

The Routledge Handbook of Propositions

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(PUP 2005), *What is Meaning?* (PUP 2010), *Philosophy of Language* (PUP 2010), *New Thinking about Propositions* (with Jeffrey C. King and Jeff Speaks, OUP 2014), *The Analytic Tradition in Philosophy, Vol. 1: The Founding Giants: Frege, Moore, Russell* (PUP 2014), *The Analytic Tradition in Philosophy, Vo. 2: A New Philosophical Vision* (PUP 2017), *Rethinking Language, Mind, and Meaning: The Hempel Lectures* (PUP 2015), and *The World Philosophy Made* (PUP 2019). Soames's work is collected in two volumes of philosophical essays (PUP 2009), and appears in such journals as *Analysis*, *Canadian Journal of Philosophy*, *The Journal of Philosophy*, *Linguistics and Philosophy*, *Noûs*, *Philosophical Issues*, *Philosophical Review*, *Philosophical Studies*, *Philosophy and Phenomenological Research*, *Proceedings of the Aristotelian Society*, and *Synthese*.

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Introduction

Adam Russell Murray and Chris Tillman

1 Propositions

It's hard to overstate the importance of propositions. We'll try anyway.

If you're like us, you don't think about an apple by having an apple inside your head. If anything, that would be a hindrance. Perhaps, instead, when thinking of an apple you form a mental image of an apple. But this strategy does not readily generalize. Consider *goodness*. Not a good *thing*, but rather goodness itself. It doesn't seem like you think about goodness by forming a mental image of goodness. What would goodness—as opposed to images of good things—even look like?

Furthermore, suppose you think something a bit more complicated, like *apples are good*. In doing so, it doesn't seem that you stitch together your mental image of apples along with a (supposed) mental image of goodness. Perhaps, instead, you think that apples are good by considering the sentence, 'apples are good'. But that can't be the whole story. 'Apples are good' is a sentence of English, and not everyone who can think that apples are good does so by having a special relationship with a sentence of English. A monolingual Spanish speaker, for instance, can think just what you think by considering 'las manzanas son buenas' instead. So, in general, we do not think of things by forming mental images of them, nor do we think of things merely by considering sentences about them.

So how *do* we manage to think of things? A traditional answer appeals to *propositions*. We think that apples are good by bearing the *thinking* relation to the *proposition* that apples are good. So what, exactly, are propositions? The scientifically minded may only accept an answer that can ultimately be spelled out in terms of the fundamental posits of physics. The metaphysically liberal-minded might find a less austere answer congenial. But whatever the answer, the question is pressing: it concerns nothing less grand than the connection between Mind and World.

To investigate the nature of propositions is to investigate the very nature of our connection to the world around us. As a part of connecting us to the world at large, propositions connect us with each other. We connect with each other by communicating, and the engine of communication runs on propositions. We use bits of language to encode propositions, and we communicate propositions to each other by making those bits of language public. As a result, we can consider novel pieces of information, integrating them into our picture of the world. Our entire store of knowledge and body of beliefs consist in a raft of propositions. Propositions make up much of the intellectual and cultural inheritance passed on from our progenitors to us, and from us to our progeny. They constitute our laws and our very identities. We dedicate ourselves to them. Some of them we even hold to be self-evident. According to ancient legend, Prometheus brought civilization to humanity

in the form of fire. But that, of course, is just a myth. It would be more accurate to say that civilization was brought to humanity in the form of propositions.

Unsurprisingly, then, propositions are routinely invoked by philosophers, linguistics, logicians, and other theorists engaged in the study of meaning, communication, and the mind. This volume aims to provide a comprehensive overview of the philosophy of propositions, from contemporary and historical perspectives.

2 Realism about Propositions

So, what *are* propositions?

This question divides into two parts. Call these *the category question* and *the role question*.

An answer to the category question begins with our earlier observation that propositions are not made of bits of English or Spanish, and attempts to provide a positive characterization of what propositions are. This might be done by identifying propositions with more metaphysically familiar entities, like properties, sets, or cognitive acts. It might also be done by identifying propositions with *sui generis* entities, not reducible to or constructed from entities with which we are more familiar.

An answer to the role question begins by pointing to a cluster of interrelated theoretical roles propositions have traditionally been assigned (see, e.g., [Lewis 1986](#), ch. 1).¹ Central here are several broadly *semantic* roles. On many views, a declarative sentence in context semantically encodes a piece of information, and this semantically encoded information is (or includes) a proposition (see, e.g., [Frege 1918/1956](#), [Kaplan 1977/1989](#), [Stalnaker 1984](#), ch. 1, and [Salmón 1986](#)). So, for example, on this view the information encoded by an assertion of ‘Trump lost the election in 2020’ is the proposition that Trump lost the election in 2020, and it is that proposition that an assertion of the sentence communicates. Other theoretical roles are more *cognitive*, or *epistemic*, in character. For example, propositions are often identified with the “objects” of intentional attitudes like belief, doubt, and knowledge.² On these views, if one believes, or knows, or doubts that Trump lost in 2020, what is believed or known or doubted is the proposition that Trump lost in 2020. Other theorists identify propositions with the contents of certain perceptual states ([Speaks 2009, 2015](#), [Siegel 2010, 2016](#), and [Schellenberg 2018](#); compare [Gauker 2012](#)).³ A final cluster of roles are broadly logical in nature. Many theorists view propositions as the primary relata of the the consequence

¹Peter van Elswyk and Susan Brower-Toland (this volume) call an answer to the role question a *functional characterization* of propositions.

²For discussion, see [Cartwright 1962](#), [Anderson 1990](#), [Richard 1990](#), [Schroeder 2006](#), and [Nelson 2019](#). As contributions to the volume by Neil Feit, Friederike Moltmann, and Ray Buchanan and Alex Grzankowski illustrate, the precise nature of the connection between propositions and the intentional attitudes is far from uncontentious.

³Additional cognitive roles that have been assigned to propositions include serving as the primary bearers of epistemic properties like *cognitive significance* ([Frege 1892/1960](#)), and *a priority* and *a posteriority* ([Soames 2005](#), 43–83; compare [Tillman and Spencer 2012](#)).

relation, as the primary bearers of *truth* and *falsity*, and as the bearers of modal properties like *contingency*, *necessity*, and *impossibility*. An adequate answer to the role question requires further refining this list of roles, and determining which type of entity, if any, best satisfies them.

Putting together an answer to the category question with a positive answer to the role question yields a *realist* theory of propositions. The central task of a realist theory of propositions is to provide an account of their nature that coheres with and, ideally, illuminates many of the theoretical roles that propositions have traditionally been introduced to play.⁴ Like any philosophical theory, realism about propositions has its detractors, and anti-realism about propositions (or proposition-like entities) has enjoyed some degree of popularity across much of philosophy's history. We discuss some more recent motivations for propositional anti-realism in §3 of this introduction. Nevertheless, the substantial majority of the papers in this volume approach the philosophy of propositions from a decidedly realist ontological perspective.⁵

Even among propositional realists, open questions remain regarding both the nature of propositions and our capacity to engage with them in thought and communication. Those questions include at least the following:

- What explains the truth-aptitude of declarative speech and thought? For example, is it that propositions *represent*—either mediately or immediately—that the world is thus-and-so? And what would it be for such representation to be veridical or non-veridical?
- What explains our capacity to engage cognitively with propositions? For example, what is it to understand, or grasp, or entertain, a proposition? More generally, what is the connection between propositions and various cognitive states, like knowledge and belief? What sense (if any) is there in supposing that propositions are the immediate objects of the intentional attitudes?
- What role do propositions play in explaining the connections between various mental states, like hope and despair? What role do they play in the determination of rational action and practical deliberation?
- What are the structural similarities, if any, between language and thought? For example, does the syntactic structure and grammatical unity of a meaningful sentence imply that the proposition it expresses is also structurally complex? Do propositions have sub-propositional structure, or are propositions in some sense structurally simple?
- A related cluster of questions concern the intuitive “unity” of propositional information. We believe that Trump lost the election in 2020, and presumably you do as well. So there is

⁴To say this is not to prejudge the possibility that different types of entity might satisfy different roles traditionally assigned to propositions (Lewis 1986, ch. 1). For example, perhaps the entities identified with propositions in the theory of intentionality differ from those required to serve as bearers of truth and falsity.

⁵Though as the contributions in Part I of the volume illustrate, propositional realism itself comes in many varieties.

some *thing* we believe. That thing is not some disparate collection consisting of (e.g.) our individual mental representations of Trump and the property of *losing*. So what explains the unified character of this thing we each believe, when we each believe that Trump lost? Do appeals to propositional “structure” help in this connection?

- Finally, what is the connection between propositions and (linguistic) meaning? On some views, that connection is direct: propositions just *are* meanings. On other views, the connection is less direct: a proposition is the information encoded by a sentence, and that information is determined relative to a context by the sentence’s standing linguistic meaning (its “character”, in the sense of [Kaplan 1977/1989](#)). On still other views, it is a mistake to identify any single entity with *the* proposition expressed by a declarative sentence; perhaps instead a typical declarative sentence is semantically associated with multiple propositions, each corresponding to an aspect, or “dimension”, of that sentence’s linguistic meaning ([Davies and Humberstone 1980](#); [Chalmers 2006](#)).

Naturally, a wide range of issues bear upon the propositional realist’s explanatory project, including matters metaphysical, semantical, logical, epistemological, and psychological. These issues are taken up to varying degrees in the essays collected here.

3 Overview

This volume is suitable for upper-level undergraduates, graduate students, and professional researchers. The volume divides into three parts.

Part I concerns foundational issues in the theory of propositions, and includes contributions by **Peter van Elswyk** (on the linguistic basis for propositional realism), **Mark Richard** (defending a view of propositions as theoretical posits) and **Ori Simchen** (defending a view of structured propositions as instrumental representations of what is said). Part II is devoted to historical theories of propositions. **Dimitrios Dentsoras** explores issues surrounding doxastic content and communication in the pre-Socratics, Plato, Aristotle, and the later Stoics. **Susan C. Brower-Toland** discusses William of Ockham’s views of propositions and their significance for later medieval theories of meaning. **Lewis Powell** discusses the relationship between propositional contents and judgements in John Locke’s philosophy of language. **Damian Melamedoff-Vosters** investigates the connections between Kant’s transcendental idealism and Kant’s view of mental events as the primary bearers of truth and falsity. **Sandra LaPointe** discusses the role of Bernard Bolzano’s notion of *Sätze an sich* in his theories of entailment, truth, and scientific rationality. Contributions by **Mark Textor** (discussing Frege’s theory of thought and communication) and **Dominic Alford-Duguid** and **Fatema Amijee** (discussing the development of Russell’s thinking on propositions) round out the volume’s historical coverage.

Part III of the volume is devoted to contemporary theories of propositions. **Nate Charlow** develops a view of propositions as “flexible” types of possibilities, while **Mark Jago** advances a theory of propositions as sets of (actual and possible) truthmakers. **Jeffrey C. King** develops

a view of propositions as structurally complex facts that encode syntactic features of declarative sentences. **Thomas Hodgson** upholds a view of Russellian structured propositions as interpreted abstracta. **Peter Hanks** and **Scott Soames** promote variants of a theory of propositions as intrinsically predicational cognitive act-types. **Jeff Speaks** defends a theory of propositions as monadic Cambridge properties, instantiated by everything or nothing. **Cody Gilmore** refines the view of propositions as 0-place relations, and explains how propositions so conceived are capable of having the particular truth conditions they do. **Lorraine Juliano Keller** outlines a view of propositions as structurally simple, fine-grained, abstract entities possessing their truth conditions essentially and fundamentally. **Ben Caplan**, **Chris Tillman**, and **Eileen Nutting** develop a hylomorphic theory of propositions, on which the constituent parts of a proposition are united into a complex whole by a primitive propositional “building” relation. **Berit Brogaard** defends propositional *temporalism*, according to which some propositions can change their truth values over time. **Neil Feit** explores the prospects for irreducibly *de se* belief. **Stephen Schiffer** exploits propositional relativity features to motivate a theory of propositions as pleonastic entities. **Adam Murray** works out a necessitist theory of propositional object-dependence. **Friedrike Moltmann** presents a theory of non-propositional attitudinal objects. **Ray Buchanan** and **Alex Grzankowski** advance a minimalist theory which individuates propositions in terms of the mental states of which they are contents. **Seyed N. Mousavian** scrutinizes theories of “gappy” structured propositions. **Joshua Spencer** proffers a novel plenitudinous view of Russellian structured propositions. **Chulmin Yoon** provides an opinionated survey of relationalist theories of semantic content. **David Braun** critically evaluates extant theories of the semantics of questions and the objects of interrogative cognitive acts. **Jesse Fitts** takes up the propositional Benacerraf problem. **Richard Gaskin** develops a syntax-driven conception of ontological commitment. And finally, **Harry Deutsch** explores the prospects for paradox-free theories of propositions.

4 The Structure of this Volume

In the remainder of this introduction we provide a more detailed overview of the volume.

4.1 Foundational issues in the theory of propositions

Part I addresses perhaps the most foundational issue in the theory of propositions: our reasons for realism in the first place. We can distinguish two types of evidence in favour of realism. The first is more metaphysical: propositions have traditionally been thought to play various theoretical roles, and we should believe in entities that satisfy those roles. (We shouldn’t believe that we don’t believe anything!) The second is more linguistic: there is ample syntactic and semantic evidence that motivates propositional realism. Peter van Elswyk focuses on the latter motivations and surveys the linguistic basis for realism about propositions.

One could be forgiven for thinking that the case for propositions supports a *robust* realism about propositions. A realist theory is robust when it takes propositions to exist independently of

semantic theorizing. Mark Richard and Ori Simchen develop moderate realist views that attempt to respect the metaphysical and linguistic evidence while circumventing the strong robust realist conclusions.

The linguistic basis for propositions

Peter van Elswyk begins by discussing influential competitors to propositional realism: Davidsonian truth-theoretic semantics (Davidson 1967) and internalist semantics as developed by Chomsky (1995), and more recently, Pietroski (2018). While cautioning that his goal is not to give the final verdict on the ultimate viability of such anti-realist approaches, van Elswyk gives reason to think that theories which assign propositions in order to explain various linguistic phenomena enjoy broader explanatory success. van Elswyk identifies a more serious threat to realism in theories which identify non-propositional entities with the semantic contents of declarative sentences in context.⁶ However, van Elswyk argues that such approaches still require propositions for the purposes of constructing a compositional semantics. On these views, the final semantic value of many complex declaratives is determined only when a (non-propositional) content composes with a proposition.

Drawing on discussion by King (2002), van Elswyk observes that a realist view of propositions is motivated by considerations involving designation. The idea is that only the realist can provide an adequate semantics for languages that include expressions that ostensibly designate propositions, but which cross-cut a variety of syntactic categories, including free relatives, anaphors, and the more commonly considered complement clauses, definite descriptions, and singular terms. While allowing that such considerations are far from straightforward, van Elswyk argues that an across-the-board resistance to realist arguments from designation is unconvincing. Additional motivation for realism arises in connection with Frege's (1918/1956) *force–content* distinction.⁷ Roughly, important aspects of force are determined by constitutive rules for assertion that are not entirely semantic. So propositional semantic contents are required in order to underwrite the very distinction between the content and force of a token speech act.

Considerations involving assertion provide further grounds for propositional realism. van Elswyk distinguishes representational and non-representational theories of assertion, and argues that non-representational theories fail. However, representational theories of assertion straightforwardly presuppose the existence of propositions, since such theories characterize the aim of assertion in terms of constitutive norms relating a speaker to a (propositional) semantic content.⁸ Van

⁶For example, on certain forms of dynamic and commitment-state semantics, sentential semantic values are identified with (non-propositional) update potentials. On dynamic semantics, see Stokhof et al. 1996; on commitment-state semantics, see Krifka 2015.

⁷While some philosophers, such as Hanks (2007, 2015), reject the force–content distinction altogether, those who accept it can avail themselves of an argument for realism from the theory of speech acts.

⁸Such constitutive norms may be broadly epistemic, as on the knowledge-norm theory of assertion developed by Williamson (2000). But views on which the constitutive norm of assertion is construed in non-epistemic terms, as

Elswyk concludes that there is a strong linguistic basis for propositional realism, though perhaps not exactly as typically conceived.

Propositions as theoretical posits

Mark Richard defends a moderate realist view of propositions as products of semantic theorizing. On this view, despite being theoretical posits, propositions satisfy the various semantic, cognitive, and logical roles with which they are traditionally associated. Richard opposes realist theories on which propositions are *sui generis* entities, capable of representing the world as being thus-and-so, and consequently of having the particular truth conditions they do, as a matter of their intrinsic nature. By contrast, on Richard's moderate realist theory, propositions are indeed representational and truth-evaluable in the traditional sense, but they are so only derivatively, in virtue of being introduced in the course of semantic theorizing to serve as representational and truth-evaluable semantic contents. On this view, it is not a proposition that somehow *makes* a particular token utterance or thought true or false, as a matter of its intrinsic representational character. Rather, it is the token utterance or thought itself which is (intrinsically) representational and truth-evaluable. The proposition is a theoretical posit which inherits its truth-conditions and associated representationality from that of the token utterance or thought, precisely in virtue of being posited to do so.⁹

While the above constitutes the core of Richard's theory, Richard nevertheless speculates about the identity of propositions. Natural language semantics places constraints on propositions.¹⁰ But those constraints are not so demanding that they leave no room for matters of metaphysical preference. And as a matter of metaphysical preference, Richard gravitates toward identifying propositions with states of affairs.¹¹ But beyond the hard constraints imposed by semantic theorizing, Richard is amenable to accommodating alternative metaphysical predilections.

Instrumentalism about structured propositions

Ori Simchen defends an instrumentalist view of structured propositions. Structured propositions have an internal structure that mirrors the syntactic structure of the sentences that express them. For example, the sentence 'Amy loves Mary' has syntactic structure: it predicates the *loving* relation of Amy and Mary (in that order). The structured proposition expressed by 'Amy loves Mary' incorporates the individual semantic contributions made by 'Amy', 'Mary', and 'loves'. On a Russellian implementation of the idea, those semantic contributions just are the individuals Amy

on Stalnaker's (1978) view of assertion as a proposal to update the common ground of a discourse context, count as representational in van Elswyk's sense as well.

⁹Other theorists who advance an inheritance model of propositional representation include Hanks (2011, 2015) and Soames (2015). See Caplan et al. 2013 and Buchanan and Grzankowski (this volume) for criticism of the idea.

¹⁰For example, whatever propositions are, they need to determine truth conditions and aboutness relations.

¹¹On Richard's view, states of affairs are properties, or way for things to be. Richard suggests that states of affairs are most apt to serve as the semantic values of the complement clause in ascriptions of the form 'S believes that P'.

and Mary, together with the *loving* relation (Russell 1903). We might conventionally identify the resulting proposition with the ordered pair $\langle\langle\text{Amy, Mary}\rangle, \text{loving}\rangle$ in which those entities figure as immediate constituents.¹² On Simchen's view, that ordered pair is a merely instrumental—as opposed to realistic—representation of what is said by 'Amy loves Mary'. A representation is realistic, in Simchen's sense, when it purports to reveal some aspect of the intrinsic nature of whatever is being represented. By contrast, a representation is instrumental when it serves a merely explanatory role that does not purport to illuminate any deep aspect of that nature.¹³

Simchen's argument for instrumentalism is partly abductive. First, instrumentalism simply avoids many of the long-standing problems that face realists. Among these is the problem of *propositional unity* (Russell 1903, 50). Amy, *loving*, and Mary are constituents of the proposition that Amy loves Mary. But what is said by 'Amy loves Mary' is a unified whole. And nothing about Amy, Mary, and *loving*, considered separately, effects this unification. Realists can offer proposals (membership in the case of sets; parthood in the case of fusions, etc.), but each of these is problematic in its own right. Better to follow the instrumentalist and avoid the problem altogether.

In addition to the problem of propositional unity, realists have a *Benacerraf problem* (Benacerraf 1965; Jubien 2001).¹⁴ Why should the proposition that Amy loves Mary be identified with (something like) the structure $\langle\langle\text{Amy, Mary}\rangle, \text{loving}\rangle$, as opposed to any other structured complex comprised of those entities? Absent reason to choose, perhaps *no* candidate deserves to be viewed as the structured proposition at issue.

A final challenge concerns the *truth-aptness* of structured propositions. What is said has truth-conditions, whereas to suppose that a mere ordered *n*-tuple of semantic values possesses truth-conditions seems categorically inapt. Simchen argues that these challenges do not arise for the instrumentalist, since the manner in which structured propositions represent what is said does not purport to reveal the intrinsic nature or essence of what is said. Accordingly the instrumentalist can agree with our intuitive judgements concerning the unity, uniqueness, and truth-aptness of what is said, without regarding these aspects of what is said as being somehow codified in the intrinsic nature of structured propositions.

