Instrumentalism About Structured Propositions*

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When we construct a model of something, we must distinguish those features of the model which represent features of that which we model, from those features which are intrinsic to the model and play no representational role. The latter are artifacts of the model. For example, if we use string to make a model of a polygon, the shape of the model represents a feature of the polygon, and the size of the model may or may not represent a feature of the polygon, but the thickness and three-dimensionality of the string is certainly an artifact of the model.

David Kaplan, “How to Russell a Frege-Church”

We create models to explain nature, but the models wind up gatecrashing nature and driving away the original inhabitants.

David Mitchell, Ghostwritten

1 Introduction

When considering various doctrines in metaphysics, it is useful to regard them as explanatory endeavours and ask how they fare as compared with other explanatory endeavours outside of philosophy proper. Explanations deploy theoretical representations of their explananda. We might represent gold as a transition metal or as the element with atomic number 79 within physical chemistry. Or we might represent it as the standard for pre-20th century monetary systems within economics.

For present purposes we set aside questions pertaining to the metaphysics of representation. We regard representations as means for portraying explananda within various explanatory endeavours without dwelling on what those means themselves are exactly and how they achieve their portrayal. A pertinent question to ask about theoretical representations is whether to regard them as revealing the nature of what they represent, or whether to regard them instead as serving particular explanatory ends but without the additional revelatory aspect. We call the first way of regarding representations realist and the second way instrumentalist. It is common to regard the representation of gold within physical chemistry as a transition metal or as the element with atomic number 79 realistically: being a transition metal is part of what it is to be gold; being the element with atomic number 79 is what gold turns out to be in the most demanding sense. And it is common to regard the representation of gold within economics as the standard for pre-20th century monetary systems instrumentally: being the standard for pre-20th century monetary systems is not presumed to be what it is to be gold but is rather instrumental to the explanation of gold’s economic significance.

The question of realist vs. instrumentalist attitude towards representations can be raised for representations wielded within metaphysical explanation to fruitful effect. Consider, for example, the possible world capture of the de re modal fact that Nixon might have lost the 1968 US presidential election. We might ask whether Nixon in a possible world where he loses is what the fact of Nixon’s possible loss amounts to upon closer theoretical scrutiny (as per realism), or whether Nixon in a possible world where he loses merely represents Nixon’s possible loss for some other explanatory purpose (as per instrumentalism).

In this chapter I consider structured propositions as representations deployed within a particular explanatory enterprise – the metaphysics of what is said – and argue that realism about these representations is unwarranted. On the whole I aim to avoid the grand topic of realism as traditionally construed. The traditional question of realism is not one we can reasonably hope to resolve via some hitherto unnoticed a priori considerations, or so it seems to me. We can, however, consider cases where a realist attitude towards a representation is clearly warranted – cases of theoretical identification in science, for example – and ask whether central features

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1This is a stipulation about the terms ‘realist’ and ‘instrumentalist’ (and cognates) as they are to be used here, applying in the first instance to attitudes (towards theoretical representations).

2A realist attitude is clearly exhibited in what Plantinga [11] calls “the canonical conception of possible worlds”. An instrumentalist attitude is clearly exhibited throughout Kripke’s [10]. I discuss this case, alongside the Fregean representation of natural numbers as equivalence classes of first-level concepts under equinumerosity and the Fregean representation of cognitive attitudes as relations to Fregean thoughts, in [17].
of such cases are present in a given case. I will argue that they are not present in the case at hand. I will further argue that instrumentalism about structured propositions is recommended by other considerations as well and conclude that we should treat them as representations serving particular explanatory ends and not as metaphysically revealing when it comes to the nature of what they represent, namely, what is said.

2 Propositions as Representations

The first order of business is to understand the theoretical role played by propositions.\(^3\) The literature here is vast and I cannot possibly do it justice within the scope of the present discussion given the high level generality of its main aim. But in a nutshell, propositions are presumed to act as the semantic contents of sentences in context, the bearers of truth and falsity, the objects of the so-called propositional attitudes, and the operands for modal operators. As is customary, we abbreviate all these roles under a single rubric: what is said. Propositions thus represent what is said. And here the tendency to treat the representations realistically as revealing the nature of the phenomena drives much of the current discussion and gives rise to special difficulties. In everything that follows I consider the metaphysics of what is said as a case of metaphysical explanation. After briefly outlining the doctrine in its bare form I will proceed to offer general reasons for not regarding propositions under a realist attitude, reasons emerging from comparing the case at hand with cases of theoretical identification in science such as water being hydrogen hydroxide or gold being the element with atomic number 79. This will be followed by a discussion of a special reason, emerging from a famous problem raised by Russell\(^{[14]}\), to refrain from treating propositions realistically.

