers for negative truths, without relying on negative facts, totality facts or reified absences. She does this by replacing the usual *necessitation* condition on truthmaking with a more general, and more flexible, requirement. This ac-

count, she argues, captures the intuitive notion of truthmakers as 'things the way they are'.

Fine   argues against possible worlds theories of propositions on the grounds that they can't capture the semantics of counterfactuals.

Jago   discusses an approach to fine-grained content in terms of possible and impossible worlds. He gives a method for constructing ersatz worlds based on theory of substantial facts. He argues that this theory overcomes an objection to actualist constructions of ersatz worlds, and that it gives rise to useful notions of fine-grained content.

Rabern   argues that what is said in an utterance (which he calls *assertoric content*) cannot be identified with that sentence's compositional value. He investigates the theoretical picture that results from denying the identification of assertoric content with compositional value.

Ripley   Compares two ways to deliver fine-grained propositions (which, for Ripley, are the compositional values of sentences): *structuralism* and *circumstantialism*. He argues that structuralism—the approach of adding syntactic structure to the possible-worlds account of propositions—delivers propositions which are still too fine-grained for many purposes. He then argues that circumstantialism, which constructs propositions from possible and impossible worlds (or 'circumstances') overcomes these problems, as well as an objection raised by Soames.

Schaffer   discusses the role of worlds in semantics, and whether the semantics should treat individuals, worlds, and times in parallel ways. Schaffer argues for the parallelism thesis, which holds that either propositions are neutral with respect to world and time information, or else that they encode both world and time information. He reviews arguments for eternalism about propositions, which holds that propositions encode time information (and so, if true at any time, are true at all times). He argues that parallel arguments are just as good (or as bad) arguments for necessitarianism about propositions, which holds that propositions encode world information (and so, if true at any world, are true at all worlds).

Schellenberg   discusses the conditions under which two utterances express the same thought, or *Fregean sense*. She considers and rejects accounts in terms of logical equivalence and intensional isomorphism, and instead opts for an account in terms of *epistemic equipollence*.

Schroeter   discusses the issue of sameness of meaning. She argues that (i) sameness of meaning must somehow guarantee sameness of subject matter,

in a way that is accessible to ordinary speakers; but also that (ii) sameness of meaning must allow for speakers' fallibility about the subject matter. She claims that traditional accounts of meaning cannot meet both constraints. She proposes an account on which meanings are individuated relationally via speakers' taking token uses of words to same-say.

Weber discusses *propositional multitasking* and its compatibility with the view that proposition have their truth-values eternally. He develops an argument, based on the Lewis-Kaplan *operator argument*, which attempts to show that compositional values cannot be eternal propositions.

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