The book aspires to add a new cognitive dimension to the standard framework for studying linguistic meaning and language use based on systems of intensional semantics deriving from Frege, Tarski, Kripke, Montague, Kaplan, and others. The semantic content of a sentence in such systems is taken to be information that represents the world as being a certain way. These entities, called 'propositions', are standardly required to play four roles – as meanings of some sentences, objects of belief, assertion, and other attitudes, contents of some mental states, and as primary bearers of truth conditions. Despite the importance of propositions, we have never had an adequate conception of what they are. Although the dominant approach identifies them with functions from possible world-states (or other truth-supporting circumstances) to truth values, I argue that these entities can't play any of the roles assigned to them. My aim is to replace them with entities that can.

Doing so requires rethinking the metaphysics and epistemology of propositions. For the early Russell, propositions were mysteriously "unified" combinations of objects, properties, and propositional functions that were true iff the properties were true of the objects (or propositional functions). For Frege, they were similarly "unified" combinations of "complete" and "incomplete" senses that were true iff the concepts presented by (higher-level) incomplete senses (in the proposition) were true of the objects (or lower level concepts) presented by the other senses. For possible-worlds theorists, a function f from world-states to truth values is true, at a world-state w, iff f(w) = truth.

I argue that these conceptions share three disqualifying defects. First, the entities they call propositions are neither representational on their own, nor are they naturally taken to have truth conditions in virtue of any natural relation agents bear to them. Theorists who

employ these entities do write rules *interpreting* them as being true or false in specified conditions, thereby treating them as *models* of propositions. Unlike these *models*, of which ordinary agents know nothing, the real propositions to which they bear attitudes *are* the interpretations they assign to sentences and utterances.

The second defect shared by traditional conceptions of propositions is that they don't tell us how agents are epistemically acquainted with them, what it is to entertain or believe them, or how agents acquire knowledge of them. This is important because, as objects of attitudes, propositions impose conditions on minds that entertain them that are far more fine-grained than the truth conditions they impose on the world. To miss this aspect of them is to miss their epistemic essence. Traditional conceptions of propositions also miss their broadly semantic essence. Just as proponents of these conceptions assume that agents *grasp* propositions, while failing to explain what this amounts to, so they maintain that sentences and utterances *express* propositions, while failing to elucidate this fundamental relation.

The third defect of traditional conceptions of propositions is their failure to adequately accommodate hyperintensionality. While the deficiencies of the possible-worlds conception are legendary, the puzzles posed for Russellian and Fregean conceptions by contemporary analyses of names, natural kind terms, indexicals, and even (pronouns functioning as) variables are also well-known. Despite decades of effort, only limited progress has been made; the classic puzzles of Frege, Mates, Kripke, Perry, Church, and others remain largely unsolved. Since its birth 50 years ago, the science of linguistic meaning and language use has made astounding progress in many areas. Unfortunately, the semantics and pragmatics of hyperintensional constructions isn't one of them. The reason for this relative paucity of progress is, I believe, that we haven't had any clear idea of what propositions are.

The book's main thesis is that our empirical shortcomings are linked to our ignorance of the foundational epistemology of propositions by our metaphysical cluelessness about them. To that end, I lay the groundwork for what I hope will prove to be realistic conception of propositions that provides answers to foundational questions, while offering solutions to empirical problems posed by hyperintensional (and other) constructions.[1]

On my conception, agents are the source of intentionality. They represent things as being various ways when they perceive, visualize, imagine or otherwise think of them as being those ways. Propositions are repeatable, purely representational, cognitive acts (types) or operations. When one perceives or thinks of B as hot, one predicates *being hot* of B, and so represents B as hot. This *act* represents B as hot in a sense similar to the derivative senses in which acts can be said to be *insulting* or *irresponsible*. Roughly put, an act is insulting when for one to perform it is for one to insult someone; it is irresponsible when to perform it is to neglect one's responsibilities. A similar derivative sense of *representing* can be used to assess the accuracy of cognitions. When to perceive or think of o as P is to represent o as it really is, we identify an entity, a particular cognition, plus a property it has when it is accurate. The entity is a proposition, which is the act of representing o as P. The property is truth, which the act has iff to perform it is to represent o as o really is.

Entertaining, i.e. *performing*, is the attitude on which other attitudes are based. To *judge* that B is hot, is to perform the predication in an affirmative manner, which involves forming dispositions to act, cognitively and behaviorally, towards B in ways conditioned by one's reactions to hot things. To *believe* that B is hot is to be disposed to judge it to be. To *know* that B is hot is for B to be hot, to believe it is, and to be safe or justified, in so believing.