Simchen further argues that certain characteristic hallmarks of successful realist representation are absent in the case of structured propositions. Specifically, a successful realist representation *makes intelligible* what is represented, by affording insight into the intrinsic nature of whatever is represented. But structured propositions, Simchen maintains, are not similarly revelatory as regards the intrinsic nature of sentential meaning. Simchen's entry concludes with a discussion of the Russell-Myhill paradox and its implications for realist theories of structured propositions (Russell

¹²See (e.g.) Salmón 1986 and Soames 1987 for development of the Russellian picture.

¹³Simchen provides a helpful illustration of the distinction by suggesting that a representation of gold within physical chemistry as the element with atomic number 79 can be viewed realistically, while the representation of that element within the history of economics as the conversion-standard in pre-20th century monetary systems is merely instrumental. The idea is that only the former representation is revelatory as regards what gold *is* in a fundamental sense.

¹⁴See Fitts (this volume) for discussion of the Benacerraf dilemma for propositional realists.

1903, Appendix B; Myhill 1958).¹⁵ Simchen argues that existing solutions to the paradox, including Russell’s own solution involving ramified type-theory and the Morse-Kelly solution advocated by Deutsch (2014), serve to undermine realist theories of structured propositions, thus providing further support for Simchen’s preferred instrumentalist view.

4.2 Historical theories of propositions

Part II is devoted to historical antecedents of contemporary theories of propositions, spanning from the ancient period, through the medieval, early modern and modern periods, to foundational work on propositions by Gottlob Frege and Bertrand Russell at the dawn of the contemporary period.

Disparate and seemingly paradoxical aspects of belief and assertion captivated thinkers as far back as the pre-Socratics. Ancient theorizing about informational content arguably culminated in the Stoics’ recognizably modern-seeming theory of propositions. Subsequent thinkers by and large fell short of the Stoics’ metaphysical boldness and retreated to theorizing about informational content in terms of inscriptions or mental representations, rather than mind-independent propositions. The trend reversed itself in the 19th century with thinkers like Bolzano, Meinong, and Frege. These figures were also major influences on Russell, and are more or less directly responsible for the current landscape of theorizing about propositions.¹⁶

The Pre-Socratics, Plato, Aristotle, and the Stoics

Pre-Socratic thought about propositions, or proposition-like entities, centered upon various paradoxes concerning belief and assertion. These included Parmenides’s view that nothing negative could be believed or asserted, and Protagoras’s view that false belief and assertion are impossible. As Dimitrios Dentsoras explains, Plato was similarly exercised by Protagoras’s concerns.

Dentsoras suggests that Plato in the *Theatetus* was amenable to something like a proto-Russellian theory of acquaintance, on which the formation of a thought about an object requires acquaintance with that object.¹⁷ Later, in the *Sophist*, Plato would come to abandon this acquaintance-based model of belief, due to its leading him to the uncomfortable pre-Socratic position that false belief is impossible. Plato reconciled himself with the possibility of false belief by identifying an atomic

¹⁵See Deutsch *this volume* for further discussion of the Russell-Myhill paradox.

¹⁶It goes without saying that a proper history of thought about language and mind demands, at a minimum, its own volume. (Or, better, volumes; c.f. Copenhaver and Shields 2019). As such, we make no claim to comprehensiveness for this section of the volume. Rather, the historical lines traced here reflect a few (perhaps idiosyncratic) highlights we found to be of interest, with each author’s individual contribution engaging in detailed historical analyses and philosophical assessments of the views of certain influential historical figures. We have endeavored, to the extent of our abilities, to fill some of the historical gaps between the focused discussions of individual thinkers, with one eye toward providing a sense of the evolution of thought about thought, and another toward the influence of past thinkers on contemporary debates.

¹⁷See, e.g., Russell 1911b. Russell’s views are discussed in greater depth in Dominic Alford-Duguid and Fatema Amijee’s contribution to this volume. As Dentsoras points out, Plato’s view in the *Theatetus* was restricted to perceptual acquaintance.

statement (or *logos*) with a “weaving-together” of a name and a verb, with the truth value of an atomic statement being determined by whether the object and action denoted by the name and verb “belong together”. Thus the statement (and corresponding belief) that Theatetus flies is represented as false, on Plato’s *Sophist* account, because it weaves together Theatetus and flying despite flying not being something that Theatetus does.

In contrast with Plato, Aristotle endorsed a more recognizably modern view of truth and falsity. For Aristotle, truth is a matter of correspondence with an obtaining state of affairs, as opposed to a “weaving together” of a name and a verb. Aristotle’s view extended to his account of false belief. For Aristotle, the proposition that Theatetus flies and its negation are about the same state of affairs, namely *Theatetus’s flying*. The falsity of the former proposition is explained, on Aristotle’s view, by the non-obtaining of that state of affairs. An equally noteworthy aspect of Aristotle’s thinking on propositions is his endorsement of *temporalism*, according to which a proposition may be true at one time and false at another.¹⁸ As Dentsoras explains, these aspects of Aristotle’s thinking bear directly upon the interpretation of his notoriously difficult views on the problem of future contingents (‘there will be a sea-battle tomorrow’).

With the Stoics we find the first recognizably modern conception of propositions. It was the Stoics who first distinguished the linguistic *vehicle* of meaning from the vehicle’s content, thus overcoming limitations of previous views in explaining the communicability and shareability of belief. The Stoic term for the common content of shared belief was ‘lekta’, which the Stoics similarly identified with the bearers of truth and falsity, with true lekta having the additional feature of “belonging” or “being the case” (*hyparchein*). Notably, a principal Stoic ontological thesis was that only causally efficacious bodies exist, thus leading the Stoics to recognize a category of ontological “subsistence” which included lekta and other non-existent entities. In this respect, Stoic thinking anticipated modern views in the ontology of propositions due to Bolzano (1837/2014) and Meinong (1904).¹⁹

Ockham and later Medieval theorists

Investigations into medieval theories of propositions are complicated by the fact that many philosophers of the period followed Boethius (Ca. 522/1860) in reserving the term ‘*propositio*’ for token acts of written or mental speech.²⁰ Thus, for many medieval theorists, propositions were viewed as entities which designate, or *signify*, that which is true or false, and not as the fundamental bearers of truth values themselves.²¹ Nevertheless, despite these terminological differences, the medieval

¹⁸Propositional temporalism is the subject of Berit Brogaard’s contribution to the volume.

¹⁹Bernard Bolzano’s theory of propositions is discussed by Sandra Lapointe in this volume.

²⁰See Nuchelmans 1996, 197, and McGrath and Frank 2020. Indeed, even as recently as Russell 1904a ‘proposition’ is used in the sense we reserve in this volume for ‘sentence’ (or ‘declarative sentence’).

²¹For example, one finds in the work of Peter Abelard a basic distinction between *dicta*—corresponding roughly to *what is said* by a token declarative speech act—and acts of assertion, with *dicta* identified with the fundamental bearers of truth values. See Abelard 1136/1970, 160, and Nuchelmans 1973, 200-201 for discussion.

period was a fertile one in the development of many recognizably modern themes in the philosophy of language, the philosophy of mind, and the theory of communication.

A relatively common theme throughout the medieval period was a focus on so-called *mental propositions*, roughly understood as either complex concepts or token sentences in a language of thought. Views of mental propositions as either the fundamental or derivative bearers of truth values were developed by such diverse philosophers as Gregory of Rimini, John Buridan, Robert Holkot, and perhaps most notably, William of Ockham.²² Susan C. Brower-Toland's contribution examines medieval theories of belief and other intentional attitudes, focusing on Ockham's views and their influence on his contemporaries, including William of Crathorn and Adam Wodeham.

Ockham's distinctive contribution was his identification of the objects of the intentional attitudes with token mental representations. For Ockham, these were token mental *sentences*, akin to sentences in a language of thought (compare Fodor 1975, 2008). This was a bold and substantive thesis on Ockham's part, and one which would prove highly controversial among his contemporaries. Ockham's critics objected that one's token mental states are not public, communicable, and truth-evaluable. That we each believe that Aristotle was wise, for example, does not entail that we each share some token mental representation of Aristotle, or that we jointly enter into any token mental state.

Nevertheless, Brower-Toland shows how much of the immediate critical reaction to Ockham's views rested on an unnoticed conflation. Ockham and other medieval theorists distinguished the representational *content* of a token intentional attitude from its *significate*, or what the particular attitude is about. The content of one's belief that Aristotle was wise, for example, represents Aristotle as being wise, but is about Aristotle (or perhaps Aristotle and the property of *wisdom*). Brower-Toland argues that in identifying the objects of the intentional attitudes with token mental representations, Ockham was conceiving of such objects as representational contents. However, since critics widely assumed the objects of intentional states are *significates*, Ockham's proposal that those objects are sentences in a "language of thought" looked like a non-starter.

Brower-Toland's observations serve to illuminate the ecclesiastical backdrop against which subsequent thinking about the intentional attitudes would take shape. Hampered by religious dogma, which countenanced exactly one mind-independent, eternally existent entity, medieval theorizing about intentionality tested the bounds of a broadly nominalistic approach to the content of our thought and talk. Such nominalism is apparent in Ockham's identification of the objects of the attitudes with token mental sentences. But it is apparent even among those of Ockham's contemporaries who, like Adam Wodeham, proposed to identify the intentional objects with truthmakers (*complexe significabilia*), a view which required Wodeham to move beyond a then-traditional Aristotelian division of reality into substance and accident. Equally notable is the fact that such

²²See Gregory of Rimini 1522, q.1, art.1, Buridan 1967 (Esp. IV, q.10 and q.14; and VI, q.10 and q.11), and William of Ockham Ca. 1323/1974. This predominant focus on mental propositions stands in stark contrast with the views of Walter Burley, who would defend a theory of extra-mental *propositiones in re* as both the fundamental bearers of truth values and the "worldly" entities designated by true mental propositions. In this respect Burley would anticipate the theory of propositions developed in Russell 1903. See Burley 1337/1967, 197; and see Nuchelmans 1996, 207 for discussion.

complexe significabilia were not viewed by medieval theorists as suitable bearers of the alethic properties, or as in any way representational in nature. For these and other reasons, Brower-Toland emphasizes, there remains considerable space between the medieval notion of a *complexe significabile* and the contemporary notion of a proposition.

Early modern theories of propositions

One rarely sees philosophers of the early modern period explicitly advocating for a realist conception of propositions. Nevertheless, throughout the period philosophers remained concerned with traditional questions regarding the nature of linguistic meaning, and with broader semantic and epistemological questions regarding, e.g., the nature and contents of knowledge, belief, and judgment. Debates over the nature of truth and falsity, and concerning the fundamental bearers of truth values, remained a central focus throughout the early modern period as well.²³

In the third *Meditation*, Rene Descartes advanced the view that truth and falsity in the “strict” or “formal” sense are properties of individual *judgments*.²⁴ Descartes conceived of judgment as a token mental *act*, through which a complex idea is affirmed to be representationally similar to some aspect of extra-mental reality. For Descartes, ideas—both simple and complex—belong to the passive part of the soul, while judgement belongs to the active part (*voluntas*). Truth and falsity are thus features of judgments when a passive (complex) idea is referred to the external world via the operation of the *voluntas* (see [Nuchelmans 1984](#), 54). Descartes’s doctrine of judgment would be taken up and developed in various ways by his immediate philosophical successors, and in particular by [Malebranche \(1674/1880\)](#).

Later, in their *Logic or the Art of Thinking*, Antoine Arnauld and Pierre Nicole would employ ‘idea’ to designate only simple concepts, reserving the term ‘judgement’ to refer to complex ideas.²⁵ A central focus of Arnauld and Nicole in the *Logic* concerns the role of judgment in rational thought. The book sets out an elaborate taxonomy of the various “forms” or “manners” of logical thinking, and an equally elaborate categorization of the logically significant varieties of judgment, which are distinguished on the basis of their logical form. However, a Cartesian focus on the nature of truth and falsity remained a central theme not only for the Port-Royal logicians, but also for [Gassendi \(1658/1962\)](#), [Hobbes \(1651\)](#), and subsequently [Locke \(1689\)](#). For these thinkers, truth is understood not as a matter of correct representation, as it was for Descartes, but rather as involving *agreement* between the constituent simple ideas in a complex, mental proposition.²⁶

²³Our discussion through this section leans heavily on both [Nuchelmans 1984](#) and [Nuchelmans 1996](#). See also the introduction to [McGrath and Frank 2020](#).

²⁴[Descartes 1641/1994](#), 3; VII, 37. See [Nuchelmans 1984](#), 50. It is clear that Descartes intends the identification to be restricted to contingent (or “synthetic”) truths. He advances a different theory concerning the eternal truths.

²⁵[Arnauld and Nicole 1662/1996](#). [Nuchelmans \(1984, 85–7\)](#) argues that Arnauld and Nicole in the *Logic* use ‘judgment’ and ‘proposition’ more or less interchangeably.

²⁶Indeed, Gassendi explicitly invoked the notion of a *proposition* in this connection because judgment was taken to involve the mind *propounding* an agreement between simple ideas. See [Gassendi 1658/1962](#), I; and see [Nuchelmans 1984](#), ch. 4 for discussion.

Here, Lewis Powell focuses on the role of propositions in John Locke’s philosophy of language. [Locke \(1689\)](#) distinguished between mental and verbal propositions in the *Essay Concerning Human Understanding*. Locke’s verbal propositions are essentially sentence tokens, composed of “signs” (or individual words) which for Locke signify “internal conceptions”, or ideas in the mind. By contrast, a mental proposition consists in the joining or separating of those ideas, and for Locke corresponds to the primary bearer of truth and falsity. At the core of Powell’s entry is an interpretative debate concerning Lockean mental propositions. The debate is between (a) a *conflationary* reading of Locke as identifying (token) judgements and other intentional mental states with corresponding mental propositions, and (b) a *proto-Fregean* reading of Locke on which token mental states and associated mental propositions are distinct. Powell defends the conflationary reading on grounds of both textual support and fit within Locke’s broader theory of communication.

The debate Powell considers arises in connection with Locke’s treatment of the copula. For Locke, a sincere assertion expresses one’s judgement that the constituent ideas of the asserted mental proposition “agree”.²⁷ *Prima facie*, however, Locke’s treatment of the copula runs into a version of the familiar Frege–Geach problem of semantic compositionality ([Frege 1918/1956](#); [Geach 1958, 1965](#); [Searle 1962](#)). Presumably, the sincere assertion of ‘Guliani believes that Trump won in 2020’ need not involve the speaker in the sincere assertion of ‘Trump won in 2020’, contrary to what Locke’s theory of judgement predicts.²⁸

The proto-Fregean interpretation of Locke distinguishes the *cognitive endorsement* of a proposition from the mere *entertaining* of it. Powell focuses on a development of this interpretation due to Walter [Ott \(2003\)](#), on which only cognitive endorsement—in the form of, e.g., belief or knowledge—relates an agent to a proposition. Mere entertaining—or the endorsement-free construction of a proposition—is on Ott’s reading of Locke entirely sub-propositional, involving a relation of non-judgemental predication holding between an agent and a (mental) proposition’s constituent ideas. However, Powell argues that the proto-Fregean reading discounts Locke’s view of assertion as the “publicizing” of one’s inner mental life.

Powell’s preferred alternative appeals to *higher-order* ideas. The view is that in sincerely asserting ‘Guliani believes that Trump won in 2020’, one does not thereby signify the endorsement-free construction of the proposition that Trump won. On the conflationary reading of Locke which Powell favours, there is no distinction to be drawn in Locke’s philosophy of language between a judgement and its content (a mental proposition). Instead, the proposal is that the assertion signifies one’s judgement that Guliani so believes. That judgement, Powell explains, is to be viewed as constructed not from the ideas of Guliani and the *proposition* that Trump won, but rather from the ideas of Guiliani and that of *believing that* Trump won. (The thought is that one affirms the latter of the former in sincerely asserting the intentional attitude ascription.) Powell identifies textual

²⁷More carefully, on Locke’s view it is a necessary condition on sincere assertion that a speaker *affirm* the idea signified by the asserted sentence’s predicate *of* the idea signified by its subject term.

²⁸The problem is not restricted to attitude ascriptions. For example, the sincere assertion of ‘if Trump won in 2020, then a Republican won’ need not involve the speaker in the assertion of ‘Trump won in 2020’, either.

support for this interpretation in Locke's commitment throughout the *Essay* to higher-order ideas of mental activities.

Kant on propositions, truth, and non-fundamental metaphysics

Near the twilight of the early modern period, Leibniz's *cogitatio possibilis* marked a significant move away from the mental propositions of Descartes, Gassendi, Hobbes, Locke, and others (Leibniz 1677–90/2006, IV, V, VII).²⁹ For Leibniz, truth is not in the first instance a property of actual token judgments as they occur in some finite human mind. Rather, Leibniz viewed truth as a property of *cogitatio possibilis*: possible contents of thought which are eternally entertained in the mind of God. In this sense, the contents of actual token judgments are a kind of “embodiment” of possible patterns of thinking that are common to both the human and divine intellect. Leibniz's conception of the fundamental bearers of truth as ontologically independent of any token finite mental states would later be reflected, in the modern period, in Bernard Bolzano's (1837/2014) conception of *Satz in Sich* (propositions “in themselves”), and in Gottlob Frege's (1918/1956) conception of Thoughts as denizens of a sempiternal “Third Realm”.³⁰

In contrast with Leibniz, Immanuel Kant held that God does not “think” or “reason” about the world, and therefore does not entertain propositions. Thus, for Kant, insofar as there are propositions, they must be in some direct sense associated with distinctively human mental activities; and truth, insofar as it is a real property of judgments, must be a property of those activities. Here, Damian Melamedoff-Vosters outlines a route, via Kant's views on the nature of mind and language, to one of Kant's most (in)famous doctrines: *transcendental idealism*. According to Melamedoff-Vosters, Kant combines two views in order to arrive at the latter doctrine: first, that the primary bearers of truth and falsity are (distinctively human) mental events; and second, that non-fundamental entities are nothing over and above what is true of them. Melamedoff-Vosters argues that when combined these two theses imply that, for Kant, what is or is not thinkable can determine what is possible, though only at the non-fundamental level.

Melamedoff-Vosters begins with the second idea, and a historical overview of the Aristotelian notion of *veritative being*, or being in the sense of truth. In the hands of some medieval Aristotelians, this notion provides a way to characterize things that are not “fully real”, such as absences. For these thinkers, an absence is a veritative being in the sense that it is nothing over and above what is true about it. Thus absences exist only in virtue of being constituents of propositions. The truth of such propositions is, in turn, explained by facts concerning our imaginative activities—specifically, the fact that in entertaining such propositions those activities are appropriately related to entities that are *genuine*, as opposed to merely veritative, beings.

As Melamedoff-Vosters explains, Kant takes this account of veritative being and applies it to the objects of non-fundamental sciences. What Kant argues is that the rules for imagining things place

²⁹See Nuchelmans 1984, 232–33 for discussion.

³⁰See Nuchelmans 1984, 232. Bolzano's theory of propositions is the focus of Sandra Lapointe's contribution to the volume. Mark Textor's contribution deals with Frege.

constraints on what the objects of the non-fundamental sciences, including propositions themselves, could be. This is because (1) humans are required to think about things by constructing propositions, and (2) constructing propositions requires the use of our imagination. For example, if it is impossible to imagine extended simples, then it is impossible for a non-fundamental entity to be an extended simple. And if it is impossible to imagine a change without a cause, then it is impossible for a non-fundamental change to be uncaused. However, for Kant, as for Aristotle, these considerations have no impact on matters of fundamental metaphysics. Things “in themselves”—or *fundamental* things—might include extended simples and uncaused changes. But Kant believes that the non-fundamental cannot include such entities, because of the veritative nature of non-fundamental being and the fact that what is true of the non-fundamental is a partially mind-dependent phenomenon.

Bolzano’s theory of Sätze an Sich

A brilliant logician in his own right, Bernard Bolzano anticipated Frege’s (1892/1960) distinction between sense and denotation, as well as notions of logical truth and consequence predating the work of Alfred Tarski, Rudolf Carnap, and W.V.O. Quine by over a century. Bolzano is also considered the greatest influence on Franz Brentano’s students, apart from Brentano himself.³¹ Sandra Lapointe’s contribution to the volume takes up Bernard Bolzano’s theory of *Sätze an sich*, or propositions “in themselves”, as opposed to the sentences by which they are contingently expressed.³²

Bolzano’s theory of propositions was closely connected to metatheoretical issues in the philosophy of logic, and the connections between logic and the special sciences.³³ Bolzano conceived of each special science as a *system* of propositions, the members of which “converge” around a particular subject-matter (the object of investigation for the science at issue). Bolzano viewed such convergence in terms of a system of inferential relations among propositions. Logical consequence, in turn, was for Bolzano a relation that holds between propositions whenever they are convergent around a subject-matter in this way. Lapointe emphasizes the stark contrast between Bolzano and other post-Kantian philosophers concerning the aim of logical inquiry. For Bolzano, logic is not concerned with an investigation into the conditions under which actual reason or cognition takes place, but rather with the systematic exposition of the special sciences.