Propositions are purported to be structurally akin to the sentences expressing them and to be constituted by whatever the significant sub-sentential expressions are about, held together in some structure. It has been a matter of dispute whether there are such things that perform all the tasks included under the rubric of what is said – semantic content, bearer of truth-value, object of attitude, and modal operand. But work in the area typically proceeds by arguing for the existence of some suitable entity performing at least one of those tasks and subsequently arguing for the entity’s suitability to perform the other tasks as well.

The historical precedent to contemporary discussions of propositions is Russell’s\(^{[14]}\) doctrine. According to Russell’s original position there is no principled dis-

\(^3\)Going forward I leave the qualification ‘structured’ implicit.
tinction between true propositions – what is truly said to be the case – and their
truthmakers – what is the case. Given the lack of distinction here, it is hardly
surprising that there should be no distinction between constituents of propositions
and what they are about. The Russellian default is that propositions are generally
constituted by what they are about, *modulo* cases for which denoting concepts are
summoned. 4

A principal issue that bedevils the doctrine of propositions is the problem known
as the unity of the proposition. The problem in a nutshell is that if we regard propo-
sitions as constituted by semantic contributions of sub-sentential expressions to the
significance of whole sentences, it is difficult to see how the propositions themselves
are anything beyond itemizations of propositional constituents. And yet when we
speak of the significance of a sentence we speak in the singular. Take the sentence
‘Amy loves Mary’. What is said by it, let us suppose, is a structure constituted by
Amy, the LOVE relation, and Mary. But Amy, LOVE, and Mary do not themselves
provide a unified something to act as what is said by the entire sentence. What
might otherwise confer such unity? It is hard to know what to say. Regarding ‘A is
different from B’ Russell [14] writes: “[T]he difference which occurs in the proposi-
tion actually relates A and B, whereas the difference after analysis is a notion which
has no connection with A and B” (49). And after contemplating the unhelpful sug-
gestion that what is contributed to the proposition by ‘is’ and ‘from’ provides the
requisite glue between A and DIFFERENCE, and between DIFFERENCE and B,
Russell concludes:

[A] proposition, in fact, is essentially a unity, and when analysis has de-
stroyed the unity, no enumeration of constituents will restore the propo-
sition... The verb, when used as a verb, embodies the unity of the propo-
sition, and is thus distinguishable from the verb considered as a term,
though I do not know how to give a clear account of the precise nature
of the distinction. (50)

Thus goes the problem of the unity of the proposition.

A second problem often raised for the doctrine of propositions is a problem of
indeterminacy that can be traced back to Benacerraf’s familiar discussion [1] of

4Denoting concepts are introduced and discussed in Chapter V of [14] before being subjected to
criticism in the Gray’s Elegy passage in [15], where they are misleadingly identified with Fregan
senses. Importantly, denoting concepts allow the early Russell to introduce generality into propo-
sitions. For ‘I met a man’, e.g., there is a distinction between the proposition expressed, one that
contains the *a-man* denoting concept, and whatever makes it true, my having met Jones, say. See
[16] for further discussion of this early and lesser known Russellian theory.
set-theoretical reductions of numbers. There are two familiar equally workable and mutually incompatible total reductions of numbers to pure sets, one due to Zermelo and the other due to von Neumann. What determines which is to stand for the number two, say, Zermelo’s \( \{\emptyset\} \) or von Neumann’s \( \{\emptyset, \{\emptyset\}\} \)? While these are distinct sets, each does just as well as the other as the set-theoretical reduction of the number two. An analogous worry can be raised for propositions. Propositions, we assume, are structures of propositional constituents. What determines that the proposition expressed by ‘Amy loves Mary’ has the structure represented by, say, \( \langle \langle \text{Amy}, \text{Mary} \rangle, \text{LOVE} \rangle \), as opposed to the structure represented by \( \langle \text{LOVE}, \langle \text{Amy}, \text{Mary} \rangle \rangle \)? While these are distinct structures of propositional constituents, each does just as well as the other in representing what is said by the sentence.

