the nature and structure of content

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THE NATURE AND STRUCTURE OF CONTENT
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For Annie, my favorite thing in the world . . .
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Contents

Acknowledgements ix

Introduction 1

1. The Primary Question and the Answers of Frege and Russell 6
2. A New Account of Structured Propositions 25
3. Objections to the New Account 65
4. Objections to Structured Propositions Generally 102
5. Objections to Propositions Generally 127
6. Tense, Modality, and Propositions 164
7. The Paradox of Analysis 197

Appendix: Quantification and Propositions 218

References 223

Index 229
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Introduction

I first began thinking about the issues addressed in this book, various issues concerning what one might call the metaphysics of structured propositions, in the early 1990s. Since that time, these issues have never been far from my mind. Indeed, the vast majority of my work since the mid-90s has been in one way or another connected to my thinking about these issues. Even my book on complex demonstratives (King 2001) had its roots in a paper on the metaphysics of structured propositions, (see King 1996: 501 and 509–11). In the few papers I wrote on these topics in the nineties, I was never able to fully develop the view or to consider its implications. Further, my views on these issues have evolved since then in certain ways. Because of these things, because of the centrality of my thinking on these issues to my overall philosophical orientation and because it seemed to me that others didn’t see connections among views that I hold that are mediated by my views on these issues, I decided it was time to write a book on the metaphysics of structured propositions. The present book is the result of that decision.

Before diving headlong into metaphysical issues surrounding propositions, it would be wise to say a bit about why philosophers believe in propositions at all. Of course, belief in propositions has had a distinguished history in analytic philosophy. Three of the great founding fathers of analytic philosophy, Gottlob Frege, Bertrand Russell, and G.E. Moore, believed in propositions.¹ Many philosophers since them have shared this belief; and the belief is widely, though certainly not universally, accepted among philosophers today. What motivates the many friends of propositions to think there are such things? I think the answer is that there are a variety of important jobs that propositions seem capable of performing, where it isn’t clear what would perform those jobs in their absence.

To begin with, pretheoretically it seems that sentences encode pieces of information and that distinct sentences may encode the same piece of information, as is perhaps the case with ‘Snow is white,’ and ‘Schnee ist weiss.’ Further, what piece of information a sentence encodes (perhaps relative to a context) together with the way the world is determine whether it is true or false. If propositions

¹ At least they did at certain points in their careers. Of course, Frege called the things we think of today as propositions thoughts.
exist, we can identify them with these pieces of information and make sense of this. Sentences express propositions (relative to contexts), different sentences may express the same proposition and propositions are true or false depending on how the world is. Second, we think that some things are the possessors of modal features such as being impossible, possible and necessary. Our pretheoretical talk suggests that these are the same things that are true and false, since we talk of things being necessarily true, possibly false and so on. Further, it seems as though someone uttering a German sentence and someone uttering an English sentence could thereby attribute necessary truth to the same thing. Again, if propositions exist, we can see how all this would be so. Propositions are the bearers of modal features, and by uttering sentences of different languages people might attribute the same modal feature to the same proposition. Third, there are things we believe, doubt, and assume and again our pretheoretical talk suggests that these are the same things that are true and false and possess modal features, as when we talk of believing something that is necessarily true. As before, if propositions exist and are the objects of our attitudes, we can understand how this would be so. In believing something, I stand in a relation to a proposition and that proposition may be necessarily true. Fourth, when we attempt to formulate a semantics for a natural language like English that contains modal locutions and verbs of propositional attitude, invoking propositions produces a nice, neat semantics. Expressions like ‘Necessarily’ operate on propositions. A sentence fronted by ‘Necessarily’ is true just in case the proposition expressed by the embedded sentence exhibits the proper behavior when evaluated at different possible worlds. Sentences containing verbs of propositional attitude, such as ‘Rachel believes that Frege is smart’, assert that individuals stand in relations to propositions, in this case that Rachel stands in the believing relation to the proposition that Frege is smart. Further, if we invoke propositions, in cases like that just considered and many others as well we can hold that that-clauses designate propositions and are used to attribute properties to them or assert that they stand in relations, as when we say that it is true that snow is white, that Shane believes that snow is white, that logicism entails that arithmetic is a branch of logic, and so on.² Perhaps there are other jobs that propositions can perform as well, but I believe that friends of propositions all believe they can do the jobs just canvassed.