Bolzano’s conception of logic, and of its role in an account of the nature of rational inquiry, is also at the core of his distinctive (meta-)epistemological views. For example, unlike more contemporary representations of analyticity as (in some sense) a matter of truth in virtue of meaning,

³¹See e.g. [Morscher 2008](#), [Lapointe 2010](#), and [Blatti and Lapointe 2016](#) for discussion.

³²Bolzano’s contemporary, John Stuart Mill (1806-1873), is mentioned in this volume as a prominent proponent of the (undoubtedly ancient) view that the sole semantic content of a linguistically simple singular term is its referent (its ‘denotation’, in Mill’s terminology). In Fregean terms, Mill’s thesis is that proper names have denotation but not *sense* (or ‘connotation’, in Mill’s terminology). See [Mill 1843](#).

³³Bolzano construed logic broadly, to include what is now thought of as epistemology, the philosophy of science, and the foundations of mathematics. Indeed, Bolzano was responsible for important important results in mathematics proper, not the least of which is the Bolzano-Weierstrauss theorem.

Bolzano's own account of analyticity was broadly substitutional in character, and drew on the notion of *propositional logical form*. In broad outline, for Brentano analyticity, or “universal validity”, is the property had by a proposition when every member of its associated substitution class is true. From a contemporary standpoint, the result is a somewhat limited delineation of the analytic: for example, the proposition that bachelors are bachelors emerges as analytic on Bolzano's treatment, but not the proposition that bachelors are unmarried men.

In his *Theory of Science*, Bolzano defines a proposition as that which is both “either true or false, always and everywhere” and “is something, but not actual” (Bolzano 1837/2014, 77; Bolzano 2004). The first conjunct of the definition articulates a recognizably modern conception of propositions. As Lapointe explains, the second conjunct of the definition is best understood against the backdrop of Bolzano's distinctive ontological views. For Bolzano, to say that an entity *x* is something is to say that the concept of *x* has an extension. But not everything there is exists on Bolzano's view. Bolzano appears to have accepted a broadly Eleatic criterion for actual existence, according to which the actual existents are all and only those entities that are causally efficacious. Since for Bolzano *Sätze an sich* are not causally efficacious they do not exist. This position both echoes the Stoic's *lekta* and anticipates a Meinongian view of being as stratified into the existent and non-existent (Meinong 1904).

Frege and the dawn of the contemporary period

From Brentano to Frege

In a turn away from both post-Kantian German Idealism and an early modern preoccupation with the metaphysics of mind, Franz Brentano famously claimed that intentionality is the mark of the mental (Brentano 1874). For Brentano and his followers, preoccupation with propositional attitudes—and, subsequently, *propositions*—took center stage. Brentano characterized intentional (propositional) attitudes as distinctly mental relations to objects of dubious ontological status. He focused on philosophical questions about the mental with a rigor and clarity of thought that would be a forerunner to modern psychology and “analytic” philosophy of mind and language.³⁴

Brentano's most famous student, Edmund Husserl, charted his own path in his (1900; 1901) *Logical Investigations* and elsewhere. Husserl served as a sort of Janus figure in the history of the philosophy of mind, with his work giving rise to both the phenomenological tradition in “continental” philosophy, while simultaneously remaining engaged in questions more typical of a mathematically-minded philosopher in 19th century Europe. This work included an adoption and refinement of Bolzano's notion of a science as a system of propositions, and a subsequent anticipation of David Kaplan's (1977/1989) distinction between *content* and *character*, where the latter is conceived as a general rule providing the linguistic meaning of an expression.³⁵

Two other prominent Brentano students, Alexius Meinong and Kazimierz Twardowski, each

³⁴See, e.g., Chisholm 1982, Huemer 2019, and Kriegel 2017a,b, 2018 for discussion.

³⁵See, e.g., Føllesdal 1969 and Beyer 2001, 2008, 2017 for further discussion.

endeavored in their own way to rid Brentano's intentionalism of its Scholastic trappings.³⁶ Though Twardowski published relatively little, his (1894/1977) offers a sustained defence of non-existent objects as among the obligatory objects of judgement, and of a distinction between the contents and objects of thought which was in some ways a nominalist counterpart to Frege's (1892/1960) distinction between Sense and Bedeutung.³⁷ Meinong, on the other hand, was perhaps most famous for his (1904) *Theory of Objects*, along with Bertrand Russell's (1904b; 1905) criticism of that work.³⁸ For Meinong, an "object" is anything that can serve as the content of an associated mental act (compare Russell 1903 on "terms"). These include not only mundane objects like flowers and philosophers, but also "incomplete" and even contradictory objects, such as the fountain of youth or the round square. Meinong's abundant ontology provided ample material to satisfy Brentano's insistence that *all* intentional attitudes have objects, while otherwise avoiding or ameliorating problems arising from empty terms (see Mousavian *this volume*). Meinong's views were relegated to relative infamy for much of the 20th century, as Fregean and Russellian anti-Meinongian theories came to occupy centre stage in subsequent theorizing about propositions and propositional attitudes.³⁹

Frege on Thoughts

Here, Mark Textor details the evolution of Frege's view of propositions, and explores connections between Frege's theory of propositions and his views on language, communication, and inquiry. Frege drew a sharp distinction between the mental acts of thinking or saying and the informational contents of thoughts and assertions. Frege held that the latter possess truth-values independently of the token acts of thinking and saying by which they are contingently expressed. Despite the significance of Frege's insight concerning the distinction between cognitive acts and their informational contents, however, Textor gives reasons to find Frege's early arguments in this area unconvincing. For example, in his early ms. 'Logic', Frege defended an anti-psychological view of truth bearers, on the grounds that what is truth-evaluable is not the product of an inner mental act. Frege writes:

What is true is true independently of the person who acknowledges it as true. What is true is therefore not a product of a mental process or inner act; for the product of

³⁶Like Bolzano before him, Brentano was also a Roman Catholic priest for a time (1864-1873).

³⁷Twardowski (1911/1999) would later introduce a distinction between cognitive acts and the intentional *products* of those acts, anticipating aspects of the contemporary act-based theories of propositions of Peter Hanks and Scott Soames (this volume). Twardowski's work is taken up by Friederike Moltmann (this volume), and is discussed elsewhere by Betti (2010, 2013), Simons (2008), and Smith (1988b), among others.

³⁸See also Quine 1948. According to some, Russell first endorsed Meinong's views in his (1903), and decidedly rejected them in his (1905), subsequent to his (1904b) review of Meinong's work. According to others, Russell got Meinong wrong from the start and the true target of the criticisms in Russell 1905 is not Meinong, but rather Russell's (1903). See Priest 2005 for discussion.

³⁹See, e.g., Findlay 1933, 1963, Parsons 1980, Chisholm 1982, Zalta 1983, 1988, Smith 1988a, Simons 1994, 1995, and Priest 2005 for further discussion.

one person's mind is not that of another's however similar they may seem to be [. . .].
(1879–81, 3; published in [Frege 1979](#); Textor's translation)

Frege's idea seems to be that since our individual (token) judgements that, e.g., snow is white are distinct, our judgements themselves cannot be identified with the bearers of *truth* in connection with the thought that snow is white. But as Textor points out, Frege's conclusion that individual judgements are not primary truth bearers does not follow even granting the premise that "what is true is true independently of the person who acknowledges it as true". For even if my individual token belief that snow is white depends, in some sense, upon me or my existence, it remains plausible that the *truth* of my belief is a matter that depends upon extra-mental reality being the way it is. The problem resurfaces with Frege's later remarks concerning irreducibly "first-personal" thoughts. Frege (1918/1956, 298) held that the thought expressed by the sincere utterance of 'I have been wounded' is graspable by only the speaker, reflecting his contention that "everyone is presented to himself in a particular and primitive way" that is incommunicable to any other agent. But Frege's contention that at least some thoughts are both truth-apt and incommunicable by their very nature is on its face incompatible with Frege's more general conclusion that communicability is the mark of truth-evaluability.

A notable feature of Frege's early thinking concerning propositions is his apparent commitment to a proto-Russellian view of propositions ([Frege 1879/1967](#)). This is a position Frege would come to abandon in 'On Sense and Reference' ([Frege 1892/1960](#)), which constituted a major departure from Frege's earlier views. The departure was largely motivated by the observation that sentences which appear to express the same Russellian proposition, such as 'George Orwell is George Orwell' and 'George Orwell is Eric Arthur Blair', potentially differ in cognitive significance (*Erkenntniswert*), leading Frege to conclude that such pairs must express different contents. According to Frege's mature view, contents of expressions are identified with modes of presentation (*Sinne*) of the objects and properties to which such expressions refer, as opposed to referents themselves. Thoughts (*Gedanke*) are the pieces of information semantically encoded by well-formed sentences in the indicative mood, and consequently are themselves modes of presentation of sentential referents. For Frege, sentential referents are truth values, which Frege construed as a distinctive kind of *object*, as opposed to a property of either sentences or the propositions they express.

In later work Frege expressed attraction to a sort of priority monism concerning Thoughts. He writes:

What is distinctive of my conception of logic is in the first instance marked out by my putting the content of the word 'true' at the top, and secondly by my letting the thought immediately follow as that for which the question of truth can arise at all. I do not begin with the concepts and put them together to form a thought or a judgement; I come by the parts of a thought by decomposing the thought. ([Frege 1919/1979](#), 253; Textor's translation)

These remarks introduce Frege's famous *decomposition principle*, according to which the same Thought can have different parts with respect to different contexts of assertion (see, e.g., [Pelletier](#)

2001 for discussion.) This has been taken to suggest that Frege held the view that Thoughts are structurally simple entities, which decompose into constituent parts only relative to the individual sentences that express them. However, Frege elsewhere argues that Thoughts indeed have parts, and that their parts are senses (Frege 1918/1956). As Textor explains, for Frege the parts of a Thought are not “parts” in the modern sense of classical extensional mereology (see Leonard and Goodman 1940 and Simons 1987 for discussion of the latter). For example, Frege maintained that unlike classical parthood, sense-parthood is intransitive. Nevertheless, Textor suggests that Frege’s views concerning transitivity may be based upon a mistake, given that the problems Frege envisaged with transitivity arise only on the assumption that contents are Russellian (Frege 1902). Textor’s entry concludes with a general assessment of Frege’s criterion for recognizing the same proposition when expressed under different linguistic guises.

All roads lead to nowhere: Bertrand Russell on propositions

Bertrand Russell’s views on propositions evolved dramatically over the course of his philosophical career. Here, Dominic Alford-Duguid and Fatema Amijee chart major themes in the development of Russell’s thought on propositions, beginning with Russell’s early views in *The Principles of Mathematics* (1903), and continuing until *The Philosophy of Logical Atomism* nearly two decades later (Russell 1919a,b,c).

Like Frege, Russell is largely responsible for the modern conception of the theoretical role of propositions. For the early Russell of the *Principles*, propositions serve as both the primary bearers of truth and falsity and *relata* of the entailment relation, and are the objects of intentional attitudes like belief and knowledge. However, even by the time of the *Principles*, Russell would depart substantially from Frege on the *nature* of propositions themselves. On Russell’s early theory, a proposition is a structurally complex entity, which is composed of the worldly individuals and properties the proposition is about. Thus, for example, on Russell’s early theory the proposition expressed by ‘Lyra loves Will’ is composed, not of Fregean modes of presentation of the individual referents of ‘Lyra’, ‘loves’, and ‘Will’, but rather of those very referents themselves.⁴⁰ As Alford-Duguid and Amijee explain, Russell was led to such a view in part by his commitment to an “acquaintance”-based model of contentful thought and talk, on which successful thought and talk *about* some entity requires direct cognitive contact with that entity. Russell saw Frege’s posit of intermediating modes of presentation between our thought and talk and its worldly subject matter as incompatible with such a requirement. For Russell, to hold (as Frege did) that ‘Mont Blanc’ contributes something other than the mountain itself to the proposition that Mont Blanc is more

⁴⁰Contemporary “Russellian” theories of propositions largely follow Russell in this respect. Theorists who advocate for descendants of Russell’s 1903 views include Marcus (1961); Donnellan (1974); Kaplan (1977/1989); Perry (1979); Richard (1983); Salmón (1986); Soames (1987); Braun 2002, 2005; King (2007); King et al. (2014) and Spencer (2016). In this volume, see the contributions by Caplan, Tillman, and Nutting; King; Gilmore; Hodgson; Mousavian; Soames; Speaks; and Spencer. Theories along these lines are also sometimes described as ‘Millian’, after J.S. Mill, a prominent advocate of the view that proper names are simply “tags” for their bearers (‘expressions without connotation’). However, in this volume we prefer to reserve ‘Millianism’ for a thesis about semantic contents of proper names, and not any particular view concerning the metaphysical nature of propositions.

than 4,000 metres high is to make a mystery of how we could ever entertain a thought about the mountain (Russell 1904a).

Russell himself would come to identify several problems with this early theory. One of these, which has come to be known as the problem of propositional “unity”, can be stated as follows. On Russell’s 1903 theory, the proposition that Lyra loves Will is a complex comprising Lyra, Will, and the *loving* relation. But what *unifies* these propositional constituents in such a way as to explain that proposition’s important properties, such as its truth-aptitude and apparent representationality? After all, one is not tempted to say, of the *set* containing Lyra, Will, and *loving*, that it is the sort of thing that can be true or false, or believed or known, etc. In the case of *true* propositions, Russell thought the answer was simple: true propositions are identical to facts. Thus whatever unifies Lyra, Will, and *loving* in the fact that Lyra loves Will can explain the unity of the (true) proposition that Lyra loves Will, since the true proposition just *is* the fact, on Russell’s early theory. However, Russell saw no natural way of extending that idea to an account of the unity of false propositions, owing to a general metaphysical suspicion of anything like “false facts”. As Alford-Duguid and Amijee’s discussion makes clear, the attempt to address these concerns regarding unity, truth, and falsity would come to embroil Russell in increasingly awkward philosophical gymnastics.

A second problem, less familiar but equally important, is that an account that treats propositions as entities runs the risk of paradox. Russell describes one such paradox, now known as the *Russell-Myhill Antimony*, in Appendix B of the *Principles*.⁴¹ In a nutshell, the paradox (as Russell presents it) involves the apparent existence of propositions that “assert the logical product” of their associated class. Assuming there are such propositions, we can consider the class *w* of propositions all of which assert the logical product of some class *m* of propositions to which they do not belong. Since *w* is a class of propositions, we may therefore consider the proposition *p* that states *its* logical product. But then *p* is a member of *w* just in case it isn’t, paradoxically.

These and other difficulties would eventually lead Russell away from some of his early realist commitments, and towards an analysis of contentful thought and talk that does not countenance propositions at all. Russell’s various attempts at such an analysis, developed in print between 1907 and 1912, and further in his 1913 MS *Theory of Knowledge*, would all be versions of Russell’s now-infamous “Multiple Relation” theory of judgment (MRTJ).⁴² Unlike Russell’s earlier views, which identify propositions with the *contents* of judgements and the meanings of assertions, the MRTJ explains contentful thought and talk in terms of judgment itself. In its simplest form, the MRTJ identifies a judgment not with a two-place relation holding between an agent and a proposition, but rather with a “multiple” relation holding between an agent and the worldly elements the judgment

⁴¹The paradox is initially discussed at Russell 1903, 534–40. It was rediscovered by John Myhill (Myhill 1958), and has recently engendered a resurgence of philosophical interest. See, e.g., Deutsch 2008, 2014 (and *this volume*), Uzquiano 2015, Walsh 2016, Goodman 2017, Whittle 2017, Bacon 2019, and Kment forthcoming.

⁴²See Russell 1907, 1910, 1912, 1913/1984. The theory is noted as an option in Russell 1906; however, there Russell appears unwilling to pursue its development at the expense of other options.

is about (Russell 1907).⁴³ So, for example, for an agent to judge that Lyra loves Will, on Russell’s initial development of the MRTJ, is for that agent to stand in a (multiple) relation to Lyra, Will, and the *loving* relation. Propositions drop out of the picture entirely, and are replaced by multiple relations holding between subjects and the worldly “contents” of their intentional states.

As Alford-Duguid and Amijee explain, a number of difficulties with this initial proposal would lead Russell to successively refine the theory in various ways, first in his “On the Nature of Truth and Falsehood” (Russell 1910), and subsequently in *The Problems of Philosophy* (Russell 1912) and, finally, his *Theory of Knowledge* (Russell 1913/1984). These difficulties included so-called “narrow” and “wide” direction problems: the former being that of distinguishing the judgment that Lyra loves Will from the judgment that Will loves Lyra; and the latter being that of explaining the impossibility of believing (or judging) nonsense (e.g., thinking or believing that loves Lyra Will).⁴⁴ Despite his best efforts to resolve these and other difficulties, by the time Russell would publish *The Philosophy of Logical Atomism* in 1919, it is clear that he despairs of the prospects for an adequate theory of propositions.⁴⁵ Nevertheless, the significance of Russell’s work on the nature of propositions remained profoundly influential throughout the 20th century, and endures into the present.

4.3 Contemporary theories of propositions

4.3.1 Addressing the category question

- 4.3.1.1 Propositional theorizing in the shadow of logical positivism#
- 4.3.1.2 Assimilationist theories of propositions #
- 4.3.1.3 Non-assimilationist theories of propositions#

4.3.1.1 Propositional theorizing in the shadow of logical positivism

After the groundbreaking work of Frege and Russell in the late 19th and early 20th centuries, theorizing about propositions largely fell out of fashion. This is due to a number of factors.

First, and as we have just seen, by 1910 Russell had abandoned his early realist commitment to propositions, in part due to seemingly insurmountable difficulties involving the unity of the

⁴³“Multiple”, or “polyadic”, relations are relations of variable, rather than fixed, adicity. For example, (classical numerical) *identity* is a relation with an adicity of two—it is a dual or binary relation. By contrast, *parthood* has variable adicity. In ‘the head, arms, legs, and torso are parts of the body’, for instance, *parthood* appears to relate four things to one, while in ‘the left half and the right half are parts of the body’, *parthood* appears to relate two things to one. But despite the variable adicity, there is just one *parthood* relation (we may suppose). Similarly, later Russell held there is a single relation of *judging*, which on some occasions may relate one thing to three, as when Cassio judges that Othello loves Desdemona, or one to two, as when Emilia judges that Iago schemes.

⁴⁴The wide-direction problem is historically attributed to Wittgenstein in the *Tractatus*; see Wittgenstein 1921/1961, 5.5422.

⁴⁵See esp. Russell 1919c.

proposition and propositional paradox.⁴⁶ Though Russell’s own discussion of these difficulties is at times murky, it was clear as early as 1907 that he thought the solution must involve a radical departure from his 1903 view.

More importantly, perhaps, Russell appeared to hold that robustly real false propositions of the sort required by his 1903 theory offend “a vivid instinct as to what is real” (Russell 1911a). The offence stemmed from Russell’s conviction that the 1903 theory required the identification of false propositions with objective, mind-independent “false facts”. Indeed, Russell (1910, 176) finds the view that falsehoods are essentially mind-dependent more intuitive than the alternative.⁴⁷

Theorizing about the metaphysics of propositions also fell out of favour due to the corresponding influence of logical positivism in the first half of the 20th century. The anti-metaphysical spirit of logical positivism was clearly expressed by Rudolf Carnap in his ‘The Elimination of Metaphysics Through the Logical Analysis of Language’, where Carnap writes that “[i]n the domain of *metaphysics*, [. . .], logical analysis yields the negative result *that the alleged statements in this domain are entirely meaningless*” (Carnap 1932, 60–61). Positivist resistance to metaphysics was forcefully advocated by Quine (1956) and other sympathizers, who regarded propositions as “creatures of darkness”. But while metaphysical theorizing was largely dying on the vine, research into formal logical systems underwent a renaissance during this period. The 1920s through the 1940s witnessed profound developments in all areas of mathematical and philosophical logic.⁴⁸ These developments, in turn, led to significant advances in set theory and the theory of computation which were harbingers of the Information Age.⁴⁹

As philosophers and logicians began to apply their techniques to natural languages, their focus inevitably migrated from purely syntactic issues to more recognizably semantic questions. Though semantic theorizing is a natural home for propositions, abstracta, and other “creatures”, positivist influence loomed large. So began a research program to address semantic questions without suc-

⁴⁶Recall that the unity problem involves, in part, explaining remarkable features of propositions, such as their apparent representationality and truth-aptness. The problem of propositional paradox involves, in part, propositions that “assert the logical product” of their associated class (as discussed in Russell 1903, 534–40). We agree with Deutsch (2008, 2014) that the threat of propositional paradox may pose an even bigger challenge to views along the lines of Russell 1903 than problems stemming from propositional unity. We also agree that, until very recently, this threat has received less attention than it deserves; for recent discussion see Bueno et al. 2014, Uzquiano 2015, Walsh 2016, Goodman 2017, Whittle 2017, Bacon 2019, and Kment forthcoming, among others. For further discussion, see Deutsch *this volume*.