A third familiar problem often raised for the doctrine of propositions is the suitability of propositions for semantic evaluation. If propositions are structures of propositional constituents, such as the individuals Amy and Mary and the LOVE relation, how is such a structure supposed to be suitable for truth or falsity? What is said by the sentence ‘Amy loves Mary’ is plausibly associated with a truth-condition, the condition of Amy loving Mary – if the condition is met, then what is said by the sentence is true, and vice versa. Yet even if we set the indeterminacy problem of the previous paragraph aside and assume there to be a unique structure of propositional constituents representing what is said by ‘Amy loves Mary’, what sense can be made of the idea that that very item, the structure, might be true? The structure is just an arrangement of the individuals Amy and Mary and the LOVE relation, much like the arrangement of a fork, a plate, and a knife in a place setting. It can thus seem unsuitable for truth or falsity. We think it categorically inapt to associate the fork being to the left of the plate and the knife being to the right with being true or false. From such a mindset it can also seem categorically inapt to associate the structure of propositional constituents Amy, Mary, and LOVE, with being true or false.

Now, without prejudging whether to regard propositions under a realist or an instrumentalist attitude, let us register how the three problems just outlined fare under instrumentalism. Consider again the proposition representing what is said by the sentence ‘Amy loves Mary’. The propositional constituents Amy, LOVE, and Mary, are to be held together in a structure that represents the unified semantic significance of the sentence while attesting to the semantic contributions of sub-sentential components. Any representational means for capturing what is said by our sentence would work here as long as the individual contributions of significant sub-sentential components are discernible in the resulting representation. There may of course be other explananda for the overall account that might favour one representation over a potential competitor. But all else being equal, under instrumentalism
nothing of significance to the nature of what is said turns on the choice of representa-
tional means. Structures represented by iterated sequencing are a natural choice, but
syntactic trees with semantic values assigned to terminal nodes (ILFs) are another,
and there are other options as well. The spectre of the unity of the proposition is
laid to rest by treating propositions instrumentally as performing certain explanatory
tasks. The problem is deflated by attending to how we casually regard a structure
of elements as a single thing despite the plurality of its elements. To treat this prob-
lem as a deep worry about what is said is to regard the unity of a sequence over a
plurality of elements, let us say, as revelatory of the nature of what is said. From an
instrumentalist standpoint this is a mistake.

A similar instrumentalist treatment extends to the Benacerraf-style worry about
propositions and to the same deflationary effect. Here is the Benacerraf-style worry
again: What determines that the proposition expressed by ‘Amy loves Mary’ has
the structure represented by \( \langle \langle \text{Amy}, \text{Mary} \rangle, \text{LOVE} \rangle \) rather than the structure repre-
sented by \( \langle \text{LOVE}, \langle \text{Amy, Mary} \rangle \rangle \)? The instrumentalist answer is that propositions
are meant to play a certain explanatory role and that either structure works for our
explanatory purposes as long as we adhere to a single choice throughout the expla-
nation. The representational suitability of either option (all else equal) should not
occasion any deep anxiety about indeterminacy for what is said.

An instrumentalist deflation extends to the problem of suitability for truth or
falsity as well: What renders a structure of propositional constituents, all by itself,
a suitable bearer of truth or falsity? It can seem categorically inapt to attribute
truth-values to such a thing, and so, inapt to associate it with truth-conditions. The
instrumentalist response is that the structure is meant to represent what is said for
certain explanatory purposes. To demand of the representation itself to be true or
false in the relevant sense is to treat the representation not just realistically, as re-
vealing the nature of what is said, but as an exhaustive realistic representation –
revealing that nature entire. By contrast, under instrumentalism we stipulate that
such a structure is associated with truth-conditions in the course of our explanations
– the propositions themselves are posited to represent what is said. As with other
explanatory endeavours, the question of representational adequacy assumes at the
very least consistency for the representational means in question. This will even-
tually lead us to consider a further specific and to my mind decisive consideration
against realism about propositions. But first, having noted how instrumentalism
handles the three problems outlined above, we approach the question of realism vs.

\[ \text{There is another sense in which the representation can be true or false – by adequately or}
\text{inadequately capturing what is said, i.e. by being true or false to what is said – but this is a very}
\text{different matter from the one discussed in the text concerning truth or falsity for what is said.} \]
instrumentalism for structured propositions afresh in more general terms.