I think it is fair to say that most advocates of propositions have come to believe that propositions must be more fine grained than sets of metaphysically possible worlds. For it seems possible to believe that \(2 + 2 = 4\) without believing that first order logic is undecidable. But since that \(2 + 2 = 4\) and that first order logic is undecidable are true in all metaphysically possible worlds, on the view that propositions are sets of possible worlds, it would not be

² In Chapter 5, I discuss how to understand the claim that that-clauses designate propositions. As I say there, it may be that that-clauses sometimes designate things other than propositions as well.
Introduction

possible to believe one and not the other.³ For this reason, most advocates of propositions favor accounts of propositions on which they are more finely individuated than sets of possible worlds. I’ll call these fine grained accounts of propositions.

To summarize, advocates of fine grained propositions are primarily motivated by the fact that such propositions can fill the roles discussed to this point. Perhaps there are other ways to perform the jobs discussed. But I think it can be claimed that other ways of doing this are likely to be less neat and more problematic than having propositions perform these jobs. For example, there isn’t any widely accepted, well worked out alternative to the semantics of verbs of propositional attitude that eschews propositions and that can claim to be as neat and unproblematic (the existence of propositions aside) as an account that invokes propositions. Given these facts, it seems to me that the only reason for not invoking propositions to perform the various jobs discussed is that they are thought to be in some way problematic. And certainly, many philosophers have thought that this is so. I believe that for the most part this is what motivates philosophers who try to get by without propositions. That is, in general it isn’t that foes of propositions think they can do things better without them. Rather, for one reason or another they think propositions are problematic and so they feel compelled to do without them.

The present book is addressed to both friends and foes of propositions. With most of their friends, the present book will assume that an account of propositions on which they are structured entities with constituents and so are individuated more finely than sets of worlds is desirable. The primary purpose of the book is to formulate and defend a detailed account of the metaphysical nature of propositions of this sort and to show the account to have many virtues. In so doing, it will attempt to engage at least some foes of propositions as well. For it will be argued that on the view to be formulated, there is no mystery about what propositions are, given rather minimal assumptions it follows they exist, and we can begin to see how and why they manage to have truth conditions and so represent the world as being a certain way. These points will address at least those foes of propositions who are such because of claiming not to understand what propositions are, or claiming not to have any reason to think they exist, or claiming not to understand how they could represent the world as being a certain way.

More specifically, given the motivation for invoking propositions I’ve outlined, my idea is that if (i) there is an account of propositions according to which there is no mystery as to what they are; and (ii) there is good reason to think they exist; and (iii) the account sheds light on the central feature of propositions (i.e. that

³ Further, Scott Soames (1987) has argued persuasively that relaxing the requirement that worlds be metaphysically possible and allowing propositions to be sets of virtually any sort of truth supporting circumstances runs into similar difficulties.
they represent how the world is); and (iv) the account doesn’t have problematic consequences; and (v) arguments against propositions can be defused, then we should adopt that account of propositions. The structure of the book reflects this idea. Chapter 1 formulates the main question to be addressed in the first three chapters of the book, the question of what holds the constituents of propositions together, and considers the answers Gottlob Frege and Bertrand Russell offered to this question. These answers are rejected, motivating the search for a new answer. In Chapter 2, a new answer is sketched that yields an account of what propositions are. It is argued that on this account (i)–(iii) just mentioned are true. Chapter 3 takes up consequences of the account sketched in Chapter 2, focusing on consequences that might be thought problematic. It is argued that there are no problematic consequences, and hence that (iv) is true. In Chapters 4 and 5, arguments against structured propositions in particular and against propositions in general, respectively, are considered and defused. This suffices to establish (v) above. Hence Chapters 1–5 constitute an argument that the account of propositions sketched should be accepted.