⁴⁷What of Frege’s (1892/1960) theory? Russell objects to Frege in the infamous “Gray’s Elegy” passage of his 1905. The passage is notoriously obscure. For discussion, see Salmón 2005 and Kremer 1994. Russell’s more “intuitive” objection is that some propositions must consist of “ordinary” objects, despite Frege’s insistence to the contrary (Frege 1904/1988). Though Russell does not explicitly say so, Fregean senses, existing in some “Third Realm”, may also be thought to offend “a vivid instinct as to what is real.” Frege would retain champions, most notably Alonzo Church, but for much of the 20th century his theory of sense and reference would be largely swept aside in the same anti-metaphysical tide that claimed Russell’s 1903 theory.

⁴⁸Exemplars include Gödel 1931; Tarski 1933/1983, 1943; Carnap 1936, 1937, 1947; Church 1936, 1950; and Turing 1936.

⁴⁹See Soames 2003, 235 and Soames 2019b.

cumbing to the darkness. This research program found its most ardent and influential champion in Donald Davidson, a student of Quine's, who maintained that propositions and other abstracta are explanatorily unnecessary for meeting the general aims of semantic theorizing (Davidson 1967). Drawing upon Tarski's (1933/1983) work on truth predicates in formal languages, Davidson's idea was that an adequate semantic theory requires only that we specify truth conditions for each natural language sentence. Davidson proposed to identify such truth conditions with instances of the following truth-schema, in which *s* is any natural language sentence⁵⁰ and *S* is a sentence in the metalanguage of the semantics under investigation stating the conditions under which *s* is true:

(T) *s* is true just in case *S*

Given the assumption that a theory of meaning *just is* a theory of sentential truth-conditions, propositions at least as traditionally understood were regarded as an "idle wheel" in semantic theorizing.⁵¹ At least one outstanding challenge for the truth-theoretic semanticist lies in accommodating recalcitrant data not obviously amenable to a purely truth-theoretic analysis. Imperatives, interrogatives, and subsentential phrases in general all have meanings, but any attempt to specify those meanings in terms of Davidsonian *truth* conditions seems like a non-starter. Furthermore, even if we restrict our attention to those sentences that are amenable to a truth-theoretic analysis, the consensus among many contemporary semantic theorists is that such an analysis is neither necessary nor sufficient for an adequate theory of meaning.⁵²

From a technical perspective, some of the resistance to theorizing with propositions was ameliorated by innovations in modal logic and possible worlds semantics, due largely to Ruth Barcan Marcus (née Barcan; 1946a; 1946b; 1947), Kripke (1959, 1963), and, perhaps surprisingly, Carnap (1947). From a more philosophical perspective, work by Marcus (1961), Montague (1969, 1970), Lewis (1970, 1973, 1980), Plantinga (1974), Stalnaker (1976a, 1978), Kripke (1980), and Kaplan (1977/1989), among others, made theorizing about propositions not only respectable again, but somewhat popular. Indeed, the very questions concerning the nature of propositions that perplexed Frege and Russell have come to re-occupy centre stage in much recent semantic theorizing. Section III of the volume surveys contemporary attempts to address those very questions.

⁵⁰Or "structural description" of such a sentence; see Davidson 1967, 309–10.

⁵¹See also Davidson 1984 and Lepore and Ludwig 2007 for discussion of Davidsonian truth-theoretic semantics. The idea that the meaning of a declarative sentence in context is fully determined by the conditions under which the sentence is true traces back at least to Wittgenstein 1921/1961. See Soames 2003, Ch. 12 for critical discussion of Davidson's semantic program.

⁵²See, e.g., Foster 1976 and Soames 1992, 2003, 2008. Still, Soames did not consider Davidson's program a complete blind alley. As Soames notes (2003, 330), "[w]hatever the shortcomings in his conception and execution, his overall truth-theoretic approach to meaning in natural language represented a major advance over both the barren semantic skepticism of Quine, and the anti-theoretical, yet philosophically overreaching, linguistic methodology of Wittgenstein and the ordinary language philosophers."

4.3.1.2 The resurgence of propositional theorizing: assimilationist proposals

Propositions as Sets of Possibilities

A long tradition in theoretical linguistics, formal semantics, and “model-theoretic” approaches to semantic content identifies the proposition expressed by a declarative sentence with the *set of possibilities* (or “possible worlds”) in which that sentence is true.⁵³ Underlying the identification is a view of (propositional) information as serving primarily to *divide* the space of possibilities that are epistemically “open” to an agent. To illustrate, suppose we ask ‘Do you know the way to San Jose?’ and that you reply, ‘Yes, San Jose is to the west’. Given our initial state of ignorance, your reply is meaningful and informative to us (before we asked, it was perhaps an open question for us whether San Jose lies due north). Thus, your reply *eliminates* some possibilities for us that we previously considered “live”. Following Jaakko Hintikka (1962; 1969), Robert Stalnaker (1976b; 1978; 1984), David Lewis (1979; 1986), and many others, we might surmise that “eliminating possibilities” in this way is a defining feature of (informative) thought.⁵⁴ And, if the informational content of a thought is just a proposition, then we might reasonably view propositions as simply being (or as being adequately represented by) sets of possible worlds (or possible “world-states”; compare Stalnaker 1976a and Soames 2007). Nate Charlow’s contribution to the volume critically assesses this broadly “Hintikkan” conception of propositions as sets of possible worlds.

As Charlow notes, the Hintikkan view is controversial. For example, it is immediately susceptible *Frege’s puzzle* (after Frege 1892/1960): given that ‘Hesperus’ and ‘Phosphorus’ corefer, the Hintikkan theory entails that the proposition that Hesperus is Phosphorus is identical to the proposition that Hesperus is Hesperus. However, these propositions appear to differ in their epistemic properties: unlike the proposition that Hesperus is Hesperus, which is trivial and presumably *a priori*, the proposition that Hesperus is Phosphorus is non-trivial, *a posteriori*, and “cognitively significant”.⁵⁵ The view is equally susceptible to a problem of “logical omniscience” (it is evidently possible for an agent to believe that *P*, and for *P* to entail *Q*, and yet for the agent to fail to believe that *Q*; as Charlow explains, the Hintikkan theory in its simplest form predicts otherwise).⁵⁶ The view also predicts, counterintuitively, that there is but a single necessary proposition

⁵³Equivalently, given classical assumptions, the view is that a proposition is a function from possible worlds to truth values. Note that such theories are most naturally read as assimilationist only under a realist interpretation.

⁵⁴The identification of propositions with sets of possibilities was arguably anticipated in Carnap’s (1947) identification of sentential semantic values with intensions, which Carnap construed as functions from “state-descriptions” to truth values. But it was not until the development of intensional semantic theory in the second half of the 20th century that the view would become more or less standard among linguists and formal semanticists. See, for example, Montague 1969, 1970 and Gallin 1975 for early applications. And see von Fintel and Heim 2011 for a contemporary overview of intensional semantics. Montague (1970, 122-3) cites Kripke 1963 as the first occurrence of the idea; though as Williamson (2013, 221) observes the identification of propositions with sets of possibilities is far from explicit in Kripke’s early work.

⁵⁵See, in addition to Frege 1892/1960, see Salmón 1986 for extensive discussion. In this volume, see the contributions by Jago, Hanks, Schiffer, Spencer, Textor, and Yoon.

⁵⁶As proponents of the theory are well aware: see, e.g., Stalnaker 1991 for discussion.

and a single impossible proposition (the set of all possibilities and the empty set, respectively). For these and other reasons, many philosophers of language have come to regard the framework as fundamentally unworkable.⁵⁷

Charlow agrees with much of this criticism: on Charlow’s view, the traditional analysis of a proposition as a set of logically or metaphysically possible worlds *is* untenable. However, and in light of the framework’s many theoretical advantages, Charlow sees refinement—and not abandonment—as the way forward.⁵⁸ Charlow critically evaluates a number of such refinements, due to Hintikka (1969, 1975) and Lewis (1979), and more recently Yalcin (2007, 2010) and Rothschild (2012), before presenting his preferred “Flexible-Type” version of the framework (see Charlow 2020 for a more in-depth presentation). In broad relief, the core idea behind Charlow’s Flexible-Type theory is that the possibilities over which attitude verbs quantify come in a variety of types: depending upon the particular “representational context” of an agent, a possibility might be a world, it might be an informational perspective, or it might also be what is, in other representational contexts, a proposition. The very notion of a proposition is thus a type-flexible one, on Charlow’s view.

Charlow develops the Flexible-Type theory alongside a “variabilist” conception of the semantic values of proper names (as introduced by Cumming (2008)), and outlines solutions to Frege’s puzzle and the problem of logical omniscience in terms of the flexible-types approach. As Charlow notes, theories of propositions as “finely” (i.e., hyperintensionally) individuated entities are often promoted as uniquely allowing for distinctions between (intuitively distinct but) necessarily equivalent propositions. Charlow concludes by indicating how, on the flexible-type approach, matters of fineness of (propositional) grain might be viewed as context-relative. On this view, the level of granularity at which propositions are individuated will hold, not absolutely (say, in virtue of facts concerning the intrinsic nature of propositions), but only relative to the informational perspective of a contextually-situated agent.⁵⁹

Propositions as sets of truthmakers

As we have discussed, simple possible worlds theories of propositions face the objection that, while intensionally equivalent, the proposition that $2 + 2 = 4$ just *isn’t* Gödel’s Second Incompleteness Theorem. The more complicated possible worlds semantics tries to shore up deficits in its simpler

⁵⁷See Soames 1987 for in-depth criticism of the framework.

⁵⁸The theoretical advantages of the framework are significant. For example, and thanks to early work in possible worlds model theory by Kripke (1959, 1963), Hintikka (1962), and others, sets of possibilities inherit the mathematical tractability of set theory (with ur-elements) and of Boolean algebras, thus freeing us from a significant technical obstacle presented by theorizing directly with what many philosophers of that period viewed as “creatures of darkness” (Quine 1960). Such reasons for acceptance are arguably on a par in certain respects with those mathematicians sometimes give for accepting set theory: the theory is explanatorily fruitful, involves great economy of primitive commitments, and so forth. To paraphrase Lewis (1986, 3-5), these might be viewed as good (though of course not conclusive) reasons to view the theory as true.

⁵⁹Issues pertaining to relativity and propositional content are discussed in more detail below. See §4.3.2.1.

ancestor by mimicking the apparent hyperintensionality of propositions. But instead of adding epicycles to the possible worlds view in order to mimic hyperintensionality, we might instead just identify propositions with hyperintensional entities.

A conservative way of developing this idea identifies propositions with sets of possible *truthmakers*.⁶⁰ Start with the anodyne observation that some sentences are true and others are false. Next, notice that this is not a brute or fundamental fact. Finally, suppose true sentences are true because there (possibly) exists something that makes them true. Those things are truthmakers. Mark Jago develops the view that propositions are sets of (actual and possible) truthmakers.⁶¹

Jago offers a number of arguments for a truthmaker account of propositions. Here are two. First: propositions are truth-conditions; truth-conditions are sets of possible truthmakers; thus, propositions are sets of possible truthmakers. Second: propositions are entities which, by their very nature, are true or false; to be true is just to be made true; and to be false is just to be made false; so, propositions are entities which, by their very nature, are made true or made false. Propositions are sets. The nature of a set is given by its membership; so the members of a proposition are its truthmakers and falsemakers.

Jago notes as an advantage of the view over possible-worlds accounts that the truthmaker view is hyperintensional: it can distinguish necessarily equivalent propositions. So unlike the possible-worlds account in its most basic form, truthmaker theorists are not obliged to identify the proposition that $2 + 2 = 4$ and the proposition that arithmetic is incomplete (if consistent) with the set of all possible worlds. In addition, the truthmaker approach offers an attractive account of same-saying: two sentences say the same thing when they have the same possible truthmakers, as opposed to being merely necessarily equivalent (as simple possible-worlds theories would have it) or due to contingent syntactical facts (as a number of Russellian or Fregean approaches would have it).

Jago, following [Armstrong \(1993, 1997\)](#) endorses a view of truthmakers as states of affairs. According to such a view, logically composite truthmakers are mereologically complex, and logically atomic truthmakers are mereologically simple. One upshot of this approach is that it affords the truthmaker theorist a natural account of partial truth/falsehood. If I say ‘There are wombats’, what I say is true, because it has an actual truthmaker. If I say ‘there are talking donkeys’, what I say is false, because it lacks an actual truthmaker. If I say ‘there are wombats and talking donkeys’, what I say is partly true and partly false. This is because only ‘there are wombats’ has an actual truthmaker.

According to Jago, the truthmaker approach has the resources to provide a satisfying account of propositional aboutness. This is a notorious problem for possible-worlds semantics: if the proposition that $2 + 2 = 4$ *just is* the proposition that whales are mammals, how can we account for the fact that the former apparently concerns numbers while the latter apparently concerns whales? The

⁶⁰See, for example, [Yablo 2014](#); [Jago 2015, 2017, 2018, 2020](#); [Fine and Jago 2018](#); [Fine 2017a,b, 2020](#).

⁶¹The truthmaker relation can be one-one or one-many. For example, given the rules of English, perhaps the fact that Trump lost in 2020 is what makes ‘Trump lost in 2020’ true. Similarly, Bob, Carol, Ted, and Alice may make ‘there are four people’ true. But so may Bob, Ruth, David, and Bertrand.

rough answer for the truthmaker theorist is that propositions are about the constituents of the states of affairs that are among their possible truthmakers. So while they are associated with the same intension (and extension), the proposition that $2 + 2 = 4$ has among its truthmakers states of affairs involving numbers, rather than whales.⁶²

Jago notes that truthmaker theory is not particularly well-suited to handle certain forms of Frege's (1892/1960) puzzle of cognitive significance. Since George Eliot just is Mary Ann Evans, the state of affairs of Eliot authoring *Middlemarch* just is the state of affairs of Evans authoring *Middlemarch*. Yet it seems one can believe that Eliot authored *Middlemarch* while not believing that Evans did. Jago's proposed solution appeals to impossible worlds: according to some ways the world could not be, Eliot pens *Middlemarch* while Evans does not.

Jago discusses three further applications of the truthmaker view, and their attendant metaphysical commitments. The first is to the problem of negative existentials (how can 'Pegasus does not exist' be true when there is no Pegasus to have the property of non-existence?). The second concerns the "polarity problem" (a sort of Benacerraf problem for "double" propositions—ordered pairs which have possible truthmakers as one element and possible falsemakers as another). The third concerns generality, and familiar problems that arise from attempting to talk of all sets (or all propositions, conceived of as set-theoretic entities). Jago's preferred version of the truthmaker view addresses these problems and others by countenancing states of affairs that do not actually obtain, including impossible states of affairs. Jago concludes by canvassing some options for embracing these more metaphysically exotic truthmakers.

Syntactically structured propositions

Jeffrey C. King initiated a resurgence in theorizing about the metaphysics of propositions around the turn of the millennium (King 1996, 2001, 2007). King's starting point involves rejecting views on which propositions are sets of any kind. So, according to King, propositions are not sets of possible worlds, nor sets of possible truth-makers, nor n -tuples with objects and properties as elements (Russell's 1903 view clothed in set theory, if you will).

On the positive side, King accepts a central tenet of neo-Russellianism: propositions are structured entities with objects and properties as constituents.⁶³ But King also contrasts his theory of propositions with the classical conception of propositions, which he attributes to Frege and Russell, on which propositions are mind-independent structured entities that have their truth values intrinsically and independently of any agents. On King's view, propositions instead result from speakers interpreting certain sentences in a certain way. In particular, on (a highly idealized version of)

⁶²If we follow Jago in countenancing *impossible* in addition to possible truthmakers, a parallel story can be told about the necessarily false propositions that $1 = 0$ and that whales are fish. Note that an adequate account of propositional aboutness on the truthmaker view *requires* that we countenance impossible truthmakers.

⁶³In addition to these metaphysical views, proponents of neo-Russellianism also typically accept the Millian view that the sole semantic content of a linguistically simple singular term outside the scope of non-extensional devices and relative to the relevant parameters is its referent. For an exception, see Schiffer 2003.

King's view, certain lexical items stand in certain syntactic relations which are immediately interpreted by those linguistically competent with the language in question as ascribing (e.g.) semantic values of verb phrases to semantic values of noun phrases. We immediately and unreflectively interpret 'Trump loses' as ascribing *losing* to Trump, for instance. On King's view, the fact that we do so in turn plays an important role in the proposition that Trump loses.

King is keen to take on the explanatory challenge posed by the so-called problems of propositional unity. On King's view, we can explain what the constituents of a structured proposition are and how they are held together by appealing to the fact that speakers interpret sentences in the way that they do. Thus, in atomic cases, the relevant constituents include the semantic values of the noun and verb phrases; those semantic values are "held together" in the proposition by constituting a certain sort of fact, and that fact is interpreted by speakers as being the semantic value of the relevant sentence (i.e., the proposition it expresses).

Furthermore, these facts have the truth conditions they do (and others don't) because speakers endow them with truth conditions in virtue of their cognitive connection to the relevant *propositional relations*. And on this account, interpreting the relevant propositional relation between semantic values as encoding ascription just *is* interpreting the relevant sentential relation as encoding ascription.

Finally, King discusses fineness of grain: if the structure of a proposition is so closely tied to the syntax of sentences that encode it, it seems to conflict with the thought that (e.g.) the proposition that Brutus stabbed Caesar just is the proposition that Caesar was stabbed by Brutus. King closes by outlining, and endorsing, a version of his view that allows active/passive counterparts such as these to express the same proposition.

Propositions as interpreted abstracta

Thomas Hodgson argues that propositions may be identified with set-theoretic entities after all, *contra* King and others. Hodgson's strategy is to defend a broadly neo-Russellian theory of propositions couched in set-theoretic terms by using the resources exploited in King's theory of propositions.⁶⁴

The proposal that propositions are set-theoretic entities faces a number of well-known objections. What is it in virtue of which some sets or *n*-tuples are truth bearers, etc., while others are not? What is it in virtue of which (e.g.) the *n*-tuple that has Trump as its first element and *losing* as its second serves as the proposition that Trump loses, while the reversed *n*-tuple does not? Answers to these questions do not appear to be forthcoming, and as a result many have despaired of identifying propositions with sets of any sort.

Hodgson thinks the despair is premature. His starting point is to note that King's own theory of propositions is one on which certain entities—facts—are interpreted in a certain way. And the fact that they are interpreted that way makes them propositions. But then, Hodgson argues, there is nothing in principle that bars us from interpreting various things—including *n*-tuples—as

⁶⁴See especially King 2007, 2009, 2014a,b and *this volume*.

propositions. If interpretational endowment suffices in the case of King-style facts, then it should suffice in other cases as well.

Worse for King, according to Hodgson, is that King's theory crucially relies on interpreted sentences. But what is asserted on a given occasion is a proposition. And there is a mismatch between the two. Namely, what is asserted differs from the relevant interpreted sentence in cases apparently involving unarticulated constituents, non-sentential assertion, or implicature. In all of these cases, information is included that goes beyond what is literally encoded by the relevant sentence (consider: 'He did it', or 'they're ready') But an interpreted sentence, at best, captures only what is literally encoded.

On Hodgson's view, something is endowed with representational features in virtue of being interpreted. To this extent, Hodgson agrees with King's solution to the problems of propositional unity. But Hodgson parts ways with King in holding that a number of things that are not King-style facts can be interpreted, and thus endowed with representational properties. This includes n -tuples.

Hodgson's observation that n -tuples can be interpreted as propositions also affords a solution to Benacerraf-like problems for views of propositions as sets.⁶⁵ Even if many set-theoretic candidates for being the proposition that Trump loses are equally intrinsically eligible, the very fact that one of them is interpreted itself serves as a tie-breaker, thus rendering it uniquely eligible to be the proposition that Trump loses. Since this proposal mirrors King's in the relevant respects, Hodgson's set-theoretic development of neo-Russellianism succeeds if King's does.

Propositions as cognitive act-types

Peter Hanks and Scott Soames are sympathetic to King's criticism of the classical conception of propositions. But they do not accept King's positive view (nor Hodgson's). Rather, they hold that propositions are types of cognitive actions.⁶⁶

Hanks's Theory

On Hanks's theory, propositions are essentially classificatory devices for certain representational states or entities. Agents represent the world by performing token actions of various kinds, or by being in certain token states, classified under a certain type. To classify the relevant token under the relevant type just is to give the token its propositional content.

Prominent among representational actions are acts of predication: predicating F of o , for example. For Hanks, the act of predication itself is inherently committal;⁶⁷ it involves taking a stand as to whether o is F , and is essentially involved in assertions and judgments to the effect that o is F (though not all token acts of predications are committal; e.g., an actor's utterances). Other

⁶⁵See Jesse Fitts's contribution for further discussion of the Benacerraf problem for propositional realists.