3 Realism vs. Instrumentalism

Is a realist attitude towards propositions warranted? The traditional question of realism for a given domain is fraught with controversy. We can, however, approach the larger issue indirectly by comparison with cases where a realist attitude towards theoretical representations is clearly warranted. Here cases of theoretical identification come prominently to mind. We represent water within physical chemistry as hydrogen hydroxide, for example, under a widespread realist attitude. Being hydrogen hydroxide, it is widely assumed, reveals the nature of the substance. It is not merely a representation of water for some theoretical purpose or other – it is what water turns out to be upon close theoretical scrutiny. Now, instead of seeking some ur-consideration that might decide the question of realism vs. instrumentalism in general and then apply it to the case of propositions, we take for granted the aptness of a realist attitude towards the representation of water as hydrogen hydroxide, say, and ask whether such an attitude might be warranted towards propositions as representations of what is said. This requires identifying salient features of theoretical identifications and using them as conjectured necessary conditions for when a realist attitude is warranted, which would then be used for the case at hand. We can thus identify three central features that seem to be present in cases of theoretical identification – there are surely others.

First and foremost, cases of theoretical identification exhibit realist purport. Representing gold as the element with atomic number 79 for the purpose of physical chemical explanation is associated with a clear pretension to identify what gold really is at bottom, the underlying nature of the substance. In this respect such a case is quite unlike representing gold as the standard for pre-20th century monetary systems for the purpose of explaining its economic significance, or representing it as the skin of Ra for the purpose of Egyptological explanation. In these latter cases there is no realist purport to identify the nature of the substance.

Second, in cases of theoretical identification there is general conservation of pre-theoretical subject matter of basic everyday claims unless radical revision is called for by genuine theoretical progress. Even in the advent of physical chemistry we

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6This general methodology is pursued for other cases of metaphysical explanation in [17].
7This is not to say that the Ancient Egyptians themselves did not take being the skin of Ra as revelatory of the nature of gold. Whatever their attitude was, there is no realist purport associated with the representation of gold as the skin of Ra within our study of Ancient Egypt.
8I am using ‘subject matter’ here and elsewhere in a non-technical sense to denote the facts
consider the subject matters of basic pre-theoretical water-claims to be water-facts. The identification of water as hydrogen hydroxide does not require us to say that those water claims are really about something other than what we pre-theoretically take them to be about, i.e. facts concerning water. Of course some revisions regarding subject matters of basic pre-theoretical claims are required by certain theoretical advances. Familiarly, our pre-theoretical jade claims turned out to be about facts concerning two sorts of substance, jadeite and nephrite, rather than one.\(^9\) Equally familiarly, our pre-theoretical thunder and lighting claims turned out to be about facts concerning one sort of event, electrical discharge, rather than two. Such revisions as to subject matter of basic pre-theoretical claims are mandated by genuine theoretical progress, but in general conservation of pre-theoretical subject matter is the rule.\(^10\)

Third, and finally, how the theoretical representations deployed in cases of theoretical identification are supposed to represent whatever they do is itself presumed to be reasonably well understood in light of the surrounding theory. Given our overall understanding of how microstructure is related to macro-features, for example, it is well understood how it is that being hydrogen hydroxide represents water or being the element with atomic number 79 represents gold. The representation of water as hydrogen hydroxide or of gold as the element with atomic number 79 does not raise further perplexity as to how it is that water or gold should be thus represented. That they are thus represented is made intelligible by the surrounding theory.

We have, then, three salient features of theoretical identifications. We put them forward as conjectured necessary conditions for when a realist attitude towards theoretical representations is warranted: (1) realist purport, (2) conservation of pre-theoretical subject matter unless revision is called for by obvious theoretical benefits, and (3) intelligibility of the relation between the representation and the represented in light of the surrounding theory. Let us now turn to propositions as deployed within the metaphysics of what is said and examine how they fare when considered

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\(^9\)The example is from Putnam [12]. For a recent discussion of this example, see [6].

\(^10\)Here is how Quine [13] puts the point:

We imbibe an archaic natural philosophy with our mother's milk. In the fullness of time, what with catching up on current literature and making some supplementary observations of our own, we become clearer on things. But the process is one of growth and gradual change: we do not break with the past, nor do we attain to standards of evidence and reality different in kind from the vague standards of children and laymen. Science is not a substitute for common sense, but an extension of it. (2)
against these conjectured necessary conditions for when a realist attitude towards representations is warranted.