Above, I suggested that two jobs propositions play are being the objects of attitudes like belief and doubt and being the things operated on by modal operators such as ‘necessarily’. However, some philosophers have mounted vigorous challenges to this claim. In particular, these philosophers have argued that there are a number of sentential operators in natural language, such as tenses (e.g. the past and future tense) and location expressions such as ‘somewhere’ and ‘everywhere’, that appear to operate on the same things as modal operators. If this is so, the things that modal operators, tense operators, and place operators operate on are too impoverished to serve as the objects of the attitudes. This is a serious challenge to propositions, since if successful it would show that no one thing can perform the jobs I’ve claimed that propositions are to perform. And this would in turn to some extent or another undercut the motivation I have given for propositions. In Chapter 6, I address this challenge by arguing that modal operators are distinctively different from tenses and place expressions, in that the former operate on propositions and the latter do not. Finally, Chapter 7 shows that the account of propositions I defend can be used to resolve the paradox of analysis and related difficulties.

A few final comments on the argumentative strategy of the early part of the book may be useful. In Chapter 1, I assume that we are only interested in fine grained accounts of propositions for the reasons I’ve outlined here. I claim that the best fine grained account is bound to be one on which propositions are structured and have constituents. Any such account that is credible, I claim, will have to answer the question of what it is that holds the constituents of propositions together. I then reject the answers Frege and Russell give to this question. Here for the most part I write as though I am assuming structured propositions exist. But that pretense is dropped in Chapter 2, where I claim that a plausible answer to the question of what it is that holds together the constituents
of a proposition must give us good independent reason to think that propositions exist. The account I sketch there does so, or so I claim.

The lack of an account of exactly what structured propositions are, an account of their metaphysical nature, has made even friends of propositions uneasy and has probably inclined many to be foes. The present book attempts to put their friends at ease and to win back their foes.⁴

⁴ Thanks to an anonymous referee whose comments and suggestions helped shape this Introduction.
The Primary Question and the Answers of Frege and Russell

As I indicated in the Introduction and for the reasons given there, I’ll begin by assuming that we are interested in fine grained accounts of propositions. Of course to say that propositions are fine grained is not yet to say what sorts of things are constituents of propositions, nor even whether propositions have constituents. I mentioned in the Introduction that I think that propositions do have constituents. This is mainly because I find the idea of “simple fine grained propositions”, fine grained propositions without constituents or parts, mysterious. What would make such a simple proposition be about, say, Paris as opposed to Santa Monica? In virtue of what would it have the truth conditions it in fact enjoys? I cannot see that these questions have answers if propositions are held to be simple and fine grained. But it seems to me they should have answers.

Because of such considerations, I also will henceforth assume that propositions have constituents. As to what sorts of constituents propositions have, even this question is not my primary concern. Still, in order to address the issues that are my primary concern, it will help to adopt a view about what the constituents of propositions are. Hence, I shall adopt without argument a view of these matters to which I am sympathetic. Nathan Salmon (1986), Scott Soames (1987), David Kaplan (1989) and others, all influenced by the seminal work of Saul Kripke (1972), have articulated views according to which certain linguistic expressions (perhaps taken relative to contexts) contribute individuals to propositions. In the wake of this work, it is widely held that proper names, indexicals (‘I’, ‘here’, ‘now’, etc.) and demonstrative pronouns (taken relative to contexts) contribute the individuals they designate (in those contexts) to the propositions expressed (in those contexts) by the sentences in which they occur.¹ Such expressions are generally called devices of direct reference, the term ‘direct’ alluding to the fact that these expressions don’t contribute some entity to a proposition that at a