⁶⁶See, e.g., [Hanks 2007, 2009, 2011, 2013, 2015, 2017a,b](#); and see [Soames 2010, 2012, 2013, 2015, 2019a](#), as well as Soames's contributions to [King et al. 2014](#).

⁶⁷Compare Soames *this volume*.

representational actions are interrogative (asking whether o is F), or imperative (commanding that o be F).

On this view, agents are the source of representation, not abstract propositions. Propositions are themselves abstractions from representational acts or states. In virtue of the nature of their types of representations, acts or states have truth conditions, answerhood conditions, or fulfillment conditions, respectively. This leads to a sophisticated account of the content–force distinction that departs from Frege’s well-known (1918/1956; 1918/1984) account.⁶⁸

Hanks is in a position to explain how propositions have the satisfaction conditions they do by appealing first to the satisfaction conditions of token cognitive acts. Cognitive act types, then, i.e., propositions, inherit their satisfaction conditions on this account, much how the (type) *American flag* has stars and stripes in virtue of (token) American flags having stars and stripes.

Finally, Hanks maintains his view resolves a number of outstanding problems, including Frege’s puzzle of cognitive significance, the problem of empty names, problems concerning propositional attitude ascriptions, problems concerning *de se* belief, the Kripke-Wittgenstein rule-following puzzle, and (perhaps) the Frege-Geach problem for expressivism. (See especially Hanks 2015, chs. 4–8 for details.)

The core of the solutions relies on the abundance of types. As an illustration, consider Frege’s puzzle. Suppose it is assertively uttered that Orwell is an author and that Blair is an author. These utterances fall under an object dependent reference type, as typical Russellians would acknowledge, but don’t fall under the same name-and-object dependent reference type, since different names are involved. According to Hanks, the relevant type in this case is a different type: the *semantic* reference type, which has a distinctively Fregean character. This type is such that one who is semantically competent with two names will, under relatively ideal circumstances, realize they co-refer. And, of course, circumstances are often less than relatively ideal; you might treat ‘Orwell’ and ‘Blair’ as interchangeable, while we might not. And we might treat tokens of ‘Paderewski’ as interchangeable while you might not. Hanks argues that this semantic reference type, unlike the abundant others, is distinctively semantic. So since ‘Orwell is an author’ and ‘Blair is an author’ can fall under different semantic reference types for a semantically competent speaker, we have the makings of an explanation of how one could reasonably believe the content of one but not the other, and rationally maintain that one is false while the other is true.

Soames’s Theory

Soames is also dissatisfied with what he sees as common to a Fregean/Russellian conception of propositions—as well as conceptions of propositions as sets of possible world-states (or characteristic functions)—as mind-independent, intrinsically representational entities that are somehow “grasped” by us. Rather, like Hanks, on Soames’s view propositions are cognitive acts—particular ways of cognizing, and, hence, of representing things as being certain ways. Truth amounts to

⁶⁸Compare Soames *this volume*. See also Hanks 2007 and Hanks 2015, ch. 4.

accuracy in representation. Sentences and utterances, in turn, inherit their representationality from the representational features of the propositions they express.

Soames's view provides a neat account of some of the remarkable features of propositions. They are representational in virtue of the relations they bear to representational cognitive acts. As such, propositions are primary bearers of truth conditions, and they are true when they represent accurately. Finally, cognitive propositions are epistemically accessible to agents in a way primitively representational denizens of a Fregean Third Realm, mind-independent Russellian abstract structures, or sets of possible world-states don't seem to be.

As cognitive acts, propositions are entertained in virtue of being performed, rather than cognized. This can be achieved through perception, visualization, imagination, and linguistic cognition. Entertaining a proposition amounts to performing an act-type of predication, which is itself the relevant proposition. The resulting view seeks to couch the remarkable features of propositions in a naturalistically acceptable framework that ultimately appeals to representational cognitive acts.

Soames extends this picture beyond simple atomic or "subject-predicate" propositions to accommodate propositions of greater complexity. Soames argues that the resulting picture has the resources to address long-standing versions of Frege's (1892/1960) puzzles in a novel and satisfactory way. Soames closes by considering whether there are enough cognitive act-types to serve the traditional roles ascribed to propositions, and whether an abundant theory of cognitive propositions might succumb to paradox. (Soames remains cautiously optimistic.)

Propositions as Cambridge properties

While some assimilate propositions to sets of a certain sort,⁶⁹ others assimilate propositions to facts of a certain sort.⁷⁰ Still others assimilate propositions to certain act types.⁷¹ Jeff Speaks is also an assimilationist: Speaks maintains that propositions can (and should) be identified with a special case of some more widely countenanced metaphysical kind. But Speaks thinks these theorists have identified the wrong metaphysical kind. Propositions are not sets, facts, or act-types. Rather, they are *properties*.

In particular, Speaks defends the view that propositions are monadic properties instantiated by everything or nothing. The properties in question are Cambridge properties—typically, highly non-natural properties, like *being such that things are some particular way*. For example, we are all *such that birds fly*. On Speaks's view, propositions are a sort of property like that.

Speaks is upfront about some of the metaphysical costs of the view. One must accept (necessarily) uninstantiated properties, an abundant view of properties, and a fine-grained view of properties. Absent any one of these commitments, properties cannot plausibly play "the proposition role". But,

⁶⁹See Lewis 1973, 1986; Stalnaker 1976a, 1984, 2011; Chalmers 2003; Hodgson *this volume*; and Jago *this volume*, among others.

⁷⁰See King *this volume*.

⁷¹See the contributions by Hanks and Soames to this volume.

Speaks notes, a broadly Russellian conception of propositions is *already* committed to just these features, while eschewing the ontological parsimony that comes with Speaks’s identification of propositions with Cambridge properties.

Speaks’s view is perhaps on its strongest grounds when it comes to perceptual contents and propositional attitude ascriptions. On Speaks’s view, the contents of perceptual states, judgements, and assertions just are Cambridge properties. Other assimilationist views, such as those of King, Hanks, and Soames, have a much tougher time identifying the contents of perceptual states with the contents of judgements and assertions. That is because the extra materials those views posit—propositional relations in King’s case, acts of ascription in Hanks’s case, and acts of predication in Soames’s case—go beyond the simple way an ordinary cognizer might take her environment to be. This matters because we easily transition from, e.g., seeing that *o* is red to judging that *o* is red to asserting that *o* is red. Speaks’s view is able to accommodate these easy transitions in a way that is unavailable to assimilationists like King, Hanks, and Soames.⁷²

A further advantage Speaks adduces for the view is its capacity to shed light on the nature of attitudinal relations to propositions. According to Speaks, traditional Fregean/Russellian and sets-of-circumstances views of propositions simply cannot do this. On Speaks’s view, propositional attitudes amount to a special case of something with which we are already familiar: namely, believing *of* a property *F* that it is instantiated. For Speaks, believing that *P* just *is* believing of some *F* that it is instantiated, where *F* is a Cambridge property. Speaks concludes this discussion by comparing the relative merits of the view that propositions are Cambridge properties with Gilmore’s view (this volume), on which propositions are 0-place relations.

Finally, Speaks confronts the alleged representationality of propositions. Speaks’s response is direct: propositions are not representational. Speaks argues that there is no common-sense basis for the claim that propositions are representational, nor is there any strong theoretical reason to believe it. To the resolute, though, Speaks can offer a watered down account of representationality—of roughly the sort offered by King, Hanks, and Soames—that is satisfied by his view of propositions as Cambridge properties.

Propositions as 0-place relations

Like a number of other philosophers, Cody Gilmore assimilates propositions to a metaphysical kind generally thought to be less problematic. But Gilmore denies that propositions are sets, facts, sentences, acts, or Cambridge properties. Rather, on Gilmore’s view, propositions are *relations*. Consider a 2-adic relation, such as *is larger than*. That relation holds between Jupiter and Mercury, in that order. Now consider a 1-adic relation, like *is larger than Mercury*. That relation holds of Jupiter. The special 0-adic case is one in which the remaining “slot” in the relation is “plugged”, as in the relation *Jupiter is larger than Mercury*. On Gilmore’s view, this 0-adic relation is the proposition that Jupiter is larger than Mercury. In effect, Gilmore recasts the traditional division between propositions, properties, and relations as a “sliding scale” of relations: propositions are

⁷²For further discussion see [Speaks 2015](#).

0-adic relations, properties are 1-adic relations, and “relations”, as traditionally conceived, are polyadic relations.

Mark Richard (2013) and Jeff Speaks (2014a; 2014b, and *this volume*) hold that propositions are (in effect) 1-adic relations. But the practice of holding that propositions are, or may be treated as, 0-adic relations dates back at least to Kripke 1963.⁷³ The identification is often made as a technical expedient, while the substantive metaphysical claim that propositions are 0-adic relations is rarely explicitly argued for. Gilmore aims to fill this lacuna.

Gilmore’s proposal is a metaphysically modest answer to the challenge issued by King (2014a, 47): the “classical conception” of propositions is incapable of explaining how or why propositions have truth conditions, since they are meant to have them by their very natures and independently of minds and languages. Gilmore’s account appeals to general facts about relations, grounding, and (constitutive) essence to explain the truth-aptitude of propositions, as part of a more general abductive argument for the view that propositions are 0-adic relations.

More carefully, on Gilmore’s account, (i) every atomic proposition is a 0-adic relation, (ii) *truth* is the 1-adic version of the *holding* relation, and (iii) atomic propositions have the truth conditions they do for basically the same reasons that partially plugged relations have the holding conditions *they* do. Truth conditions for non-atomic propositions are left as an exercise for the reader.

4.3.1.3 Non-assimilationist theories of propositions

Assimilationist proposals (propositions as sets, facts, cognitive acts, properties, relations, etc.) are motivated in part by dissatisfaction with some aspects of the primitivism in the views of Frege and Russell. Assimilationists might also be motivated by considerations of parsimony: if we are committed to sets, acts, and so on, and if those entities can do the work propositions need to do, then we should assimilate. If sets, acts, and so on are less metaphysically problematic than *sui generis* propositions, and if they can do the work propositions need to do, then resistance is futile. We must assimilate.

But doubts might remain. Can entities like sets, or acts, or properties actually do the work propositions need to do? And is failure to assimilate ultimately where Frege and Russell go wrong? Of course, we should not multiply metaphysical kinds beyond necessity. But what if it *is* necessary? If the project of assimilation fails, does that doom realism about propositions?

Perhaps not. Objectionable primitives in the views of Frege and Russell include Frege’s senses, along with their mutual insistence on brute, mind-independent representationality. But one can hold that propositions belong to a *sui generis* kind without adopting all of that additional baggage. And we have already seen many examples from the history of philosophy in which theories of propositions were advanced with no pretense to assimilation. The next entries examine some contemporary ways of developing non-assimilationist propositional realism.

⁷³The view was later more widely adopted by Montague (1969, 1970), Prior (1971, ch. 3), and Gallin (1975), among others, and continued to have currency in the remainder of the 20th century and well into the 21st. See, e.g., Bealer 1982; Zalta 1983, 1988; Lewis 1986, 27–50; Turner 1987; Chierchia and Turner 1988; Menzel 1993a,b, 2015; Bueno et al. 2014; Dorr 2016; and Dixon 2018.

Simple propositions

Lorraine Juliano Keller defends a non-assimilationist view according to which propositions are mereological simples lacking proper parts or constituents. Furthermore, on Keller's view, propositions have their truth conditions fundamentally and essentially.⁷⁴ Call this *the Simple View*. Keller notes that some simply dismiss the Simple View.⁷⁵ But Keller maintains the view should be a contender since it avoids many of the problems its competitors face.

Keller considers the main competitors to the Simple View to be theories on which propositions are sets of possible worlds, à la Hintikka 1962, 1969, Montague 1969, Lewis 1973, and Stalnaker 1984, and “structured” views of propositions, roughly in the spirit of Russell 1903. Keller notes at the outset an apparent disadvantage of the Simple View: its main competitors hold that propositions are, or are built out of, entities we have antecedent reason to believe in (i.e., objects and properties, or perhaps possible worlds, or pairs of possible worlds and truth values). By contrast, on the Simple View, propositions are inscrutable. In spite of all this, Keller holds that the Simple View enjoys many advantages over its rivals.

First, the Simple View can differentiate between intuitively distinct propositions in a way the sets of worlds view cannot. For example, on a set of worlds view there is only one necessary proposition (the set of all possible worlds). But on the Simple View there are many: for example, the proposition that $2 + 2 = 4$ and the proposition that arithmetic is incomplete (if consistent) are distinct. Moreover, sets of worlds (or functions from worlds to truth values) simply are not plausibly what we assert and believe. The sets of worlds view provides us (at best) with a *model* of propositions, but shirks the crucial question: *What are propositions?*⁷⁶

As for structured propositions, Russellians (and Fregeans) hold that propositions have constituents, and that this fact is explanatory. Propositional constituents are supposed to explain propositional structure, as well as shed light on the intentionality of propositions. Keller's charge is that these allegedly explanatory facts about constituency stand in need of explanation. For starters, propositional constituency cannot simply be set-theoretic *membership* (contra Hodgson *this volume*), since such a view is incapable of adequately addressing problems stemming from the unity of the proposition and the propositional Benacerraf problem.⁷⁷ Second, propositional constituents cannot be mereological *parts* of the structured propositions they comprise. For if they were, the transitivity of proper parthood would be violated: Mont Blanc's snowfields are a part of Mont Blanc, but not of the proposition that Mont Blanc is over 4000 metres high. But if propositional constituents are neither set-theoretic members nor mereological parts of propositions, then what

⁷⁴Variants of Keller's view are developed by George Bealer (1982; 1998), Trenton Merricks (2015), and Peter van Inwagen (2004), respectively. Keller tentatively endorses a version of this view as defended by Bealer (*ibid.*).

⁷⁵Detractors include King (2007, 2009) and Richard (1990), among others.

⁷⁶Though see Charlow *this volume*, Richard *this volume*, and Stalnaker 2010 on the relation between modeling and propositional realism.

⁷⁷On the problem of unity, see Simchen *this volume*; on the propositional Benacerraf problem see Fitts *this volume*.

are they?⁷⁸ Finally, appeals to constituency (or parthood) do nothing to explain the apparent intentionality of propositions. Russellian propositions are supposed to be *about* their constituents (or some of them, anyway), in virtue of having them as constituents. But books, for example, are not (typically) about their parts, despite having them as constituents. Thus, countenancing constituency is a strain on ideology. It is better to stick with the one primitive: intentionality.

Keller sees two ways out for the proponent of structured propositions. Both involve relying on something other than constituency to address problems stemming from and related to the unity of the proposition. First, one might appeal to the resources of act-theoretic propositions, *à la* Hanks (2015) (and this volume) or Soames (2019a) (and this volume) to explain propositional intentionality.⁷⁹ But these accounts explain propositional intentionality in terms of predication or ascription, which seem, on their face, hardly explanatory. In addition, tying propositions to cognitive acts leaves complex propositions that are beyond our ken inexplicable. If no agent could grasp a proposition with a million conjuncts, for example, act-theoretic views incorrectly predict that no such proposition exists.

Proponents of structured propositions might instead avoid unity-style objections by taking propositions to lack representationality or intentionality. But an argument to the contrary appears to show that aboutness entails representationality: propositions are about things, and, hence, they represent things. If you and I disagree about whether Trump loses, then ‘Trump loses’ better encode a proposition, rather than a mere belief state. Our disagreement is, ostensibly, about Trump. Given that it is about Trump, it also represents Trump.

Keller concludes by adumbrating certain benefits of the Simple View, and contrasts different ways of developing the idea due to Bealer (1982, 1993, 1998), van Inwagen (2004), and Merricks (2015). In short, and unlike competitors, the Simple View has no problems with fineness of grain, constituency, intentionality, or mind-independence.

Hylomorphic propositions

Ben Caplan, Chris Tillman, and Eileen S. Nutting defend a non-assimilationist *hylomorphic* theory of propositions, according to which propositions have both matter and form. On a hylomorphic theory, the wood-and-metal parts of a table are the table’s matter, while the manner in which those material parts are arranged is the table’s form. Similarly, on a hylomorphic theory of propositions, the proposition that Trump loses has Trump and *losing* as its matter, and the *proposition-building* relation as its form. Caplan et. al. call this ‘the vaguely Aristotelian view’.

Caplan et. al. begin by making some standard assumptions about propositions: they are expressed by sentences, they are truth-apt, and are the objects of propositional attitudes. Caplan et. al. also make a non-standard assumption: propositions literally have parts.⁸⁰

⁷⁸Though see Textor *this volume*.

⁷⁹See also the contributions by Hanks and Soames to this volume.

⁸⁰This view is defended by Russell (1903, 1904a), King (2007), Cappelen and Hawthorne (2009), Fine (2010c), Tillman

The vaguely Aristotelian view appeals to grounding and (constitutive) essence for objects and properties, as well as *propria*; roughly, the latter are features of an object that are grounded in its essence but not included in it: features an object has *because* of its essence. For example, having exactly two protons is essential to being a helium atom. This, in turn, requires that a helium atom has exactly two electrons in its only valence shell. This latter feature is not part of the essence of a helium atom, but it is not an accident, either. Rather, it is a *proprium* of the helium atom that is grounded in (or “flows from”) the atom’s essence.

On the vaguely Aristotelian view, the proposition that Trump loses is essentially grounded in the fact that Trump and losing stand in the *proposition-building* relation. And among the proposition’s *propria* are: having Trump as a part, having *losing* as a part, having *proposition-builder* as a part, and being true when and only when Trump loses. The *propria* possessed by the proposition that Trump loses flow, in turn, from the *propria* of the *proposition-building* relation. It lies in the essence of the *proposition-building* relation to be such that some entities stand in it if and only if certain conditions are met,⁸¹ and whenever it is instantiated, a further entity—a proposition—exists. The fact that the resulting proposition comes to have the parts and truth conditions it has is due to the *propria* of the *proposition-building* relation.

Caplan et. al. close by considering a potential advantage of their view over seemingly close competitors like Gilmore *this volume* and Fine 2010c. As Braun (1993, 2005), Mousavian (this volume), Spencer (2016), and many others have noted, sentences like ‘Vulcan is a planet’, ‘Trump is non-self-instantiating’, and ‘Vulcan is non-self-instantiating’ all seem to have contents that play important propositional roles. Arguably, they all encode “gappy” propositions that are, in a way, semantically defective.⁸² We can think of the proposition that Vulcan is a planet as the mereological complement of Trump and the proposition that Trump is a planet. We can think of the proposition that Trump is non-self-instantiating as the mereological complement of *being a planet* and the proposition that Trump is a planet. And we can think of the proposition that Vulcan is non-self-instantiating as the mereological complement of Trump, *being a planet*, and the proposition that Trump is a planet. On the vaguely Aristotelian view, the first has the *proposition-building* relation and *being a planet* as parts, the second has Trump and the *proposition-building* relation as parts, while the third has only the *proposition-building* relation as a part. Since Gilmore, Fine, and others do not countenance (their correlates of) the *proposition-building* relation as a part of every proposition, they lack an explanation for the apparent meaningfulness of, e.g., ‘Vulcan is non-self-instantiating’. For parallel reasons, these philosophers cannot explain the fact that that sentence is not mere nonsense, and that its content can serve as an object of propositional attitudes.

and Fowler (2012), Richard (2013), Gilmore (2014), and others. It is rejected by Meinong (1904), Bealer (1998), Keller (2013), Speaks (2014a), and Merricks (2015), among others.

⁸¹In the atomic case, those entities need to be an object and a non-paradoxical property.

⁸²David Kaplan first proposed gappy propositions in unpublished comments on Kripke in 1973 (Almog 1991, 618; fn. 15), and briefly discusses them in his (1977/1989, 496; fn. 23).

4.3.2 Addressing the role question

In §2, we specified a number of semantic, cognitive, and logical roles propositions are thought to play. An adequate answer to *the role question* requires refining this list of roles, and determining which entity or entities, if any, best satisfy them. In the remainder of this section we consider some further roles propositions might play, and how a more complete theory of propositions might accommodate them.

4.3.2.1	Relativity and propositional content	#
4.3.2.2	Intentional attitudes and their objects	#
4.3.2.3	Varieties of Russellianism	#
4.3.2.4	Further logical and metaphysical issues	#

4.3.2.1 Relativity and propositional content

In addition to the classical roles, propositions may exhibit *content relativity*. That is, they may be called upon to reflect various spatiotemporal, egocentric, or other relativistic aspects of our experience. Alternatively, there may be a sort of relativity in facts about which propositions exist; the existence of a proposition may be sensitive to what things there are and the ways those things could be.

Temporalism

Propositional eternalism is the view that each proposition has its truth value eternally.⁸³ An alternative, *temporalism*, allows that at least some propositions are true at certain times and false at others.⁸⁴ Berit Brogaard presents a novel case for temporalism based on preferential propositional attitudes like *wishing*, *desiring*, *hoping*, and *intending*.

