

# Success, Failure, and the Classical Disquotational Strategy

*Richard Kimberly Heck*

**Department of Philosophy, Brown University**

## **Abstract**

Perhaps the most important argument against disquotationalism is the so-called Success Argument: The success of certain behavioral strategies depends upon the truth of a person's beliefs; if so, then the notion of truth appears to play an important role in psychological explanation, contradicting a central thesis of disquotationalism. I defend this argument here. I first argue that the Success Argument cannot be answered using the 'Classical Disquotational Strategy'. This implies that the disquotationalist owes us some substitute for the truth-conditional account of content. Second, I argue that the only such substitute known to me fails to do the necessary work. The crucial case, however, concerns the role that the *falsity* of beliefs plays in explaining behavioral *failure*.

## **1 Disquotationalism and Truth-Conditions**

Deflationary theories of truth come in two basic forms. Views of the first sort concern the truth of propositions. The rough idea is that there is nothing more to its being true that snow is white than snow itself's being white. An especially strong form of the view would be that the sentences

(1) Snow is white.

and

(2) It is true that snow is white.

express the very same proposition, and similarly for other such pairs. A weaker form of the view would be that (1) and (2) are analytically or conceptually equivalent. An intermediate view is that (1) and (2) are, to borrow a term from Hartry Field, 'fully cognitively equivalent': to first

approximation, believing (desiring, etc) the one has the same significance for an agent's behavior (including their merely mental behavior) as does believing the other.

The other sort of view, which is known as *disquotationalism*, is a view about the truth of sentences. This time, the rough idea is that nothing more is required for the sentence "Snow is white" to be true than snow's being white. The strongest possible form of this view would be that (1) and

(3) "Snow is white" is true.

have the very same meaning. A weaker view would be that (1) and (3) are analytically or conceptually equivalent. And an intermediate view, which is what Field (1994, pp. 250–1) endorses, is that (1) and (3) are 'fully cognitively equivalent'.

Both the view that I am calling 'disquotationalism' and the name by which I am calling it have their roots in the work of W. V. O. Quine (1970, p. 12), who famously wrote: "By calling the sentence ['Snow is white'] true, we call snow white. The truth predicate is a device of disquotation." Elsewhere, however, Quine (1956, p. 187) explicitly denies that (1) is "analytically equivalent to" (3), insisting that "agreement in truth value can be claimed, and no more": His view, that is to say, is just that (1) and (3) are *materially* equivalent, and almost no-one would deny that. The reason for Quine's caution is not his skepticism about analyticity but an application of an observation due to Alonzo Church (1950).<sup>1</sup> If (1) and (3) are synonymous, then their translations into German

(4) Der Schnee ist weiss.

(5) "Snow is white" ist wahr.

should also be synonymous, which they plainly are not. But there is now a large literature on Church's objection. Perhaps some of the moves made there could be adapted to this case.

A more worrying objection was voiced many years before by G. E. Moore (1953, p. 276).<sup>2</sup> In the case of propositional deflationism, the

<sup>1</sup>Church's objection was originally directed against Carnap's proposal that "John believes that snow is white" relates John to the *sentence* "snow is white" rather than to a proposition or something of that sort (Carnap, 1947, pp. 61–2). Church credits the idea of using translation as a test for synonymy to Langford (1937).

<sup>2</sup>Moore's lectures were originally given in 1910–11 though not published until much later.

objection is that the truth of (2) seems to require the existence of the proposition that snow is white, whereas the truth of (1) does not. The obvious response is that the objection tendentiously assumes that the complement clause “that snow is white” refers to the proposition that snow is white. But all the objection really requires is that there is *something* to which the complement clause refers to which no constituent of (1) refers. One could perhaps deny even that claim, but a similar response is unavailable to the disquotationalist, who faces a similar objection: The truth of (3) requires there to be such a sentence as “Snow is white”, whereas the truth of (1) does not. It would be utterly implausible to deny that the quotation-name that occurs in (3) is a name of a sentence, or that the truth of (3) requires the existence of that sentence.<sup>3</sup>

Marian David (2005, §IV), from whom I learned of Moore’s case for precedence, discusses several responses that a deflationist might explore, arguing that none of them work. Any of these could be adapted by a disquotationalist, but none of them seem to me to be any more helpful in that form. But there is a response that David does not consider, namely, the one that Field actually adopts. Field (1994, pp. 250–1) simply concedes Moore’s objection and weakens the view to one on which a belief expressible by (3) is ‘fully cognitively equivalent’ to one expressible by (1) only *modulo* the belief that the sentence “Snow is white” exists. Something similar would need to be said about such pairs as

(6) “Snow is white” is false.