¹ It is usual to include demonstratives, both simple (‘that’) and complex (‘that woman who lives on the second floor’), in the class of expressions that contribute individuals (relative to a context) to propositions. I leave them off because I argued in King (2001) that complex demonstratives, and perhaps simple ones as well, are quantificational.
circumstance of evaluation determines an individual distinct from the entity. Rather, the individual itself gets contributed to the proposition.²

Because I think there is much to be said for this view, and because I have found what the above authors have said convincing, I’ll adopt the view here. So I’ll assume individuals occur in some propositions. However, we will see that making this assumption is not necessary to raise the main question I wish to address. The natural next step is to assume that (syntactically simple) n-place predicates contribute n-place relations to propositions (where 1-place relations are properties). I’ll take that step. So I’ll assume that propositions are entities that are more fine grained than sets of possible worlds and contain individuals, properties and relations as constituents.

Propositions fitting this description, often called structured propositions, are sometimes represented in a certain way. The proposition that Annie likes Carl is sometimes represented as follows:

1. <Annie, liking, Carl>

That is, the proposition is represented as an ordered triple of Annie, the liking relation and Carl. Could the proposition actually be that ordered triple? I believe there are reasons for thinking that it cannot be and more generally that propositions are not ordered n-tuples. The first problem is a Benacerraf style worry.³ There are a number of distinct n-tuples, all of which seem to be equally good candidates for being the proposition that Annie likes Carl. For example, in addition to 1, there are

1a. <liking, Annie, Carl>
1b. <Annie, Carl, liking>
1c. <liking, <Annie, Carl> >

It is hard to see why any one of these should be the proposition in question, while the others are just non-proposition ordered three-tuples.

Worse, to this point I have been implicitly assuming the standard definition of ordered pair (in terms of which ordered n-tuples are defined) due to Kuratowski.⁴ Holding that definition constant, any number of three-tuples, which are

² Sometimes the claim that a term is a device of direct reference is understood merely as the claim that the term doesn’t contribute some descriptive or conceptual material to a proposition that at a circumstance of evaluation determines the term’s referent by means of the referent satisfying it, (see Salmon 1986). On this way of using the term ‘direct reference’, to claim that a term is directly referential is not yet to make any claim about what it does contribute to propositions. Those who use the term ‘direct reference’ in this way often understand the claim that a term is Millian as the claim that the term contributes only its referent to propositions, (see Salmon 1990). I’ll understand the claim that a term is directly referential here as including Millianism so construed, since these issues are not my primary concern.
³ Benacerraf (1965).
⁴ < X,Y > =d {X, [X,Y]}
just certain sets on this definition, are equally good candidates for being the proposition that Annie likes Carl as 1-1c make clear. But of course there other ways to define ordered pairs (and so n-tuples). And on these other definitions, ordered pairs will be different sets from the sets they are identified with on the Kuratowski definition. So we now have as apparently equally good candidates for being the proposition that Annie likes Carl the sets 1-1c are identified with on the Kuratowski definition of ordered pair (and hence ordered n-tuple), as well as the sets 1-1c are identified with on other definitions of ordered pairs (and hence n-tuples). It is just impossible to believe that there is one of these candidates that is the proposition in question. What in the world could make it so?

A final difficulty for the view that propositions are ordered n-tuples concerns the mystery of how or why on that view they have truth conditions. On any definition of ordered n-tuples we are considering, they are just sets. Presumably, many sets have no truth conditions (e.g. the set of natural numbers). But then why do certain sets, certain ordered n-tuples, have truth conditions? Since not all sets have them, there should be some explanation of why certain sets do have them. It is very hard to see what this explanation could be.