First, when it comes to condition 1 – the presence of realist purport – there can hardly be any doubt that propositions are typically regarded by theorists as revealing the nature of what is said. The proposition theorist engages in the metaphysics of what is said; a concern to reveal the nature of the explananda of metaphysical explanation is present by the very nature of the enterprise. So condition 1 is clearly met here.

When it comes to condition 2, however – the conservation of pre-theoretical subject matter unless revision is demanded by clear theoretical benefits – the situation is far from clear. Even granting that pre-theoretical claims about what is said are less firmly rooted in everyday opinion than pre-theoretical claims about water or gold, say, it is highly doubtful that basic claims about what is said are in any way about structures of propositional constituents. What happens in the advent of any of the proposed theories of propositions is pretty clearly a departure from whatever we pre-theoretically take ourselves to be talking about, however dimly, when making claims about what is said.\(^{11}\) So whether or not condition 2 is met in this case depends on whether or not revisionism as to subject matter is demanded by genuine theoretical progress. But here we must admit that the evidence for such progress is scant. It surely does not remotely compare with whatever warrants revision as to subject matter in the sciences.

When it comes to condition 3 – intelligibility of how propositions represent what is said in light of the surrounding theory – we clearly come up short. Even putting aside other worries mentioned in Section 2, it remains unclear why a certain structure of the constituents Amy, Mary, and LOVE, should represent what is said by ‘Amy loves Mary’. Recall that what is said covers the significance of the sentence, the bearer of truth and falsity, the object of attitudes, and the modal operand. How the proposition is supposed to represent all that does not follow from facts articulated by the surrounding theory.\(^{12}\) The situation here is thus unlike other cases of theor-

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\(^{11}\)Recall here what is included under “what is said” – objects of attitudes, e.g.

\(^{12}\)This is certainly the case for theories that identify propositions with ordered \(n\)-tuples of propositional constituents, but it includes more recent views as well. Consider, for example, a position such as King’s [9], according to which the proposition expressed by ‘Amy loves Mary’ is roughly the fact that Amy, LOVE, and Mary are the semantic values at the terminal nodes of the relevant syntactic structure. How this is supposed to capture what is believed in believing that Amy loves Mary, for example – one of the hallmarks of what is said – is left officially unaccounted for by such a view. One might perhaps couch the theory in some language of thought account, but arguably this only delays the complaint: it is no clearer by the lights of the surrounding extended theory how the relevant structure per mentalese is supposed to capture what is believed in believing that
ical identification. Indeed, propositional structure seems to encode what is said as covering these various roles. There is an unmistakable feel of stipulation here, which bespeaks an instrumentalist attitude towards the representation.

In short, judging by familiar cases of theoretical identification, where a realist attitude towards the representation is clearly warranted, the case for a realist attitude towards propositions is weak. The weakness is compounded by a special problem afflicting propositions, a problem first presented and discussed by the chief architect of the doctrine of propositions in its original formulation, Russell. The rest of the chapter will be devoted to this problem and its ramifications for the issue at hand.

4 Russell’s Appendix B Paradox

In a review of King’s [9] theory of propositions, Deutsch [2] admonishes the contemporary literature surrounding propositions quite generally for its failure to engage with the paradox of propositions presented in Appendix B of Russell’s [14], a problem also known as the Russell-Myhill paradox. I would like to channel some of Deutsch’s sentiment as a further pitch for adopting an instrumentalist attitude towards propositions.

When facing paradox, we naturally tinker with our extant theories and the representations they deploy in search of better theories and representations that would be immune to the problem. When naïve set theory saddles us with Russell’s paradox we conclude that our naïve set-theoretical capture of sets, with its principle of unrestricted comprehension, is faulty. We do not conclude as per realism about naïve sets that somehow sets or collections themselves are revealed upon closer theoretical scrutiny as having a paradoxical nature. Otherwise it would make little sense to search for a theory of sets such as ZF to supplant the naïve theory. We look for a different theoretical capture of an extra-theoretical subject matter, a theoretical capture of sets or collections that is paradox-free. Or consider the Liar paradox in a metamathematical setting. Tarski’s Theorem says that no language sufficiently rich (i.e. in which the diagonal function is definable) may contain its own truth predicate. The proof of the theorem is a formalization of the Liar. But the metamathematical limitative result concerns a particular formal capture, a truth predicate, that is a formal representation of the property of sentential truth. It is not generally maintained that sentential truth itself is paradoxical – otherwise the various proposed formal captures of sentential truth in the wake of Tarski’s limitative result would not have been proposed as alternative formal captures of sentential truth. When

Amy loves Mary.
a paradox-free theoretical capture of a pre-theoretical subject matter is proposed, there is a perfectly understandable tendency to regard the new representation under a realist attitude as revealing the nature of whatever it purports to represent. Here, however, we must exercise caution. The proposed theoretical capture must not introduce elements that are *prima facie* too alien to the represented subject matter to be plausibly regarded under a realist attitude as revealing its nature. As we are about to witness, this requirement can be overlooked.