(7) Snow is not white.

and also about embeddings of such sentences (e.g., in conditionals). Whether all that can be made to work is not clear, and, as David remarks, “it is surprising that the *prima facie* difficulty [that Moore’s objection] poses. . . is rarely mentioned” (2005, p. 387). But it is hard to see Moore’s objection deciding the issue.

What will most matter for our purposes is that disquotationalism is a *much* more radical view than deflationism is. To get a sense for this, note that a disquotationalist should regard the following statement as true:

(8) “Snow is white” would have been true even if “snow is white” had meant that pigs fly.

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<sup>3</sup>Pro-sentential theories (e.g. Grover et al., 1975) may deny exactly that. But consider such generalizations as: Every true  $\Sigma_1$  sentence is provable in Robinson arithmetic. The quantifier must range over sentences, so “true” applies to sentences.

This may seem surprising,<sup>4</sup> but it is simply a consequence of the extremely strong equivalence between (1) and (3) that the disquotationalist requires. As disquotationalists understand (8), it is equivalent to:

- (9) Snow would have been white even if “snow is white” had meant that pigs fly.

And that is because, as Field (1994, p. 266) remarks, echoing Quine, “... to call ‘Snow is white’ disquotationally true is simply to call snow white...”, and that is true whether or not “is true” occurs inside a modal context (Heck, 2021b, pp. 117–20). If so, then, at least arguably, such claims as (8) are ones disquotationalists must accept. Suffice it for now to say that Field (1994, p. 275) not only accepts such claims but emphasizes them.<sup>5</sup>

Propositional deflationists, by contrast, have no such commitment. They may happily regard (8) as false. Sentential truth can be explained in terms of propositional truth thus:

- (10)  $S$  is true iff  $\exists p[S \text{ expresses } p \wedge p \text{ is true}]$

That is: A sentence is true iff it expresses a proposition that is true. The crucial question is then how one understands the expression relation. One option is to understand it too in a deflationary way. In that case, one may well find oneself committed to (8). And some propositional deflationists do hold such a combination of views (e.g. Horwich, 1998). But others do not, rejecting deflationism about expression and seeking some substantial account of the relation between a sentence and the proposition it expresses (e.g. Soames, 1999). Sentential truth then becomes an equally substantial notion.

So, if we assume propositional deflationism, disquotationalism is all but equivalent to deflationism about the relation of expression, that is, to a view on which the notion of expression can be completely characterized in terms of such apparent trivialities as:

- (11) “Snow is white” expresses the proposition that snow is white.

<sup>4</sup>Some people think sentences have their meanings essentially (Simchen, 2012). I find the underlying conception of what sentences are incompatible with any plausible theory of human language comprehension. But the central issue here could be discussed in terms of demonstratives, and uttered demonstratives do not have their reference essentially.

<sup>5</sup>That said, Field (1994, pp. 275–8) also explores the possibility of using an ‘extended’ disquotational truth-predicate to avoid this consequence. We’ll discuss the extended notion a great deal below.

If (11) is indeed a triviality, neither requiring nor admitting of substantial explanation, then so is the notion of sentential truth; if not, then not. But the underlying point is independent of any commitment to propositional deflationism. In effect, what the disquotationalist's acceptance of (8) is telling us is that they regard

(12) The condition that must be met for "Snow is white" to be true is that snow should be white.

as an analytic truth, one that is true in all possible worlds, no matter how "Snow is white" itself is used in those worlds. Ultimately, then, disquotationalism is not just a view about truth but a view about truth-conditions. Indeed, Field (1994, p. 253) describes the central question in which he is interested as "whether truth conditions... play a central role in meaning and content".