On the basis of these difficulties, I conclude that propositions cannot be identified with n-tuples of their constituents. This leaves us with the view that n-tuples such as 1 are properly understood as representing propositions. Now that we see that ordered n-tuples are not propositions but are merely used to represent them, I can raise the primary question that I want to address in the first part of the present work. The question is, simply, what do the corner brackets and comma in 1 represent? That is, 1 as a whole represents the proposition that Annie likes Carl, and so the corner brackets and comma must represent some feature of this proposition. We can of course give a provisional answer to the question of what feature of the proposition that Annie likes Carl the corner brackets and comma represent. Presumably, they represent whatever it is that holds the constituents of the proposition that Annie likes Carl together and endows the proposition with a certain structure. But now our original question resurfaces in a new form: what is it that holds together the constituents of the proposition that Annie likes Carl and imposes structure on it? In general, propositions must have something that does this. Clearly, somehow the constituents need to be held together for there even to be a proposition. If there are no propositions, as some suggest, the constituents of alleged propositions nonetheless exist. So to have propositions in addition to their constituents, something must bind the constituents together in the proposition. Further, there seem to be propositions with the same constituents. For example

5 Note that refusing to identify ordered n-tuples with sets, perhaps taking them to be sui generis entities, won’t help with either of the difficulties I have raised for the view that propositions are n-tuples. First, we would still have no reason to identify the proposition that Annie likes Carl with one of 1-1c as opposed to any other. And second, we would still have no answer to the question of why certain n-tuples have truth conditions and others (e.g. < 1, 2, 3 >) don’t.
the proposition that Carl likes Annie and the proposition that Annie likes Carl appear to have the same constituents. So the difference between them must be how those constituents are arranged or structured. Our question, then, is: what is it that binds together the constituents of propositions and imposes structure or an arrangement upon its constituents? This is the question that will occupy us for the first two chapters.⁶

Note that the question of what binds together the constituents of propositions and imposes structure on them is at least to some extent independent of the question of what the constituents of the proposition are.⁷ That is why in discussing what the constituents of propositions are above, I said that I was not primarily interested in that question. Still, I have adopted what I view as the most plausible account of what the constituents of propositions are. But I wish to emphasize that those with other views about what the constituents of propositions are should still be interested in the question that is my primary concern and that I will subsequently address.

Before attempting to answer the question of what holds together the constituents of propositions and imposes structure on them, it would be wise to consider answers others have given to this question. Recent structured proposition theorists, including those mentioned above, have been surprisingly silent on this subject. Indeed, though one often finds propositions depicted as in 1 above in the works of recent structured proposition theorists, there is generally no indication as to whether the theorist in question takes the proposition to be an ordered n-tuple or rather takes the ordered n-tuple to represent the proposition. Further, if the latter is in fact the case, there is no indication as to what the proposition itself really is and what binds its constituents together.

⁶ As an anonymous referee pointed out, if propositions are just mereological fusions of their constituents, there need be nothing that binds the constituents of propositions together. Presumably an advocate of this view would hold that mereological composition or fusion is unrestricted (any group of things has a fusion) and that there is no unique fusion of given parts (in order that one has distinct propositions with the same parts). Further, an advocate of this view is likely to view unrestricted composition as ontologically innocent and “automatic”: commitment to the parts just is commitment to their fusion. (Thus Lewis (1991) (who does however embrace uniqueness of composition): ‘But given a prior commitment to cats, say, a commitment to cat-fusions is not a further commitment. The fusion is nothing over and above the cats that compose it. It just is them.’ p. 81—I am of course not attributing to Lewis the view under discussion according to which propositions are mereological fusions of their constituents). It is because the composition is automatic and innocent that nothing would be required to bind together the constituents of propositions on this view (nothing holds the cats together in the cat-fusions because they are nothing beyond the cats themselves). Though I don’t consider this view in any detail in the present work, my main problem with it is that I don’t see what the account would be of which fusions are propositions (presumably cat-fusions aren’t but some fusion of Annie, liking and Carl is the proposition that Annie likes Carl) nor of why the fusions that are propositions have truth conditions (presumably cat-fusions don’t). Further, I have serious doubts about the claim of ontological innocence, especially when uniqueness of fusion is denied. See also note 13, Chapter 2.

⁷ Though claims about what the constituents are may constrain the answer to the question of what binds them together, and vice versa.