Russell’s Appendix B paradox is originally formulated in [14] as follows:

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

We reconstruct Russell’s argument as follows.\(^{13}\) First, the claim that “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’,” can be generalized to the uncontroversial claim that a difference in propositional constituent implies a difference in proposition. We formulate this as a benign necessary condition on propositional identity. Where \( P \) and \( P' \) range over propositions,

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(P=) \quad \text{if } P = P', \text{then for any } o, o' \text{ where } o \text{ occupies the same position in } P \text{ that } o' \text{ occupies in } P', o = o'.
\]

Next, for any class of propositions \( m \), the proposition \( \forall q (q \in m \rightarrow q) \) is taken as the claim that every proposition in \( m \) is true.\(^{14}\) This proposition may or may not be a member of \( m \). Consider the class \( w \) of propositions each saying with respect to some class \( m \) of propositions that all the propositions in \( m \) are true but which do not

\(^{13}\)For further discussion, see [20].

\(^{14}\)We can represent this as a complex consisting of the property of universality for propositional functions \( \text{ALL}_{pf} \), the truth-function \( \text{IF-THEN} \), and the relational property \( \text{MEMBER} \) relating things to the classes that include them. The proposition can then be taken as \( \langle \text{ALL}_{pf}, h \rangle \) where \( h \) is a propositional function that takes any \( q \) to \( \langle \text{IF-THEN}, \langle \text{MEMBER}, \langle q, m \rangle, \langle q \rangle \rangle \rangle \). I set this type of representation aside for the rest of the discussion for the sake of readability.
themselves belong to \( m \): \( w = \{ r \mid \exists m(r = \forall q(q \in m \rightarrow q) \land r \notin m \} \). Let \( p \) be the proposition that says that every member of \( w \) is true: \( p = \forall q(q \in w \rightarrow q) \). It turns out that \( p \in w \) just in case \( p \notin w \). For suppose that \( p \in w \). Then for some class of propositions \( m \), \( p = \forall q(q \in m \rightarrow q) \) and \( p \notin m \). But given that \( p = \forall q(q \in w \rightarrow q) \) and given condition \( P^w \), \( m = w \). So from \( p \notin m \) it immediately follows that \( p \notin w \). Other way, if \( p \notin w \), then, given that \( p = \forall q(q \in w \rightarrow q) \), it follows that for some \( m \) or other, \( p = \forall q(q \in m \rightarrow q) \) and \( p \notin m \). So by the definition of \( w \), \( p \in w \). Contradiction.

Russell himself eventually evades the paradox with his ramified theory of types, disallowing such propositions that include quantification over all propositions, themselves included, and more generally prohibiting impredicative definitions – definitions that include quantification over a universe containing the defined entity. This puts to rest the paradox for propositions as representations of what is said. But when it comes to what is said itself, ramification easily seems mysterious and unmotivated. Let \( S \) be a sentence that says something I take to be the cleverest. Why in the world would there not be anything said by the sentence ‘Of all things said, what is said by \( S \) is the cleverest’? Even if we accept some prohibition on impredicative definitions à la Russell to block the Appendix B paradox, our acceptance does not easily extend from the specific means for representing what is said – propositions – to what is said by our sentences.\(^{15}\) Under a realist attitude that considers propositions to reveal the nature of what is said, to deny the existence of certain propositional complexes is to withhold significance from sentences that appear for all the world to be significant in their apparent form. Suppose I say ‘Anything said is either grasped by someone or could be grasped by someone time and energy permitting’. The realist about propositions who seeks to block the paradox by disallowing quantification over all propositions will maintain either that nothing is literally said here, or else that the sentence says something rather different from what it appears to say. Neither option is attractive. What I said seems to make perfectly good sense as it stands – it seems for all the world to speak of anything said without qualification. Indeed, it might even be true. It is a very tall order to deny significance for natural language locutions that seem perfectly meaningful as they stand. On the other hand, revisionism with respect to what such sentences appear to say in light of their apparent form is unmotivated given our current understanding of their syntax and semantics. In this respect the situation here is unlike parallel situations with attempted solutions to neighbouring paradoxes. Consider again Russell’s more familiar paradox of the