Temporalism is supported by an analysis of natural-language tense markers as *temporal operators* (Prior 1955).⁸⁵ On this view, the semantic function of ‘it will be the case that’ in ‘it will be the case that Biden is President’ asserted in 2020 is to shift the temporal index of evaluation from 2020 to some future time: the tensed sentence is true, in 2020, just if relative to that future time ‘Biden is President’ is true. According to the temporalist, ‘Biden is President’ expresses an untensed, temporal proposition that is true at some times and not at others. Thus, Brogaard argues,

⁸³In the contemporary period, eternalism is defended by Lewis (1980), Richard (1981), King (2003), Salmón (2003), Glanzberg (2011), and others. Frege (1918/1956) also maintained that propositions (or *Thoughts*) have their truth values eternally.

⁸⁴Specifying the views accurately requires more finesse if the background logic is more exotic than is assumed here. Note that temporalism is not the view that *all* propositions are temporal in nature. Plausibly, even by temporalist lights, the propositions of mathematics, science, and much philosophical discourse have their truth values eternally.

⁸⁵Here and in what follows, we are using ‘tense marker’ to indicate any syntactic indication of temporality, and not only a specific type of verb conjugation.

if natural language tense markers express temporal operators—and if those operators operate on propositions—then there are temporal propositions.⁸⁶

But, as Richard (1981) pointed out, the case for temporalism is not univocal: there are apparently invalid arguments that would be valid if temporalism were true.⁸⁷ Consider this argument:

1. Mary believed that Nixon was President.
2. Mary still believes everything she once believed.
3. Therefore, Mary believes that Nixon is President.

The temporalist identifies the object of Mary’s (past) belief in (1) with the temporal proposition that Nixon is President. That proposition continues to be believed by Mary today if (2) is true. So the argument appears valid, given temporalism. Brogaard counters that (1–3) may in fact be valid, since many structurally similar arguments are valid, and concludes that Richard’s argument for eternalism is at best inconclusive.

Moreover, Brogaard argues that only temporalist propositions are suitable as objects for many preferential propositional attitudes. Consider future-directed preferential attitudes, like *hoping*. ‘Jill hopes that Jack will be home soon’ ascribes to Jill the hope that Jack will be home soon. Given eternalism, the object of Jill’s hoping is an eternal proposition (perhaps it is the eternal proposition that there is a time t later than Jill’s hoping such that Jack is home *at t*). So eternalism represents Jill’s hoping as either eternally satisfied or eternally unsatisfied. But then Jill’s hoping makes little sense. For it is a plausible necessary condition on successfully hoping that φ that one believe truly both φ and $\neg\varphi$ are possible. A better candidate for the object of Jill’s attitude, Brogaard suggests, is the temporal proposition that *Jack is home*. The ascription to Jill of hoping that Jack will be home is thus true just if, for some time t later than the ascription, Jill hopes that temporal proposition is true at t .

Brogaard notes that the temporalist view is independently motivated, providing a smooth treatment of specificity in connection with “desire” modals (Jill can hope that Jack comes home, but not that Jack comes home in a bodybag, and can express that specific desire simply by uttering ‘I hope that Jack comes home’).⁸⁸ Temporalism similarly improves upon eternalist treatments of past-directed preferential attitudes (‘Jill hopes that Jasmine passed the exam’).

Brogaard concludes by highlighting similarities between preferential attitudes and commissive and directive attitudes, like acts of promising, requesting, and apologizing. These, like preferential attitudes, have a “world-to-mind” direction of fit. And, like preferential attitudes, there is reason to think that the objects of commissive and directive attitudes are temporal, rather than eternal,

⁸⁶As Brogaard understands the view, the temporalist recognizes a species of *propositional*, as opposed to objective or “metaphysical”, tense. On metaphysical tense, see Prior 1967 and Fine 2005.

⁸⁷See also Kneale and Kneale 1970.

⁸⁸See Graff 2003 and Yalcin 2011 for discussion.

propositions. If temporal propositions are required to play any of these propositional roles, then temporalism is true.

Content-relativity and Pleonastic propositions

Often, propositions are about things. And sometimes, in order to entertain those propositions, we must think about the things they are about in different ways. If we say ‘today is the day’ on the 1st, we can continue to believe what we said on the 2nd as well. But not by accepting ‘today is the day’, and not by thinking of the 1st the way we did when we said it. When on the 2nd we say ‘yesterday was the day’, we give voice to the same belief we express on the 1st. Propositions like these have what Steven Schiffer calls *relativity features*. Schiffer argues that *Pleonastic propositions* alone are compatible with the relativity features of propositions.

Relativity and Frege

Dr. Lauben thinks to himself that he has been wounded. According to Frege, in doing so Lauben thinks of himself in a way no one else can. On Frege’s view, this way in which Dr. Lauben thinks of himself is itself a basic component of his thought. As such, he cannot communicate that very thought to anyone else. For in order for someone else to entertain it, they must—*per impossibile*—think of Dr. Lauben in a way that only he can.

Frege (1918/1956) proposed that when Dr. Lauben utters ‘I have been wounded’, what he communicates does not have as a basic component Dr. Lauben’s special way of thinking of himself. Rather, what he communicates better corresponds to what he would say by uttering ‘he who is speaking to you at this moment is wounded’. This proposition instead has as a basic component a way of thinking about Dr. Lauben that is a way for you to think about him, too. Strictly speaking, no one else can share our first-personal thoughts.

Surprisingly, Frege goes on to suggest that what we say on the 1st by uttering ‘today is the day’ can be expressed on the 2nd by ‘yesterday was the day’: according to Frege, “(a)lthough the thought is the same its verbal expression must be different [. . .] [t]he case is the same with words like ‘here’ and ‘there’” (*ibid.*). This is surprising for two reasons. First, adverbial demonstratives seem to give rise to exactly the sorts of relativity issues raised by first-person pronouns. Second, with Frege their treatments differ dramatically. While first-person pronouns encode incommunicable contents, adverbial demonstratives (somehow) encode ways of thinking about times and places that can be said in many ways—ways that intuitively correspond to different ways of thinking about those times and places. A more plausible approach would uniformly treat first-person pronouns, adverbial demonstratives, and “perceptual demonstratives”, etc. Fregeanism appears unable to meet this demand.

Relativity and Russell

According to Schiffer, Russellianism ultimately fares no better. Whereas Fregeans take the basic components of propositions to be ways of thinking about things, broadly construed, Russellians take the basic components of propositions to be just those very things thought of, broadly construed.

Russellians deny that any propositions have the sorts of relativity features that interest Schiffer. ‘I am Schiffer’, uttered by Schiffer, ‘You are Schiffer’, uttered to Schiffer, ‘He is Schiffer’, uttered while indicating Schiffer or his likeness, and ‘Schiffer is Schiffer’, uttered no doubt by some philosopher of language, all encode the same trivial proposition whose basic components include Schiffer himself and the relation of numerical identity. While one may have to think of Schiffer in some way or other in order to entertain the proposition, there is no particular, uniquely special way that is required. One must think of a thing in a certain way only in order to *understand an utterance*, rather than to *entertain the relevant proposition*.

The Russellian view faces well-known challenges. Intuitively, ‘Salmón is Salmon’ is informative in a way that ‘Salmon is Salmon’ is not. And ‘Schiffer believes that Salmon is Salmon’ may be true in a way ‘Schiffer believes Salmon is Salmón’ is not. This, in a nutshell, is Frege’s puzzle of cognitive significance and attitude ascriptions (Frege 1892/1960). But a related puzzle is that an amnesiac might find ‘I am Schiffer’ informative in a way ‘Schiffer is Schiffer’ is not. Schiffer concludes the Russellian can accommodate the apparent relativity only if they can adequately address Frege’s puzzle of cognitive significance. Schiffer is pessimistic on this score, as he has argued elsewhere.⁸⁹

Relativity and Pleonastic Propositions

Russellian and Fregean propositions alike are structured: they are “built up” from basic propositional components or constituents. In the Russellian case the constituents are (more or less) *things*. In the Fregean case, they are (roughly) ways of thinking *about* things. In either case, propositions differ when they differ in their constituents. Schiffer’s pleonastic propositions, by contrast, are unstructured. They have no basic components. They differ when their truth conditions differ. They also differ in how one must think about the things involved in those truth conditions whenever one entertains them.

These last two features flow from a core tenet of Schiffer’s view. The first involves contextually determined criteria for evaluation: one who utters ‘George Eliot is a man and Mary Ann Evans is not’ cannot be correctly reported as saying that Eliot is not a man, whereas one who utters ‘Evans is not a man, and Eliot is Evans’ can be correctly so reported. These contextually determined criteria in turn determine which proposition is the referent of the ‘that’-clause in our attitude reports, which then constrains how reporters (and their audiences) must think about Eliot/Evans. “Object-dependent” propositions, like any proposition serving as a referent of ‘that Eliot authors’, are contextually individuated in ways that determine their relativity features.

Frege sought to solve his famous puzzle by, in effect, treating our avowals of belief and disbelief as sacrosanct, tracking intuitive judgements about informativeness. But this leads to trouble in connection with Frege’s views on first-personal thoughts. In particular, as we have seen, Frege holds that first-personal thoughts are incommunicable, while holding that ‘today is the day’ and ‘yesterday was the day’ may express the same proposition. But the latter may differ in informativeness—‘today is the day my taxes are due’ may differ in informativeness from ‘yesterday was the day my

⁸⁹See esp. Schiffer 1987, 1992, 2003, 2006.

taxes were due'. Schiffer argues instead that our avowals of disbelief are not sacrosanct. I can sincerely claim I don't believe something I in fact do. This all may seem grist for the Russellian mill, since, notoriously, Russellians have to admit (e.g.) that Lois *does* believe that Clark is Superman. But even if avowals of disbelief are not sacrosanct, Schiffer maintains they are more sacred than Russellians allow. Schiffer closes by arguing that his preferred view preserves this sanctity in a way Russellianism cannot, even when paired with ways of thinking about things or (non-propositional) "modes of presentation".

Attitudes *de se*

It is traditional to identify propositions with the objects of intentional attitudes, like belief and knowledge. However, Neil Feit argues that considerations involving irreducibly *de se* belief put pressure on the idea that intentional attitudes should be understood in terms of a binary relation between agents and *propositions*.

De se belief is *self-locating* belief: it is belief about *where*, or *who*, or *when* one is, and about other self-locating or self-identifying relations one bears to one's external environment. *De se* ignorance is ignorance of such self-locating information: it is ignorance regarding one's (spatial or temporal) location or identity within the world. As an illustration, consider David Lewis's tale of two gods (Lewis 1979).⁹⁰ The gods inhabit the same world, with one living on the tallest mountain and one living on the coldest. We are to suppose that each possesses complete propositional knowledge of what his world is like. Yet both are ignorant regarding their respective locations within the world: neither god knows which mountain is the mountain that *he* is on. Given that each god could acquire a *de se* belief about his location within the world that would eliminate this ignorance, Lewis concluded that not all belief has a proposition as its content in the traditional sense.⁹¹

Perhaps instead the having a *de se* attitude involves the self-ascription of a *property* (this was Lewis's own view).⁹² Properties differ from propositions, at least as traditionally conceived, since the former potentially discriminate between individuals within a possible world. Each god's ignorance might thus be explained by supposing that while both self-ascribe the property of *being such that exactly one god lives on the coldest mountain*, neither self-ascribes the property of *being the god on the coldest mountain*. On this view, *de se* ignorance does not involve ignorance regarding the truth of some proposition, but rather the failure to self-ascribe some individuating, and hence self-locating, property.⁹³

⁹⁰In addition to Lewis 1979, both Castañeda 1968 and Perry 1979 contain well-known discussions of *de se* belief.

⁹¹Note that it is compatible with both gods' *de se* ignorance that each believes every true descriptive proposition of the form *the F is on the coldest mountain*. As Feit explains, analogous considerations weigh against the supposition that there is a true *singular* proposition belief in which would eliminate either god's *de se* ignorance. See also Perry 1979, 8.

⁹²Lewis 1979; see also Lewis 1986, 27–50. Chisholm (1981) and Recanati (2012) defend similar views. Feit (2010, 2012) develops the property theory in detail.

⁹³A closely related view represents the content of a *de se* belief with a set of "centered" possible worlds. On this view, the *de se* proposition either god would express with an assertion of 'I am on the coldest mountain' is the set of centered

A further option distinguishes between the (propositional) contents of beliefs and the *guises*, or *modes of presentation*, under which a proposition might be believed. A propositional guise is a *way of believing* a proposition.⁹⁴ On this view, the resolution of either god’s *de se* ignorance does not involve his coming to believe a new *proposition* (we continue to suppose that each god has perfect propositional knowledge about the world he inhabits). Instead, the idea is that (e.g.) the god on the coldest mountain comes to learn what mountain he is on by coming to believe a singular proposition about himself in a first-personal way (or under a first-personal mode of presentation). Careful attention to which sentences an agent accepts, or rejects, provides a useful (but fallible) method for tracking the way in which they believe a proposition. So, for example, suppose ‘Boreas’ names the god on the coldest mountain. Perhaps the god on the coldest mountain learns what mountain he is on when he comes to believe the singular proposition that Boreas is on the coldest mountain, while accepting the sentence ‘I am on the coldest mountain’. Feit critically evaluates various ways of developing these ideas.

Frege’s (1918/1956) discussion of the first-person suggests a third option, on which the possibility of *de se* belief reflects the fundamental *unshareability* of certain propositional contents. Perhaps when either god learns what mountain he is on, what is believed is a singular proposition only he can grasp (a “first-personal” proposition).⁹⁵ On this view, all ignorance—including *de se* ignorance—is propositional; what the possibility of *de se* ignorance reveals is merely that certain propositions may be grasped by only a single individual, reflecting what Frege called the “special and primitive way” in which each of us is presented to ourselves. As Feit notes, however, the nature of Frege’s special and primitive way in which we are self-presented remains mysterious despite efforts to explicate the idea in other terms.⁹⁶

Feit concludes with a discussion of *de se* scepticism—the view that *de se* belief raises no distinctive problem for the traditional conception of propositions as the objects of intentional attitudes.⁹⁷ The sceptic holds that *de se* belief can be unproblematically understood in terms of a binary relation between an agent and a proposition. Feit demurs.

worlds in which the individual occupying the center is on the coldest mountain. If we identify *de se* propositions with sets of centered worlds, this view would allow us to preserve the traditional identification of propositions with the objects of intentional attitudes.

⁹⁴This way of understanding *de se* belief is developed by Perry (1979). For additional discussion of propositional guises, see Salmón 1986 and Braun 2002.

⁹⁵On one way of developing the idea, each god is uniquely situated to grasp their own “self-concept”, and it is this concept which figures in the relevant first-personal proposition they would come to believe were their *de se* ignorance to be resolved. For discussion of Frege on first-personal thoughts, see (e.g.) Peacocke 1981, Evans 1981, McDowell 1984, and Schiffer *this volume*.

⁹⁶Feit develops this criticism in more detail in Feit 2008.

⁹⁷On *de se* scepticism, see (e.g.) Stalnaker 1981 and Cappelen and Dever 2013.

Propositional dependence and perspectival shift

Recent work in higher-order metaphysics has led to renewed interest in a debate concerning the modal status of propositional existence and nonexistence.⁹⁸ On one side of the debate is the (propositional) *contingentist*, who maintains that it is a contingent matter what propositions there happen to be. On the other side is the (propositional) *necessitist*, who maintains that propositional existence and nonexistence are each a necessary matter.⁹⁹ Drawing upon earlier work in *relativized modal metaphysics*, Adam Murray shows here that less theoretical daylight separates these two ontological positions than is traditionally supposed.¹⁰⁰ Central to Murray's argument is a distinction between genuine metaphysical or ontological *dependence*, on the one hand, and that of (ontological) *perspective-relativity*, on the other. With that distinction in view, Murray shows how higher-order (propositional) necessitism can be developed in a way that exhibits theoretical virtues traditionally associated with the opposing, contingentist picture.

Propositional contingentism has traditionally been argued for on the grounds that singular propositions are *ontologically dependent* upon their individual subject-matters.¹⁰¹ In a nutshell, the contingentist idea is that since (e.g.) the proposition that Socrates is wise depends for its existence upon that of Socrates, a possibility in which Socrates does not exist is *ipso facto* a possibility in which that singular proposition is nonexistent. Since it is a contingent matter whether Socrates is something, the contingentist reasons, it is an equally contingent matter whether the proposition that Socrates is wise is something.

Murray cautions against that modal characterization of the dependence idea. The argument is that the very notion of a *non-actual possibility* at issue in the contingentist's argument is loose, corresponding on the one hand to a genuine "counterfactual" alternative to actuality, and on the other to a merely "hypothetical" perspective *from which* matters of (higher-order) ontology might be viewed or considered. (Think of a *modal perspective*, in Murray's sense, as a possibility considered "as actual" (Stalnaker 2001; Chalmers 2006), or as what Kaplan (1977/1989) and Lewis (1980) call a "context"). Disambiguated in that second way, the contingentist argument merely tracks our capacity as modal reasoners to imaginatively "shift" perspectives in the course of counterfactual reasoning, by temporarily taking up the (false, because non-actual) view or standpoint of a possibility in which the higher-order existence facts are otherwise. As Murray explains, such ontological perspective-relativity does nothing to undermine the possibility that, actually, each and

⁹⁸See, e.g., Stalnaker 2010, 2011, Otero 2013, Williamson 2013, esp. Ch. 6, Williamson 2015, Fritz and Goodman 2016, and Sider 2016.

⁹⁹A bit more carefully, propositional contingentism is the view that it is possible for there to be a proposition that is only contingently something, and propositional necessitism is the view that it is necessary that each proposition is necessarily something.

¹⁰⁰Murray elsewhere develops a theory of relativized modal metaphysics with Jessica Wilson (Murray and Wilson 2012), and with Wilson and Benj Hellie (Hellie et al. 2021).

¹⁰¹See, e.g., Prior 1968, 1969; Fine 1977, 1980, 1985; Adams 1981; Stalnaker 2011; Einheuser 2012; and Fritz and Goodman 2016.

every proposition is necessarily something.

That is not to say that propositions are somehow metaphysically “independent” of their contingent subject-matters, on Murray’s view. Murray defends an alternative, non-modal, view of propositional dependence that appeals to facts about propositional *essence*. Again in a nutshell, the idea is that for a singular proposition to depend, in the salient metaphysical sense, upon some object is just for that object to figure ineliminably in the identity or nature of the proposition (with ‘identity’ and ‘nature’ here understood in roughly the sense of [Fine \(1994\)](#)). Murray argues, contra [Williamson 2013](#), 291–96 and others, that in combination with that understanding of propositional object-dependence, higher-order necessitism does not collapse into first-order necessitism (the latter a decidedly more controversial position).

The resulting framework represents propositional existence as both metaphysically necessary, and as (non-trivially) dependent upon a contingent domain of first-order individuals. Murray closes by discussing advantages the framework enjoys over higher-order necessitist theories defended by [Plantinga \(1983\)](#) and more recently [Williamson \(2013, 2015\)](#).

4.3.2.2 Intentional attitudes and their objects

It is traditional to identify propositions with the “objects” of intentional attitudes, like belief, hope, and, perhaps, knowledge.¹⁰² The identification is supported by a view of ‘that’-clauses as designating propositions in attitude ascriptions. For example, ‘that Trump won’ in ‘Guliani believes that Trump won’ arguably designates the proposition that Trump won, and it is that proposition which the traditional view identifies with the object (or “content”) of Giuliani’s belief. Friederike Moltmann, Ray Buchanan, and Alex Grzankowski explore the scope and limits of the traditional identification of propositions with the objects of intentional attitudes.

Attitudinal objects

Moltmann argues for a shift in focus away from propositions in theorizing about the intentional attitudes. Moltmann’s framework instead recognizes *attitudinal objects*—non-propositional, concrete, and agent-dependent entities, such as token *judgments*, *beliefs*, *claims* and *intentions*—which satisfy many of the roles traditionally assigned to propositions.¹⁰³

Friederike Moltmann begins by highlighting ways in which attitudinal objects are indicated in natural language. Consider nominalizations of attitude verbs, such as *John’s belief* or *Mary’s claim*. These arguably denote (non-propositional) attitudinal objects, as do quantifiers and associated pronouns taking the position of clausal complements, as in *John said something*. That is because restrictions of such quantifiers—as in ‘John said something nice’—are not plausibly viewed as predicates of propositions (a proposition is not “nice” in the salient sense). Moltmann argues that such predicates are better viewed as applying to attitudinal objects: it is John’s saying, and not the proposition expressed *by* his saying, that is nice. In a related vein, Moltmann argues

¹⁰²The identification goes back at least to Ockham. See Brower-Toland *this volume* for discussion.