Quine's disquotationalism seems to be motivated, at least to some extent, by his skepticism about propositions. Field, however, makes it plain that disquotationalism requires a much more encompassing skepticism: one that extends to any notion of representational content robust enough to capture truth-conditions. Quine may share that skepticism: He sometimes seems to doubt that it is even possible to make proper sense of any notion of equivalence between sentences stronger than material equivalence (Quine, 1960, pp. 23–4). But that worry emerges from Quine's concerns about the limits of 'radical translation' which, infamously, are mostly imposed by his behaviorism (Chomsky, 1969). Field, on the other hand, is willing to countenance 'theories of content' that Quine would not, namely, any theory that reduces content to physicalistically acceptable notions. In fact, Field (1972; 1978) was for many years a champion of causal theories of reference. It seems to have been his eventual disillusionment with the project of 'reducing' truth-conditional content to physics that led Field to embrace disquotationalism.

What is at issue in the debate over disquotationalism, then, is no less than this:

If the notions of meaning and content are to do the work we need them to do, must they be characterized in terms of some notion of representational content sufficient to determine truth-conditions, in some substantial sense?

I take Field to have made a significant contribution just by realizing that, since disquotationalism precludes any substantial notion of truth-conditions, we can address this question by asking instead whether we

can get by with just a disquotational truth-predicate. That seems a more manageable question, and I propose to argue *for* an affirmative answer to the displayed question by arguing *against* disquotationalism.

What is meant here by a ‘disquotational truth-predicate’ is one that is stipulatively introduced so as to behave the way disquotationalists think our actual truth-predicate does behave.<sup>6</sup> A disquotational truth-predicate is thus supposed to be one that is wholly characterized in terms of the cognitive equivalence between any given sentence  $S$  and the corresponding sentence  $\ulcorner\text{“}S\text{” is true}\urcorner$ . So the first thesis of disquotationalism is:<sup>7</sup>

DT1 An intelligible notion of truth can be adequately explained in terms of the Disquotation Principle:  $\ulcorner\text{“}S\text{” is true}\urcorner$  is fully cognitively equivalent to  $S$  (modulo the existence of  $S$  itself).

The second thesis concerns the role that such a notion of truth is, and is not, suited to play:

DT2 A disquotational truth-predicate can only play an ‘expressive’ role and can never play a semantic, ‘word–world relating’ role.

The standard example of such an ‘expressive role’ is the use of truth in generalizations, such as:

(13) Everything the Pope says is true.

Disquotationalists want to insist that (13) should be read as the infinite conjunction of such sentences as:

- If the Pope says “Dogs bark”, then dogs bark.
- If the Pope says “Pigs fly”, then pigs fly.

The difficulty is that it is not clear how to express this generalization finitely. The obvious thing to try is something like:

(14) For all  $S$ , if the Pope says  $S$ , then  $S$ .

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<sup>6</sup>One might reasonably compare the argumentative strategy I’m about to describe with a famous ‘test’ that Kripke (1977, p. 265) uses in his discussion of referential uses of descriptions.

<sup>7</sup>I have expressed some skepticism about even this claim elsewhere (Heck, 2004, 2019), but I’ll not pursue that issue here.

But, familiarly, that is ill-formed, since  $S$  here is unable to make up its mind whether it goes proxy for a sentence (as in the third occurrence) or a name of one (as in the second). The solution is supposed to be provided by the truth-predicate, which allows us to reconstrue (13) as:

(15) For all  $S$ , if the Pope says  $S$ , then  $S$  is true.

This, then, is the ‘generalizing’ role that disquotationalists take the truth-predicate most fundamentally to play (Quine, 1970, pp. 11–3).<sup>8</sup>

An opponent of disquotationalism can happily accept DT1 and DT2, however. Some even do, on the ground that we need a disquotational truth-predicate to express generalizations like (13) and, more importantly, such modal generalizations as “All of the axioms of Euclidean geometry might have been true” (McGee, 2005, p. 147). My own view is that this is a mistake, one that results from a failure to distinguish between sentential and propositional notions of truth (Heck, 2004, §2). But we can leave that issue aside. Here, we need only the weaker point that accepting the legitimacy and utility of a disquotational truth-predicate does not suffice to make one a disquotationalist. The distinctive disquotationalist thesis is rather:

DT3 There are no *legitimate* uses of the notion of truth that cannot be understood as uses of a disquotational truth-predicate.