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[1] In addition to problems of hyperintensionality, the new conception provides a satisfying solution to the problem in the Gray's Elegy passage Russell (1905) "On Denoting," *Mind* 14:479-93.

Since believing p doesn't require cognizing p, any organism that can perceive or think of p's constituents as being certain ways can believe p, whether or not it can predicate properties of propositions. Knowing things *about* propositions requires distinguishing one's cognitive acts from one another. Self-conscious agents who can do this can ascribe attitudes to themselves and others, and predicate properties of propositions. Focusing on their cognitions, they identify distinct propositions as different thoughts, which leads them to conceive of truth as a form of accuracy. How a proposition represents things is read off the acts with which it is identified, from which we derive its truth conditions. P is true at world-state w iff were w actual, things would be as p represents them – where *what p represents* is what any conceivable agent who entertains p would represent. Since this doesn't vary from one world-state to another, p's truth conditions don't either. No one has to entertain p for p to be true.

This conception explains how an organism without the concept of a proposition or the ability to cognize one can know or believe them. It also explains how sophisticated agents acquire the concept, and come to know things about propositions by monitoring their cognitions. It even gives a plausible account of what it is for a proposition p to be *the meaning* of a sentence S, and of what it is for speakers to understand S. Roughly put, it is for speakers to use S to perform p. Learning a language involves learning how to use its sentences to perform the propositions they express. One who understands 'Plato was human' uses the name to pick out the man, the noun to pick out humanity, and the phrase 'was human' to predicate the property of the man -- thereby *performing* the proposition p that the sentence semantically expresses.

However that's not the only proposition the speaker expresses. *Using the sentence to predicate humanity of Plato* is itself a purely representational cognitive act, and so counts as a proposition p*. Since to perform p* is to perform p, but not conversely (just as to perform

the act *driving to work* is to perform the act *traveling to work*, but not conversely) the two propositions are cognitively distinct -- even though they represent the same thing as being the same way, and hence are truth-conditionally identical.

The importance of *representationally identical but cognitively distinct propositions* is illustrated by (1a,b), both of which semantically express the proposition P that is the act *predicating being a planet of Venus*.

1a. Hesperus is a planet.
 b. Phosphorous is a planet.

In addition to P, one who understands and accepts (1a) believes the proposition, P_H, that is the act *predicating being a planet of Venus using 'Hesperus' to identify it*. One who understands and accepts (1b) believes the cognitively distinct but representationally identical proposition, P_P, that is the act *predicating being a planet of Venus using 'Phosphorous' to identify it.* This, combined with a proper account of what it is to understand the two names, is the beginning of a solution to instances of Frege's puzzle involving linguistic cognition.

The solution extends to all forms of cognition that give rise to representationally identical but cognitively distinct propositions. These include first-person cognition, present tense cognition, perceptual cognition, and cognition involving recognition of recurrence.[2] The basic strategy applies to John Perry's problem about the first-person knowledge of the amnesiac Rudolf Lingens (plus extensions using second-person pronouns and third person demonstratives),[3] parallel problems involving temporal cognition, Saul Kripke's puzzle about belief,[4] Frank Jackson's puzzle about knowing what red looks like,[5] Thomas Nagel's

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[2] The latter is what Kit Fine calls cognizing *as the same* in Fine (2007), *Semantic Relationism*, Malden, MA: Blackwell.

[3] John Perry (1977), "Frege on Demonstratives," *Philosophical Review* 86:474-97.

[4] Saul Kripke (1979), "A Puzzle About Belief," in Avishi Margalit, ed., *Meaning and Use*, Dordrecht: Reidel, 239-83.

puzzle about what its like to be a bat,[6] Alonzo Church's derivation of the paradoxical conclusion that *if Jones believes that $x \neq y$, then $x \neq y$* from a widely accepted axiom of quantification theory,[7] and Mark Richard's problem of explaining substitution failures such as replacement of the proper name 'logicism' with the co-designative articulated 'that arithmetic is reducible to logic' in attitude ascriptions.[8]

[5] Frank Jackson (1986), "What Mary Didn't Know," *Journal of Philosophy* 83:191-95.

[6] Thomas Nagel (1974), "What's it like to be a bat?" *Philosophical Review* 83: 135-50.

[7] Alonzo Church (1988), "A Remark Concerning Quine's Paradox About Modality," in Nathan Salmon and Scott Soames eds., *Propositions and Attitudes*, Oxford: Oxford University Press, 58-65.

[8] Mark Richard, "Articulated Terms," *Philosophical Perspectives* 7: 207-30.