¹⁰³Moltmann’s essay summarizes work on attitudinal objects developed in (e.g.) [Moltmann 2013](#), [2017](#), and [2019](#).

that a compositional semantics for intentional attitude ascriptions requires attitudinal objects to serve as the semantic values of noun-phrases in complex attitudinal predicates (for example, ‘had the thought that *S*’ in ‘John had the thought that *S*’). The idea is that such noun phrases as ‘the thought that *S*’ contribute attitudinal objects and not propositions to the semantic contents of more complex constructions in which they grammatically embed.

As this brief characterization illustrates, Moltmann’s attitudinal objects are very unlike propositions at least as traditionally conceived. For example, certain attitudinal objects, while possessing *satisfaction* or *correctness* conditions, do not have truth conditions. In contrast with a proposition, a promise or intention can be satisfied or fulfilled, though never true or false.¹⁰⁴ Additionally, Moltmann argues that in virtue of being temporally located and of finite temporal duration, attitudinal objects may be reasonably viewed as “concrete” entities, and thus as causally efficacious.¹⁰⁵ Propositions, by contrast, have been traditionally viewed as atemporal and as consequently “abstract” (compare Frege 1918/1956). This raises difficulties for an analysis of content-based causation, as indicated by talk of a speaker’s claim causing a commotion or surprise. For these and other reasons, Moltmann finds advantages in a theory which identifies attitudinal objects, and not propositions, with the objects of intentional attitudes.

In virtue of their status as mind-dependent entities possessing their truth and/or satisfaction conditions intrinsically, Moltmann suggests that attitudinal objects may be plausibly seen as intrinsically representational. If so, the postulation of attitudinal objects as contents of intentional attitudes sidesteps various difficulties arising on a view of propositions as mind-independent entities that somehow manage to represent as a matter of their intrinsic nature. A theory of the intentional attitudes invoking attitudinal objects in place of propositions similarly affords a novel treatment of shared content, as when what we believe is the same as what you report. Moltmann represents the sharing of content in terms of relations of exact resemblance between numerically distinct attitudinal objects, with truth and satisfaction conditions at the level of common content being inherited from particular token instances.¹⁰⁶

Moltmann concludes by comparing the theory of attitudinal objects with an historical precursor in the product-theoretic semantics of Kazimierz Twardowski (1911/1999). Twardowski viewed the products of actions like thinking, claiming, judging, and intending as being on an ontological par with more familiar *material* products: just as a piece of writing is the product of a particular act of writing, on Twardowski’s view a token thought or judgement is the product of a particular act

¹⁰⁴Other attitudinal objects have acceptance and realization conditions. As Moltmann explains, different classes of satisfaction select different types of attitudinal objects. See also Hanks *this volume*.

¹⁰⁵Many attitudinal objects have what Moltmann calls a “limited lifespan”. For example, Guliani’s belief that Trump won comes into existence when Guliani begins to have the belief, and will go out of existence if Guliani ceases to have that belief.

¹⁰⁶Being mind- and agent-dependent, Moltmann’s attitudinal objects are non-repeatable, and thus not “shareable” in the sense traditionally attributed to propositions.

of thinking or judging.¹⁰⁷ However, Moltmann argues that such “state-related” attitudinal objects as beliefs and intentions cannot in all cases be viewed as the products of actions in Twardowski’s sense. Moreover, “act-related” attitudinal objects, like recognitions and realizations, are not plausibly viewed as the (intentional or non-intentional) products of associated epistemic acts. Finally, Twardowski’s product-theoretic intentional objects seem ill-suited to serve as what Moltmann calls “modal objects”, such as (token) obligations, permissions, or invitations.

Intentionality and propositional minimalism

Ray Buchanan and Alex Grzankowski argue that the principal role of propositions in the theory of mind lies in coordinating the ways our intentional states represent the world as being. Buchanan and Grzankowski employ this observation in developing a *minimalist* position in the metaphysics of propositions, on which the representational character of the intentional attitudes imposes few constraints on the ultimate metaphysical nature of propositions.

What conditions determine whether a given proposition serves as the content of some (token) intentional state?¹⁰⁸ One historically popular answer appeals to the intrinsically representational character of the proposition itself: on this view, an agent stands in an intentional relation to a proposition, and so has an intentional attitude with that proposition as its content, whenever the agent’s attitude represents the world as being just as the proposition does. However, Buchanan and Grzankowski find that traditional “trickle-down” model of representationality—according to which our mental states represent as they do in virtue of the representational character of their propositional contents—dubious. They also reject more recent, naturalistically-oriented, attempts to locate the source of propositional representationality in agents, with propositions somehow inheriting their representational features from an agent’s mental states.¹⁰⁹ Instead, Buchanan and Grzankowski propose to jettison the traditional view of propositions as representational in favor of a view that appeals to the intrinsically representational character of our intentional attitudes. Concretely, their idea is that for mental state tokens to have the same propositional content *just is* for those states to represent the same objects, properties, and relations in exactly the same way.

Buchanan and Grzankowski suggest that this account of sameness of propositional content provides us with an implicit real definition of what a proposition *is*: a proposition, on their view, is simply an equivalence class of mental states that represent the same as one another. The idea is that we begin with the notion of sameness of mental-state representation, and then define propositions in terms of more fundamental facts concerning the co-representationality of the mental. On their corresponding *minimalist* view of propositions, to stand in an intentional attitude relation to

¹⁰⁷Such products are thus plausibly viewed as abstract artifacts in roughly the vein of [Thomasson 1998](#).

¹⁰⁸Buchanan and Grzankowski carefully distinguish the representational *content* of an intentional attitude from what the attitude is *about*. Mary’s belief that Trump lost has the proposition that Trump lost as its content. But Mary’s belief is not about that proposition—instead, her belief is about Trump (or perhaps Trump and the property of *losing*).

¹⁰⁹Here Buchanan and Grzankowski have in mind theorists like [King \(2007\)](#) (and this volume), [Hanks \(2011, 2015\)](#) (and this volume), and [Soames \(2015\)](#) (and this volume). See also discussions by King and Soames in [King et al. 2014](#). For criticism of the inheritance model, see [Caplan et al. 2013](#) and [Speaks’s contribution to King et al. 2014](#).

a proposition is to be in a token mental state that is co-representational with all other mental states in the equivalence class from which that proposition is an abstract.¹¹⁰ Buchanan and Grzankowski maintain that minimalism renders many traditional metaphysical questions concerning the nature of propositions otiose. Given minimalism, for example, there is no substantive question of whether propositions are structured or unstructured entities, or of whether propositions are somehow intrinsically representational. Buchanan and Grzankowski similarly argue that on propositional minimalism there is no deep problem concerning the metaphysical “unity” of the proposition.

4.3.2.3 Varieties of Russellianism

Contemporary Russellian theories of propositions face two distinctive problems: Frege’s (1892/1960) puzzle of cognitive significance and the problem of empty terms. According to the latter, no proposition is encoded by (e.g.) ‘Vulcan is non-self-instantiating’ if the semantic content of a proper name is just its referent and that of a predicate is just the corresponding property, as Russellians would typically have it. However, it seems that such sentences are often meaningful and can figure into our mental lives in important ways. The best explanation seems to be that such sentences encode propositions as their semantic contents. Seyed N. Moussavian critically evaluates Russellian solutions to the problem of empty terms that appeal to semantically impoverished (or “gappy”) propositions.

According to Frege’s puzzle of cognitive significance, ‘Orwell is Orwell’ and ‘Orwell is Blair’ encode distinct propositions, since only the latter figures into a potentially useful extension of our knowledge in the right way. However, given that ‘Orwell’ and ‘Blair’ are coreferential, Russellians are pressured to treat those sentences as encoding the same proposition. Classical Russellian approaches attempt to explain the apparent differences in cognitive significance by appealing to *propositional guises* (or “ways of believing” propositions; Salmón 1986; Braun 2002) or *pragmatic enrichment* (Soames 2002). Joshua Spencer presents a novel Russellian proposal that instead appeals to *propositional coincidence*. And Chulmin Yoon investigates the prospects for a *semantic relationist* solution in the spirit of Taschek 1992 and Fine 2007.¹¹¹

The varieties of gappy propositions

Russellians hold that the sole semantic contribution made by a logically proper name to the proposition expressed by a sentence in which that name occurs as a grammatical constituent is simply the name’s *referent*. If proper names behave semantically like Russellian (logically) proper names, then the existence of *empty* names suggests that at least some Russellian propositions are semantically defective. Seyed N. Mousavian critically evaluates the view that sentences containing empty names semantically encode “gappy” Russellian propositions (or proposition-like entities).

¹¹⁰Compare familiar implicit definitions of, e.g., ‘the direction of line *A*’ or ‘the number of *F*s’. Buchanan and Grzankowski’s idea is that such implicit real definitions tell us everything there is to be told about the entities involved (e.g., numbers, directions, and in their case, propositions).

¹¹¹It is worth bearing in mind that the various Russellian strategies explored in this section are not mutually exclusive. Some might be better fits than others for certain problems, and, in principle, Russellians might avail themselves of aspects of any of theories discussed below.

Consider (1):

1. Vulcan does not exist.

That sentence appears to be meaningful. A proponent of the view that there are gappy propositions may hold that (1) semantically encodes a structured Russellian proposition that can be represented as follows:

2. $\langle \{\}, \textit{nonexistence} \rangle$

Such a theorist might further claim that the proposition in question is true, and (presumably) that it can serve as the object of propositional attitudes. It is important to note that proponents of the view (at least typically) deny that the semantic content of ‘Vulcan’ in (1) is the empty set. Rather, the idea is that the occurrence of the empty set in (2) represents the fact that ‘Vulcan’ makes no semantic contribution to the proposition expressed by (1).¹¹²

Proponents of the *Gappy Proposition View* (GPV) have a tougher time explaining apparent differences in content. Consider (3) and (4):

3. Vulcan is a planet.
4. Sherlock Holmes is a planet.

Assuming both names fail to refer, (3) and (4) encode the same content, according to GPV. But, intuitively, they do not. Braun (1993; 2002; 2005) proposes that one may believe the unique proposition encoded by (3/4) in a “Vulcanish” way, or under a particular *psychological guise*, and thus come to rationally believe that (3) is true while (4) is false.¹¹³ On Braun’s view, however, that proposition is, strictly speaking, false. A competitor view, due to Adams and Dietrich (2004) and Adams and Fuller (2007), appeals to pragmatic implicature to address intuitions concerning difference in content. An utterance of (1) might, for example, pragmatically imply (5):

5. The planet Le Verrier hypothesized to explain perturbations in Mercury’s orbit is nonexistent.

The proposed explanation is that it is easy to confuse the semantic content of a sentence with its descriptively enriched implicatures. Thus we judge (1) to be true because we judge (5) to be true. Finally, Braun (2005) and Salmón (1998) conjecture that truly empty names are quite rare, since they both embrace an abundant view of fictional, mythical, and imaginary objects (compare

¹¹²See, e.g., Almog 1991, Kaplan 1977/1989, and Braun 1993, 2005. For detractors see Adams and Stecker 1994, Adams et al. 1997, and Adams and Dietrich 2004. Stressing that he viewed the problem as a minor one given his focus on “logically perfect” languages, Frege (1892/1960, 164, fn. I) tentatively suggested that apparently non-referring names be regarded as (co-)referring to a “null object”, which Frege identified with the number 0. Russell (1905) would later dismiss Frege’s strategy as “plainly artificial”.

¹¹³For additional discussion of propositional guises, see Perry 1979, Salmón 1986, and Feit (this volume).

van Inwagen 1977 and Caplan 2004). On this sort of view, certain uses of ‘Vulcan’ and ‘Sherlock Holmes’ are not empty names. Though Braun and Salmón differ on whether atomic gappy propositions have truth-values, they agree that their negations have truth-values, where negation is interpreted as ‘false’ (in Braun’s case) or ‘untrue’ (in Salmón’s).

Mousavian considers several objections to GPV. Consider (6) and (7):

6. Santa Claus is identical to Santa Claus.

7. Santa Claus is self-identical.

Everett (2003, 9) argues that it is “highly counter-intuitive to suppose that [(6) and (7)] are false”. Everett’s complaint is that while a theory like Braun’s may be able to explain the intuition that such sentences express truths, it cannot explain their literal truth. Furthermore, the intuition that (3) and (4) differ in semantic content persists even after a speaker is informed that ‘Vulcan’ and ‘Sherlock Holmes’ are non-referring.

Mousavian (2011) presents several additional objections to the GPV. First, arguments that semantically gappy entities are in fact *propositions* are wanting. Though such entities may strongly resemble singular Russellian propositions, and encode important semantic facts about sentences that contain empty names, they do not plausibly contain enough content to (mis-)represent the world, thus disqualifying them as propositions.

Second, Mousavian points out that GPV seems to imply that gappy propositions are proper parts of “full” propositions. Consider (8):

8. Mars is a planet.

The mereological complement of the proposition expressed by (8) and Mars would seem to be the proposition encoded by (3), at least according to GPV. But (8) plausibly encodes an atomic proposition that does not include other propositions as parts.

A third objection concerns what according to GPV ought to count as *thoroughly* gappy propositions. Consider (9):

9. Vulcan is non-self-instantiating.

According to some versions of GPV, the proposition encoded by (9) can be represented as (10):

10. ⟨____, ____⟩

But then, it seems, this proposition will be a mereological part of all atomic propositions, contrary to expectations.

Finally, Mousavian argues, if psychological guises, pragmatic implicatures, or non-classical connectives can be brought to bear on problems arising from apparently empty names, then gappy

propositions themselves seem superfluous.¹¹⁴ Mousavian concludes with a critical assessment of endorsements of GPV by Caplan, Tillman, and Nutting (this volume) and [Spencer \(2016\)](#).

Plenitudinous Russellianism

Joshua Spencer accepts Russellian structured propositions. But Spencer rejects a widely accepted *Limiting Thesis*, according to which, given any propositional constituents (and assignment of propositional “roles” to those constituents), there is at most one proposition composed of just those constituents (playing just those roles). Instead, Spencer endorses a theory of *Plenitudinous Russellianism*, according to which distinct Russellian propositions may contain exactly the same propositional constituents playing exactly the same propositional roles. Elsewhere, Spencer argues that the view provides a novel solution to puzzles involving empty names and contingent existents ([Spencer 2013](#)), and fictional names ([Spencer 2016](#)).

How can the proposition that Eliot is an author if Eliot is be numerically distinct from the proposition that Evans is an author if Eliot is, given that Eliot *is* Evans? On Spencer’s view, every proposition has a subject-like role and a predicate-like role. In the proposition that Evans is an author if Eliot is, Eliot/Evans plays the subject-like role, and the property of *being an author if Eliot is* plays the predicate-like role. The same holds of the proposition that Eliot is an author if Eliot is. But different means of reference are associated with the subject-like role in each proposition. The means of reference by which ‘Eliot’ refers to Eliot/Evans just is the causal-historical chain that leads from her to the use of ‘Eliot’. And the means of reference by which ‘Evans’ refers to Eliot/Evans is the different causal-historical chain that leads from her to the use of ‘Evans’. No information about causal-historical chains serves as a constituent or part of either proposition. But given the difference in their subject-like roles, the propositions in question differ, despite having the same constituents structured in the same manner. And, crucially, on Spencer’s view, this difference grounds the possible difference in cognitive value between the two propositions.

Plenitudinous Russellianism offers a novel solution to Frege’s puzzles of identity and cognitive significance ([Frege 1892/1960](#)). According to Frege’s puzzle of identity, the propositions that $a = a$ and that $a = b$ differ in cognitive value or informativeness, even when true; but that should not be if those propositions are identical. However, Spencer argues, we suppose the proposition that $a = a$ and the proposition that $a = b$ are identical only if we accept that their having the same constituents playing the same roles suffices for their identity. That is a version of the Limiting Thesis, which Spencer rejects.¹¹⁵

Spencer argues that when viewed through the lens of Plenitudinous Russellianism, Frege’s puzzle of cognitive significance is importantly similar to the more familiar *grounding problem* concerning (e.g.) a statue and the lump of clay which constitutes it: what grounds (or explains) the different features of the lump and clay, on the one hand, and the Evans/Eliot propositions, on

¹¹⁴See fn. 107 on the compatibility of these various Russellian strategies.

¹¹⁵Spencer argues that this sort of reply also adequately addresses a closely related problem of cognitive significance that [Salmón \(1986\)](#) describes as “Frege’s puzzle”.

the other, given that in each case the entities are composed and arranged in just the same way? On Spencer's view, the challenge posed by both puzzles is essentially the same.

Semantic relationism

Semantic relationists agree with the Russellian view that the semantic content of 'Evans' is Evans, and the semantic content of 'Eliot' is Evans. But, like Spencer (this volume), semantic relationists also agree with the Fregean view that 'Evans is Evans' and 'Eliot is Evans' encode distinct propositions.¹¹⁶ As Fine (2007, 3) explains, that is because, on semantic relationism,

the fact that two sentences say the same thing is not entirely a matter of their intrinsic semantic features; it may also turn on semantic relationships among the utterances or their parts which are not reducible to those features.

On one way of thinking about the idea, propositions sometimes contain coordinating "bonds" or "ties" that hold between their constituents. Let us say that there are two occurrences of Eliot/Evans in the Russellian propositions expressed by 'Eliot is an author if Eliot is' and 'Evans is an author if Eliot is', respectively. An appropriate use of 'Eliot is an author if Eliot is' represents those occurrences as being occurrences of the same individual, whereas a use of 'Evans is an author if Eliot is' does not. (Though they are "occurrences" of the same individual, the latter sentence does not *represent* them that way.) On the relationist picture, these representational facts manifest at the structural level in coordination relations occurring *within* the (distinct) propositions expressed by the two sentences. Specifically, the two occurrences of Eliot/Evans in the proposition expressed by 'Eliot is an author if Eliot is' are *coordinated*, and thus the proposition represents them as the same. The proposition expressed by 'Evans is an author if Eliot is', by contrast, contains the very same constituents, but a different structure: its occurrences of Eliot/Evans are *uncoordinated*, so the proposition does not represent those occurrences as the same.

Chulmin Yoon evaluates semantic relationist proposals due to William Taschek (1992; 1995a; 1995b; 1998) and Kit Fine (2007; 2010a; 2010b), in light of criticism due to N. Ángel Pinillos (2011). These proposals are then applied to versions of Frege's (1892/1960) puzzle of cognitive significance and Kripke's (1979) puzzle about belief ascription. Finally, Yoon considers coordination puzzles involving apparently empty terms. This class of coordination problems is especially pressing for semantic relationism, since empty terms co-refer only vacuously, if at all.

4.3.2.4 Further logical and metaphysical issues

Propositional realists are happy to maintain that declarative sentences encode propositions. But interrogative (and imperative¹¹⁷ sentences have semantic contents if declaratives do. Are those

¹¹⁶However, as we will immediately see, semantic relationists do not accept this thesis for the same reasons that motivate Fregeans or Plenitudinous Russellians to accept it.

¹¹⁷See Charlow 2014b,a.

contents propositions? And if not, what are they? David Braun surveys the state of the art, and develops a theory of (non-propositional) *structured questions*.

Jesse Fitts and Richard Gaskin explore different aspects of the relationship between propositions and ontology. Building on discussions by Simchen (this volume) and Hodgson (this volume), Fitts's main concern is a propositional Benacerraf problem. Much as numbers appear not to be sets, as there are too many equally eligible candidates, so propositions appear not to be sets (or facts, or . . .), for parallel reasons. Fitts explores a number of ways the propositional realist might respond, with a particular focus on set-theoretic theories of propositions. By contrast, Gaskin is concerned with the degree to which we can "read" ontology off of our theoretical commitments. Commitment to the Russellian proposition that Trump loses, for example, would seem to carry with it a commitment to Trump and *losing*, in addition to a commitment to propositions. Some are wary of such "easy inferences", however, and it is an open question which (if any) of these inferences are cogent.¹¹⁸ Gaskin develops a *linguistic idealist* view on which the relationship between commitments that result from propositional theorizing and our ontological commitments is maximally transparent.

Foremost among the logical and metaphysical issues facing propositional realists is the looming threat of paradox. Since the discovery of Russell's (1903) paradox of propositions (and Myhill's (1958) rediscovery of it), the suspicion has lingered that theories of structured propositions inevitably succumb to paradox, or else skirt the problem by cobbling together *ad hoc* and unlovely patches. The lingering suspicion was largely suppressed during the post-positivist resurgence of propositional theorizing, but has since received renewed attention. Harry Deutsch critically assesses alternatives for paradox-free propositional theories.

Propositions and questions

Propositions are traditionally invoked as the semantic contents of declarative sentences. But interrogative sentences—or *questions*—appear to have semantic contents as well. Is the semantic content of a question a proposition?