What makes one a disquotationalist, then, is the view that the *only* legitimate uses of truth are of the expressive sort mentioned in DT2.

The dialectic then tends to play out as follows. Opponents of disquotationalism note that there are philosophical and scientific theories and explanations in which the notion of truth seems to play an important role. For example, both in logic and in semantics, we find such claims as

(16) A conjunction is true iff both its conjuncts are true.

which is supposed to express, among other things, the truth-functionality of conjunction. What I shall call the *Classical Disquotational Strategy* (CDS) attempts to unmask this application of the notion of truth as really being of the ‘expressive’ sort for which the disquotational truth-predicate was designed. If so, then the disquotational notion of truth is adequate

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<sup>8</sup>It is, in fact, much less clear than usually seems to be supposed what this ‘generalizing’ is supposed to involve, but let me not pursue that issue here (but see Heck, 2021b, §1; 2021a, §1).

for the theoretical or explanatory purpose at issue and no ‘substantial’ notion of truth is required.<sup>9</sup>

Of course, there are other sorts of strategies open to disquotationalists. They might argue that the truth-involving theory or explanation is, for one reason or another, independently objectionable. Or they might offer an alternative explanation that does not even appear to use the notion of truth. In the case mentioned, for example, they might argue that logic and semantics should proceed in terms of proof- or verification-conditions, in which case (16) can be rejected in favor of something like:

(17) A conjunction has been verified iff both its conjuncts have been verified.

Neither of these strategies, however, is proprietary to disquotationalism. An opponent of disquotationalism might have similar complaints.

Indeed, as Field (1994, p. 250) emphasizes, what is distinctive about contemporary disquotationalism is precisely the thought that one needn’t follow verificationists in rejecting the notion of truth nor follow anti-realists like Sir Michael Dummett (1991) in attempting to reduce truth to something else, such as justification; similarly for truth-conditions. Rather, disquotationalism is a sort of quietism: One can accept the notion of truth *and the uses typically made of it* so long as one can construe those uses as really just being ‘expressive’. But, if so, then it is precisely its embrace of the CDS that distinguishes contemporary disquotationalism from earlier views, such as verificationism and anti-realism, which strive either to do without the notion of truth or to reconstruct it in other terms; similarly, again, for truth-conditions.

To put it differently, the promise of disquotationalism is that, instead of having to articulate an alternative to the truth-conditional conception of content, we can simply make do with the ‘naïve’ conception of content that is implicit in and wholly explained by such trivialities as

(11) “Snow is white” expresses the proposition that snow is white.

As Stephen Leeds (1995, p. 4) puts it, disquotationalists believe that (11), together with its generalizations and analogues, tell us “everything there is of interest to know about how our language, and other languages too,<sup>10</sup> connect with the world. . .”. There’s simply no need for a theory

<sup>9</sup>We’ll not actually consider disquotational accounts of such ‘compositional principles’ here. I’ve discussed them elsewhere, however (Heck, 2021b).

<sup>10</sup>Not by itself, of course, but only when augmented with translations of those other languages into ours. We’ll discuss this issue in the next section.



of content in the sense in which the causal theory of reference, say, was supposed to be one.

The rest of the paper is organized as follows. I argue, in §2, that translation must play a significant and, indeed, ubiquitous role in disquotationalist substitutes for truth-involving explanations. I then investigate, in §3, the consequences of incorporating an appeal to translation into the disquotationalist's substitutes for the kind of truth-involving explanation at issue in the so-called Success Argument. I'll argue in §3.2 that the need to appeal to translation undermines the application of the CDS to this case: The use of "true" in explanations of behavioral success is not merely expressive. In §3.3, I'll discuss Field's suggestion that we might reconstrue such explanations in terms that are not truth-involving at all. Finally, §4 considers the role that reductionism plays in disquotationalist thinking.