\(^{15}\)There may be other reasons, which need not concern us, to dislike the ramified theory of types. Logicians have tended to dislike the theory’s attendant axiom of reducibility, which is difficult to accept as a logical principle. For further discussion of the issue, see [5].
class of non-self-membered classes. To block the latter we typically either enter a provision into the transformation rules of a proposed formal system by swapping one axiom schema (unrestricted comprehension) for another (separation), as in ZF; or else we enter a provision into the formation rules of a proposed formal language that disallows certain syntactic constructions, as in the theory of types. But in neither case need it be maintained that the ordinary phrase ‘is non-self-membered’ is literally insignificant or has significance other than its apparent one.  

I repeat the upshot of the present discussion regarding another suggested response to Russell’s Appendix B paradox. According to Deutsch’s recently proposed Morse-Kelley-based solution to the paradox, we would recast my sentence as saying that any proposition that is a member of some class is either grasped by someone or could be grasped by someone time and energy permitting. While such revisionism may be warranted as a stipulation about propositions as representations of what is said, it should not, I submit, be taken to reveal what the original English sentence says. Nothing in the original sentence bespeaks class membership. The sentence says what it says, and what it says would be represented – assuming Deutsch’s solution to the paradox is preferred over others – by a proposition that includes the condition of class membership.

This final consideration offers, I believe, a compelling reason to regard propositions under the auspices of an instrumentalist attitude even beyond the general guidelines discussed in Section 3. Accordingly, I propose not to regard these representations under a realist attitude. Propositions, we may suppose, have some explanatory utility. But we should not treat them realistically lest we be saddled with an empirically unmotivated revisionism regarding apparently significant sentences, or worse, the radical idea that they lack significance altogether. Together with the instrumentalist deflation noted in Section 2 of worries about propositional unity, Benacerraf-style indeterminacy, and suitability for truth and falsity, I conclude that we have an overriding reason to regard propositions as representations wielded for specific explanatory purposes and not regard them as revealing the nature of what is said. Instrumentalism is the right attitude to adopt towards them.  

16 Russell himself assumes otherwise for reasons discussed in [7] and which would take us too far afield. Suffice it to say that Russell’s predilection to the contrary is based on a conception of logic and language that is markedly different from our own.

17 In a number of writings on the topic Soames objects to traditional conceptions that identify propositions as formal structures of propositional constituents on the grounds that such structures are not inherently representational. As against a proponent of the traditional view, Soames [18], [19] insists that structures of constituents do not have representational properties intrinsically, so it is incumbent on their advocate (Soames’s opponent) to explain how those properties emerge from cognitive relations cognizers bear to those structures – an undischarged explanatory burden. The
key here is that propositions are presumed to reveal the nature of what is said. If propositions are identified as structures of constituents as per Soames’s opponent, then they are to reveal the nature of what is said. But then we are owed some explanation of how the representational properties of those structures of constituents emerge from our cognitive relations to them. On the present way of looking at things, by contrast, propositions are theoretical representations that are not to be regarded as revealing the nature of what is said to begin with (pace both Soames’s target and Soames’s complaint). We associate propositions with truth conditions by stipulation. Thanks to Chris Tillman for discussion here.

Perhaps an analogy is in order. Consider Frege’s [4] claim that the number 17 is the extension of the second-level concept $\text{equinumerous with } F$, where $F$ is a first-level concept with a 17-membered extension (setting Russell’s Paradox aside). A critic might object that this cannot be right because the Fregean construction – the extension of the second-level concept – is not intrinsically applicable to quantities. And so we are owed some explanation of how the applicability of the construction to quantities emerges from our interactions with the number, our counting practices or whatnot. Frege and this critic share the assumption that whatever theoretical account is being offered here, it is to be regarded as revealing the nature of the number. But an instrumentalist about Frege’s construction would demur: Frege’s construction represents 17 for certain theoretical purposes – say the purpose of showing that arithmetic need not avail itself of any logical means beyond second-order logic. But the construction should not be expected to reveal the nature of the number as per realism. The applicability of the construction to quantities can be stipulated.