David Braun answers in the negative. Braun critically examines David Lewis's (1970) *Performative Theory* of interrogative contents, the *Imperative-Epistemic Theory* due to Åqvist (1975) and Hintikka (1976), the *Force-Indicator Theory* due to Frege (1918/1956), Stenius (1967), Searle (1969), and Dummett (1973), and *Set-Theoretic Theories* due to Hamblin (1958), Karttunen (1977), and Groenendijk and Stokhof (1982), before presenting an alternative *Structured Questions Theory* that resembles, in some ways, theories put forth by Ginzburg (1995), Krifka (2001), Hanks (2015), and Soames (2015).

On the Performative Theory, every interrogative sentence is synonymous with some declarative sentence. For example, on this view 'Does Alice sing?' is represented as synonymous with 'I ask (you) whether Alice sings', where the semantic content of the latter in context is a function

¹¹⁸See, e.g., Yablo 1998, 2009; Schiffer 1992, 2003, 2006 (and this volume), and Bueno and Cumpa 2021; compare Thomasson 2014, 2021.

from possible worlds to truth-values. Braun canvasses a host of problems facing the Performative Theory, chief among these being that the theory implies that interrogative contents and the sentences which express them have truth values, contrary to ordinary judgments. By contrast, on the Imperative-Epistemic Theory, interrogatives are synonymous with imperatives commanding addressees to provide knowledge to the speaker. Thus ‘Does Alice sing?’ is represented as synonymous with the imperative ‘Bring it about that I know whether Alice sings’. Both Åqvist (1975) and Hintikka (1976) treat imperatives as expressing (truth-evaluable) propositions. Thus the theory suffers from many of the problems that arise on the performative view.

The Force-Indicator Theory similarly represents interrogative sentences as synonymous with declaratives, differing only at the level of the illocutionary force with which they are standardly expressed. On this view, declaratives are used to *assert* propositions, while interrogatives are used to *ask whether* propositions are true. Naturally these commitments carry with them the attendant problems of the Performative and Imperative-Epistemic theories, together with further difficulties stemming from the embedding of indirect interrogatives within declaratives. A standard utterance of ‘Carl asks whether the maid stole the diamonds’ does not ask whether the maid stole the diamonds, while a standard utterance of ‘If the butler didn’t steal the diamonds, then did the maid?’ does not assert that the butler didn’t steal the diamonds and does not ask whether the maid stole them. Braun argues that the theory additionally fails to reduce questions to propositions, since it cannot adequately account for ‘wh’-interrogatives, like ‘Who sings?’.

Set-Theoretic Theories of interrogatives deny that questions are propositions. Instead, according to Set-Theoretic Theories questions are set-theoretic constructions from propositions, where propositions are assumed to be functions from possible worlds to truth values. Braun’s focus here is on the more influential versions of this view, which represent the semantic contents of questions as identical with sets of functions from possible worlds to truth-values. Braun argues that such views avoid the problems faced by the other theories, but suffer from difficulties of their own. First, simple direct interrogatives are represented as non-extensional. Though ‘renate’ and ‘cordate’ are co-extensive, these co-extensive expressions differ in intension. Thus set-theoretic theories of interrogatives implausibly represent ‘Is Alice a cordate?’ and ‘Is Alice a renate?’ as differing in extension, since on these views their extensions are sets of functions from worlds to truth-values. Moreover, such theories inherit well-known problems of fineness of grain that arise on analogous treatments of declaratives (see, e.g., Stalnaker 1984, Lewis 1986, ch. 1, and Charlow *this volume*).

Braun’s view is that the semantic contents of interrogatives are *structured questions*. On this theory, the content of ‘wh’-expressions and phrases resembles that of quantifier phrases on a structured-contents approach. Such approaches treat ‘Some boys sing’ as expressing a structured proposition of the form ⟨singing, ⟨SOME, *being a boy*⟩⟩. In a parallel manner, Braun holds that ‘Which boy sings?’ expresses a structured content that may be represented by the pair ⟨singing, ⟨WHICH, *being a boy*⟩⟩, where *WHICH*, when applied to the property *being a boy*, yields a functional relation that, when applied to singing, yields the property of *being a boy that sings*. Braun identifies the extension of the latter (with respect to a world) with the set of boys that sing (in that world). Braun extends the theory to accommodate other interrogatives, explains their relation-

ship to intensional entities appealed to in set-theoretic theories, and shows how the theory avoids problems faced by competitors.

The propositional Benacerraf dilemma

Paul Benacerraf (1965) famously argued against set-theoretic reductions of the natural numbers, on the grounds that no argument could non-arbitrarily decide in favour one such reduction over any other.¹¹⁹ More recently, an analogous dilemma has surfaced for realist theories of propositions.¹²⁰ Consider attempts to identify each proposition with some set-theoretic entity or other. One proposal might identify propositions with sets of possible worlds. Another might identify propositions with functions from worlds to truth values. Arguably, each set-theoretic candidate serves equally well as a representation of the propositions. But then how could one identification be viewed as uniquely providing the literal truth concerning what propositions *are*, absent non-arbitrary reason to prefer that theory to its (non-equivalent) alternative? The puzzle suggests that propositions cannot literally be set-theoretic entities of any type. Parallel considerations cut against views of propositions as ordered *n*-tuples of objects, properties, and relations.¹²¹

Jesse Fitts argues that a recent empirical turn in the propositions literature affords a novel response to the propositional Benacerraf dilemma. So-called “mind-first” theories of semantic content represent propositions as depending for their existence and nature upon the cognitive processes of linguistic agents.¹²² So, for example, King (2007, 2014a) defends an identification of propositions with complex facts that incorporate syntactic relations—specifically, relations of *syntactic concatenation*—in their internal structure. Focusing on the proposition expressed by a simple atomic sentence, King proposes that agents interpret such relations as ascribing the semantic value of the sentence’s predicate (a property) to the semantic value of the sentence’s noun phrase (an individual). One might think that such a view lends itself immediately to a Benacerraf-style dilemma, given that different (and non-equivalent) relations of syntactic concatenation are available which would allow King’s structured facts to satisfy various role-filling criteria traditionally associated with propositions.¹²³ However, Fitts suggests that the apparent indeterminacy might be resolved by the empirical character of the view, and in particular by its appeal to *actual* relations of syntactic concatenation. The idea is that if agents really are composing the semantic values of some lexical

¹¹⁹Both the von Neumann and Zermelo set-theoretic progressions, for example, serve equally well as representations of the natural numbers. Benacerraf argued that since any reason to prefer one identification over the other would be arbitrary, neither progression plausibly serves as a reductive basis for the numbers.

¹²⁰See, e.g., Bealer 1998, Moore 1999, Jubien 2001, Armour-Garb and Woodbridge 2012, and Hodgson *this volume*.

¹²¹Why identify the proposition that Desdemona loves Cassio with a structure like $\langle \text{loves} \langle \text{Desdemona}, \text{Cassio} \rangle \rangle$ and not with some other ordered pair? Such considerations have led some theorists, like King (2007) and Soames (2010, Ch. 5), away from simple Russellian views of structured propositions. See Caplan and Tillman 2013 for critical discussion of King’s theory in this connection.

¹²²On mind-first theories of propositions, see (e.g.) Hanks 2011, 2015 (and this volume), Soames 2015 (and this volume), King 2007 (and this volume), and the essays by King and Soames in King et al. 2014.

¹²³Distinct candidate relations of syntactic concatenation differ at the level of their adicity, for example.

items when they compute the meaning of a sentence, then there may be an empirical fact about the way agents are composing those semantic values that will determine the concatenation relation that is actually included in a proposition's structure.¹²⁴

Fitts's discussion extends to set-theoretic accounts of propositions, as developed by Hintikka 1962, 1969, Montague (1969, 1970), Stalnaker (1984), Lewis (1986, ch. 1), and others. Fitts distinguishes a view on which the salient set-theoretic entities serve as explanatorily useful *models* of the propositions from one which seeks to *identify* each proposition with a set-theoretic entity of some sort (a set of possible worlds, say).¹²⁵ Underlying the former view is the idea that one studies the nature of propositions obliquely, *via* the discernible properties of the model (i.e., set-theoretic relations).¹²⁶ Fitts suggests that Benacerraf-style reasoning loses much of its traction against a view of set-theoretic propositions as serving merely to model propositions in this way. For the dilemma is thought to arise for the worlds-theorist given that there are equally acceptable but distinct set-theoretic candidates with which the propositions might be *identified*. But if sets of some sort only model (or "represent") propositions then the availability of multiple, non-equivalent, set-theoretic candidates merely indicates the availability of multiple equivalent *models* of the propositions. Fitts concludes that no problematic Benacerraf-style dilemma looms for the propositional realist in that case.

Propositions and ontology

Richard Gaskin develops a *linguistic idealist* view of ontology, on which to be an object (broadly construed) *just is* to be the semantic content of a meaningful linguistic expression.¹²⁷

Gaskin draws upon a philosophical tradition which represents the reference relation as a theoretical posit introduced to model and explain aspects of linguistic understanding (Quine 1978, 1980; Davidson 1967; McDowell 1998). Such views receive a sustained development in the neo-Fregean, logicist program advanced by Bob Hale and Crispin Wright (Wright 1983, Hale 1988, Hale and Wright 2001). For example, Wright (1983, 24) maintains that our concept of an object simply is that of the referent, or potential referent, of a singular term, and hence that our concept of singular term *reference* is explanatorily prior to that of objecthood more generally. Hale and Wright would subsequently extend the explanatory priority of reference to predicates, thus maintaining a

¹²⁴An alternative possibility is that it is empirically indeterminate what relations of syntactic concatenation are applied to various lexical items when agents compute the propositional meaning of a sentence. In that case, Fitts suggests, the indeterminacy potentially reflects merely contingent epistemic limitations on our part, and not indeterminacy that is irresolvable as a matter of metaphysical necessity.

¹²⁵See Stalnaker 2011 (and relatedly, Charlow (this volume)) for a view of possible worlds semantics as serving to model (as opposed to realistically describe) its underlying modal subject-matter. See Paul 2012 for a view of metaphysics in general as primarily concerned with the construction of explanatorily fruitful models of reality.

¹²⁶Thus for example one might propose to model the *entailment* relation between propositions in terms of a relation of set-theoretic inclusion, without thereby proposing an *identification* of the entailment relation with (e.g.) the subset relation.

¹²⁷Gaskin's paper synthesizes earlier work in the linguistic idealist tradition. See, e.g., Gaskin 1997, 2008, 2019.

view of properties as the ontological correlates of meaningful predicative expressions (Hale and Wright 2001; Hale 2010).

A core tenet of Hale and Wright's framework is the idea that ontological commitment is driven by what is *true*: on their approach, if a true sentence involves an expression of a certain kind, then there exists an entity of whatever kind is stood for by that expression. By contrast, Gaskin argues for a more liberalized conception of ontological commitment as driven by considerations of *meaningfulness*. On Gaskin's view, to be an entity of any metaphysical category just is to figure in the truth-conditions of some meaningful sentence, true *or* false.

Gaskin develops a theory of reference on which all semantically significant expressions necessarily refer. There are no meaningful, but semantically "empty", expressions, on Gaskin's view, though the precise nature of an expression's referent will often fail to be a function of that expression's syntactic type. Thus, for Gaskin, even paradigmatically empty singular terms like 'Zeus' or 'Vulcan' (necessarily) refer: such expressions refer to whatever concepts are grasped by a competent language user who understands sentences in which the expressions occur. Indeed, on Gaskin's view even meaningful *sentences* refer: Gaskin identifies Russellian, structured propositions with the referents of meaningful (declarative) sentences, and develops a theory of ontological commitment as determined by the truth conditions of such propositions.¹²⁸ Thus on Gaskin's framework all meaningful sentences, true and false, introduce Russellian propositions, and the world's ontology is determined by their truth-conditions. It is in that sense that Gaskin's view is a species of linguistic idealism: as Gaskin characterizes the position, the world "falls out" of meaningful language; "[s]entences are the primary and the given: they, and their truth-values, are, in general, independent of us; everything else is secondary and derived" (Gaskin, *this volume*).

Propositions and paradox

In 1903, Bertrand Russell discovered a paradox.¹²⁹ In 1958, John Myhill rediscovered it (Myhill 1958). Russell presented the paradox as follows:

Let us state this new contradiction more fully. If m be a class of propositions, the proposition "every m is true" may or may not be itself an m . But there is a one-one relation of this proposition to m ; if n be different from m , "every n is true" is not the same proposition as "every m is true". Consider now the whole class of propositions of the form "every m is true", and having the property of not being members of their respective m 's. Let this class be w and let p be the proposition "every w is true". If p is a w , it must possess the defining property of w ; but this property demands that p should not be a w . On the other hand, if p be not a w , then p does possess the defining property

¹²⁸In characterizing sentence "meaning" Gaskin subscribes to a view which recognizes both Fregean Thoughts and Russellian propositions. According to Gaskin, both are required to serve as sentential meanings in a broad sense.

¹²⁹Russell 1903, Appendix B. The paradox is importantly similar to one Russell (1902/1997) had earlier communicated to Frege.

of w , and therefore is a w . Thus the contradiction appears unavoidable. (Russell 1903, 527)

Drawing upon Uzquiano 2015, 329, we can think of the paradox as arising on the basis of the following three premises:

1. If m is a class of propositions, there is a proposition of the form *every proposition in m is true*.
2. If m and n are different classes of propositions, then the proposition *every proposition in m is true* is distinct from the proposition *every proposition in n is true*.
3. There is a class w of propositions of the form *every proposition in m is true*, for some class of propositions m to which the proposition does not belong.

By (3), there is a class w of propositions of the form *every proposition in m is true*, for some class of propositions m to which they do not belong. By (1), there is a proposition p which says that every member of w is true. Let ' $\forall q(q \in w \rightarrow q)$ ' designate p . Now, p is either a member of w , or it isn't. Suppose it is. Then, for some class of propositions m , $p = \forall q(q \in m \rightarrow q)$, and $p \notin m$. Given that $p = \forall q(q \in w \rightarrow q)$, it follows by (2) that $m = w$. And, since $p \notin m$, $p \notin w$. Thus, $p \in w \rightarrow p \notin w$. Suppose instead that $p \notin w$. Then for some m , $p = \forall q(q \in m \rightarrow q)$ and $p \notin m$. But then p satisfies the characteristic definition of w , in which case, $p \in w$. Assembling, $p \in w \leftrightarrow p \notin w$. A contradiction.

As Harry Deutsch emphasizes in his contribution to the volume, the *Russell-Myhill Paradox* (RM) has serious implications. Not least for the theory of propositions Russell himself espoused when RM was discovered.¹³⁰ But also for the neo-Russellian theories of propositions espoused by Perry (1979), Richard (1983), Salmón (1986), Kaplan (1977/1989), Soames (1987), and others. Moreover, and as Myhill (1958) would later emphasize, RM is formulable in the intensional language of Church 1951, and thus plagues quasi-Fregean theories of (structured) propositions as well, despite the manifest differences between the Russellian and Fregean conceptions.¹³¹ As Deutsch has long emphasized, proponents of structured propositions, including many contributors to this volume, ignore RM at their peril: given RM, the views they advocate, regardless of their other virtues, are (provably) inconsistent.¹³²

Deutsch argues that superficially satisfying solutions to RM are powerless against a cluster of more powerful paradoxes, in which the notions of truth and reference are less obviously at issue. Central here is a paradox of propositional *aboutness*. The paradox derives from the reasonable assumption that, for any class S , there is a proposition p about S and *only* about S . Following

¹³⁰See Alford-Duguid and Amijee *this volume* and Simchen *this volume* for discussion.

¹³¹See, e.g., Frege 1904/1988 and Russell 1904a.

¹³²See Deutsch 2008, 2014.

Deutsch, say that in such a case p is *about!* S . Now consider the class of propositions q such that, for some class S , (i) q is about! S , and (ii) q is not in S . Call that class S^* . Given a proposition q^* about! S^* , we may ask whether q^* is itself in S^* . If it is not, then q^* satisfies conditions (i) and (ii), in which case, q^* is in S^* . But if q^* is in S^* , then q^* must be about! some S^* that it is not in; and since that S must be S^* , q^* is *not* in S^* , after all. Thus, *impossibly*, q^* is in S^* if and only if it isn't.

The ramifications of the *aboutness!* paradox are considerable. For one, we can secure from it a version of RM, thus demonstrating the inconsistency of widely held views of structured propositions in the vein of Frege and Russell. This suggests, moreover, that a fully general solution to RM must solve the *aboutness!* paradox as well. And as Deutsch (this volume; fn. 2;) is quick to point out, it is far from clear that the problem is avoided simply by adopting a coarser-grained view of propositions as sets of possible worlds or possible truthmakers.¹³³ Nor is it clear that the paradox avoided by adopting a view along the lines of Juliano Keller *this volume*, according to which propositions are structurally simple.¹³⁴ Indeed, the *aboutness!* paradox makes no assumptions about the nature of propositions, other than that they are finely individuated enough so that propositions about! different sets are different simpliciter.¹³⁵

RM shares important similarities to Russell's more famous paradox for naïve set theory. Russell's set-theoretic paradox requires the existence of a *troublemaker*: the "Russell set", or the set of all sets that are not members of themselves. Many, following Richard Cartwright (1994), take the lesson of Russell's set-theoretic paradox to simply be that there can be no such troublemaker. One might similarly surmise that q^* or S^* are troublemakers, and thus impossible. And yet the existence of S^* is guaranteed by basic principles of standard set theory, while q^* is basically obligatory for any propositional realist.

Russell himself blamed his famous paradox on the "impredicative", self-referential nature of the definitions of the Russell set (and similar entities). As a consequence, Russell developed his ramified theory of types (RTT), which forbids the construction of troublemakers (Russell and Whitehead 1902/1910). Deutsch is unwilling to follow Russell (and later, Kaplan (1995) and Kripke (2011), who also advocate RTT) on this score.¹³⁶ For impredicative definitions are invaluable to the development of classical mathematics, and as such do not warrant a blanket ban. Moreover, Deutsch maintains that an adequate—and arguably less artificial—solution is available which avails itself of the modern resources of second-order logic and set theory.¹³⁷

¹³³See Nate Charlow and Mark Jago's respective contributions for discussion of these sorts of views.

¹³⁴As such views make vivid, there is no direct relationship between relative fineness of grain and propositional structure.

¹³⁵As Deutsch argues later his chapter in connection with Kripke's (2011) paradox, even the assumption of propositional realism may be relaxed.

¹³⁶See Ishii and Salmón 2020 for related discussion of property abstraction in connection with the ramified theory of types.

¹³⁷Deutsch considers resolving the aboutness! paradox by adopting a free logic, in which we relax the classical assumption that every individual constant and individual variable under an assignment denote something that exists. Systems of free logic contain correspondingly modified quantificational rules that block the derivation of the existence of trou-

In the case of second-order logic, those resources include propositional variables and corresponding quantifiers, together with comprehension principles guaranteeing the existence of certain propositions.¹³⁸ As in the case of standard, first-order Zermelo-Fraenkel (ZF) set theory, in second-order ZF there is no universal set, nor is there a set of all propositions. Second-order ZF therefore allows one to consistently deny that any second-order entity (such as a predicate) applies to every individual or to every proposition. One difficulty noted by Deutsch is that second-order ZF has no “faithful” Henkin models validating every instance of second-order comprehension, given that the latter guarantees the existence of a universal set. A more serious difficulty is that second-order ZF does not accommodate the intuition that there is a class of all propositions that are about! some class or other (indeed, the framework predicts that no such class exists).

A more promising route, in Deutsch’s view, combines second-order logical resources with Morse-Kelly (MK) set theory. MK distinguishes sets from (proper) *classes*. A proper class is a set-like entity that is “too big” to be a set. Crucially, proper classes, like the Russell class, cannot themselves be members of any set. Analogously, in second-order MK, there are *proper propositions*. Just as a proper class is not an element of any set, so too no proper proposition is an element of any set. One can therefore consistently deny in second-order MK that there is a set w of all propositions that are about! some class S or other. Deutsch suggests that adopting second-order MK comes as close to possible to satisfying the various intuitions generating both RM and the *aboutness!* paradox, while remaining consistent.

Deutsch closes with a critical discussion of Bacon et. al’s (2016) diagnosis of the Prior-Kaplan paradox, and considers the implications for Kripke’s more recent (2011) paradox about time and thought.

blemakers. However, this strategy forces one to “deny the obvious”, as Deutsch puts it: you cannot deny the existence of a proposition to the effect that every proposition in a certain set is true without invoking the very proposition you are denying exists!

¹³⁸A system of logic is “higher-order” when it allows for quantification into categorematic positions other than those occupied by individual (first-order) variables. As an illustration, a simple comprehension principle like $\exists P(P \leftrightarrow \varphi)$, in which P is a second-order propositional variable and φ is any formula not containing free occurrences of P guarantees the existence of a relatively “abundant” domain of propositions. In effect, the principle says that there is a proposition the truth of which is materially equivalent to the obtaining of the condition encoded by φ . Stronger principles are available in higher-order languages containing modal or intensional operators. See (e.g.) [van Benthem and Doets 1989](#) and [Muskens 2006](#) for discussion.

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