## 2 Disquotation and Translation

As Field (1994, p. 260) emphasizes, the thesis that  $\ulcorner \text{"}S\text{" is true} \urcorner$  is 'fully cognitively equivalent' to  $S$  itself entails that truth applies, in the first instance, only to sentences one understands—and so not, e.g., to sentences of a foreign language one does not speak.<sup>11</sup> That might seem surprising. Even if one does not oneself know what "La nieve es blanca" means, one might have thought that one could nonetheless understand what it means to say that the sentence "La nieve es blanca" is true. But, according to disquotationalism, that is an illusion. The reason is straightforward. To put it bluntly: If "true" just erases quotation marks, then " $\ulcorner \text{"}La\ nieve\ es\ blanca\text{" is true} \urcorner$ " is just a decorated version of "La nieve es blanca" itself. Less bluntly: If an attribution of truth to a sentence is 'fully cognitively equivalent' to an utterance of that very sentence, then " $\ulcorner \text{"}La\ nieve\ es\ blanca\text{" is true} \urcorner$ " is fully cognitively equivalent to—roughly speaking, synonymous with—"La nieve es blanca" itself. Believing the one is the same as believing the other. But one can't believe "La nieve es blanca" if one doesn't understand it.<sup>12</sup>

In fact, however, what this argument shows is only that a disquotationalist cannot make do just with what Field calls a 'pure' disquotational notion of truth: one explained entirely in terms of the Disquotation

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<sup>11</sup>In a more recent paper, Field (2017) whole-heartedly embraces this 'egocentric' approach to content, which is also explicit in Leeds (1995).

<sup>12</sup>For extensive discussion of this issue, see Moore (2020).

Principle. There is a need also for an ‘extended’ disquotational truth-predicate, which is explained in terms of translation: A sentence I do not understand is true in the ‘extended’ sense if it can be translated by a sentence I do understand that is true in the ‘pure’ sense.<sup>13</sup> This still has the consequence that most people do not understand such sentences as

(18) The sentence “There are non-measurable sets of reals” is true.

due to their ignorance of real analysis, which one might find implausible. But I shall set this concern, too, aside here.<sup>14</sup>

It can seem natural and even obvious that “true” applies, in the first instance, only to sentences one understands. Thus, Saul Kripke (1975, pp. 701ff) imagines that we might learn what “true” means just by learning that we should be prepared to assert “ $S$  is true” just in case we are prepared to assert  $S$  itself. And what is the alternative? That we learn what “true” means by learning how to apply it to sentences we do not understand? So it might seem as if the truth-predicate we initially acquire must be a disquotationalist one, which would give disquotationalism a significant dialectical advantage.

But the thesis that “true” can, in the first instance, only be applied to *sentences* one understands is a *much* more radical claim than is usually recognized. The problem is that there are very few *sentences* that are ripe for disquotation: sentences  $S$  that are ‘fully cognitively equivalent’ to the corresponding sentence “ $S$  is true”. The most obvious problem is posed by sentences that involve demonstratives, such as “That is a banana”. Familiarly, it makes no sense to ask whether such sentences are true or false. But it has become increasingly clear over the last couple decades that context-sensitivity is nearly ubiquitous, affecting color adjectives like “white” (Szabó, 2001; Reimer, 2002; Kennedy and McNally, 2010) and even logical terms such as quantifiers (Stanley and Szabó, 2000). In fact, it is difficult to think of any sentence outside mathematics and the ‘official’ pronouncements of the hard sciences that does not exhibit some degree of context-dependence, if only because of tense.

A similar problem arises with utterances made by other people, even when these do not involve context-dependence. I cannot simply assume

<sup>13</sup>That is:

$$\top(\Sigma) \equiv \exists S[S \sim \Sigma \wedge \top(S)]$$

where  $\Sigma$  is a ‘foreign’ sentence and  $S$  a ‘native’ one, and ‘ $\sim$ ’ means: translates. Note the similarity to how propositional deflationists explain sentential truth, as at (10).

<sup>14</sup>Stewart Shapiro (1998, pp. 55ff; 2003; 2005) argues that that this restriction causes trouble for disquotationalism. Field (2001a, pp. 147–8) discusses the argument briefly.

that anyone else means by their words what I mean by mine. I cannot, that is to say, simply assume that any other speaker's utterance of a given sentence will be true just in case an utterance by me of the same sentence would also be true. Similar remarks apply to utterances of my own made at other times. If so, however, then it is only very rarely that any sentence *S* will be 'fully cognitively equivalent' to the corresponding sentence  $\ulcorner S \urcorner$ .

If I want to say, then, that an utterance *U* made by someone else, or by myself at some other time, is true, then I need to invoke translation: *U* is true iff there is some sentence that I understand which, if it were uttered by me now, would both correctly translate *U* and be true. The 'pure' disquotational notion of truth thus applies, in the first instance, only to utterances made by me, at the present moment, of a sentence I understand (Heck, 2004, §4; David, 2005, p. 389).

None of that would be news to Field. It is for precisely such reasons that he insists that "true" applies, in the first instance, to sentences of one's own idiolect or, perhaps, to sentences of one's own language of thought (Field, 1994, pp. 279–80; 2017). Such a restriction comes at a significant cost, however: The 'pure' disquotational notion of truth is all but useless by itself. If a disquotational notion of truth is to do any work, we need to use the 'extended' notion, which embeds an appeal to translation.

### 3 Truth and Psychological Explanation

Perhaps the best known argument against disquotationalism is the Success Argument. The rough idea is that, if we're going to take our existence as rational agents seriously—if we're going to reject behaviorism and the like—then we need to think of our search for food, say, as guided by our beliefs about where food is to be found. Hence, our *success* in finding food will typically depend upon whether those beliefs are *true*. So if you want to explain how people manage not to starve, and you want to explain it (in part) in terms of people's cognitive capacities, then it looks as if the truth of people's beliefs is implicated in that explanation. And that means, or so it would certainly seem, that truth is doing serious explanatory work, which is precisely what disquotationalism cannot abide.

This argument has its origins in the work of Hilary Putnam (1975; 1978, pp. 17–33). It has since received a great deal more attention,

including a sustained elaboration, analysis, and defense due to Field (1986, §V), just prior to his conversion to disquotationalism. It seems to me, however, that most of that discussion has done more to confuse the issue than to clarify it.<sup>15</sup> Indeed, Field later describes his own discussion of the Success Argument as “so abstract and convoluted it couldn’t have convinced anyone...” (Field, 2001a, p. 153), and that is when he is being charitable. My goal here, then, is to offer a version of the Success Argument that, or so I will be claiming, gives us good reason to reject disquotationalism.

### 3.1 Navigation and Cognitive Maps

It will help if we make things a bit more concrete and consider the simple case of navigational behavior: our ability to find our way around the world. This is an ability that we share with many other creatures—among them rats, who, for all their other cognitive limitations, have a strikingly good ability to find their way around mazes. How do they do it? Part of my reason for considering this question is that serious scientific work has been done on it, and there are now developed proposals that have significant empirical support. I’ll focus on one of these here, not because I’m partial to it (though I am) but because it vividly illustrates what is at stake in the present debate. Similar remarks would also apply, however, to the other accounts on offer.

Here, then, is one popular and reasonably well-supported explanation of how rats navigate mazes: Very roughly, rats find their way around by making use of little maps that they carry in their heads.<sup>16</sup> These ‘cognitive maps’ are so-called because, or so some believe, they actually do have a map-like structure: Spatial relations between objects in the environment are represented, on the map, by means of geometrical relations among ‘markers’ that represent those objects on the map.<sup>17</sup> And rats are very good map-makers. As they move around, they continually update their cognitive maps, and they do so in such a way that, by and large, their maps end up accurately representing the topography of their local environment. So the reason rats are so good at finding their

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<sup>15</sup>A noteworthy exception is a recent paper by Gamester (2018), which was published after this paper was drafted. I’ll make some remarks about it in the footnotes.

<sup>16</sup>The evidence for this view is summarized by Rescorla (2018).

<sup>17</sup>These are what Rescorla (2018, p. 381) calls ‘cognitive maps in the strict sense’. In fact, though, it would not matter for our purposes if rats only had cognitive maps in the ‘loose’ sense: other mental representations of topographic aspects of their environments.

way around mazes is that, once they've had enough time to explore a particular maze, they have a map of it.

There are two features of this account that will be important for what follows. First, the accuracy of the rats' maps is essential to the explanation. That rats have maps in their heads does nothing to explain their navigational proficiency if the maps are no good. Second, the maps are essential, too. Simply to posit that rats have lots of information about the topography of their environment would beg the question how that is possible. The answer is meant to be that this information is encoded, as Edward C. Tolman (1948, p. 192) put it when he introduced the idea, in "a cognitive-like map of the environment. . . indicating routes and paths and environmental relationships. . .".

What ties these two aspects of the explanation together is the *representational content* of the maps: We can speak of the maps as being correct or incorrect only because they have such content; the maps encode information only because it makes sense to ask whether they are correct. So Tolman's proposed explanation is committed to the claim that cognitive maps have something like truth-conditions. The crucial question, to which we shall turn shortly, is how the disquotationalist proposes to understand this sort of explanation.<sup>18</sup>

Before we address that question, however, let me emphasize that what Tolman offers us is not just an explanation of navigational *success*. Suppose Whiskers has been through the maze several times and can run it quite quickly. But now Peter cruelly decides to change the maze. Off goes Whiskers, and the poor guy ends up crashing into a wall. Why? Because Whiskers thought there was an opening there (i.e., his cognitive map represented there as being an opening there). What the representational content of Whiskers's map contributes to, most immediately, then, is thus the explanation of his behavior, successful or otherwise. That is to say, what explains his success, in the cases in which Whiskers is successful, is the combination of two other factors: (i) that his behavior is guided by his cognitive map of his environment and (ii) that his map is accurate. So, again: Representational content contributes most fun-

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<sup>18</sup>Just to emphasize: There is nothing special about this particular explanation. Similar points could be made about a wide range of psychological explanations that involve 'information processing'. Burge (1986a) discusses many such examples; all of them could be used to make the same sorts of points I make below. The central question is how we should understand the notion of *information* that appears in such explanations.

damentally to the explanation of behavior and only derivatively to the explanation of successful behavior. This point will be crucial later.

Let me also note that it does not matter whether one wants to *call* maps ‘true’ or ‘false’ or whether one wants to speak of them as having ‘accuracy-conditions’ instead of truth-conditions. The niceties of English usage are irrelevant. This entire discussion could be reformulated, without loss, in terms of an alternative proposal according to which cognitive ‘maps’ have logical rather than geometrical structure, i.e., are language-like (see Rescorla, 2018, §6). But there is a good reason to discuss maps here, because they make it clear that the *pure* disquotational notion of truth really is useless by itself, since what’s fundamentally at issue *has nothing to do with language*. The issue is what role, if any, the notion of representational content must play in our theory of cognition, e.g., whether, in explaining navigational behavior, we need to invoke the representational content of cognitive maps. It does not matter even a little bit whether that content is linguistically encoded, if that’s what it takes for it felicitously to be called ‘true’.<sup>19</sup>

### 3.2 Translation and the Classical Disquotational Strategy

Disquotationalists are of course free to reject Tolman’s explanation of rats’ navigational proficiency and, indeed, to reject all explanations of mental processes in terms of computations over structured mental representations.<sup>20</sup> But the question whether to accept the so-called ‘representational theory of mind’ has nothing obvious to do with truth: There have, in fact, been adherents of RTM who have thought we could do without the idea that mental ‘representations’ have content (Stich, 1983).<sup>21</sup> But the promise of disquotationalism, or so I argued above, is supposed to be that it does not require us to reject the sorts of uses to

<sup>19</sup>It is an empirical issue whether all mental representations have syntactic structure or whether some of them have other sorts of structure, such as the geometrical structure that maps have (see e.g. Fodor, 2007; Heck, 2007; Rescorla, 2009; Beck, 2012, 2015).

<sup>20</sup>There is a hilarious parable, due to Lewis (1991, p. 59), about a philosopher who seeks to convince mathematicians to change their ways by confronting them with philosophy’s litany of successes. A similar warning applies here. A sharper one would emphasize the fate of Quine’s *a priori* arguments for linguistic behaviorism.

<sup>21</sup>Although it is many years too late, I’d like to take a moment to thank Fred Dretske for introducing me to the issues we are discussing here. He taught a graduate seminar at Duke somewhere around 1985, when I was an undergraduate, and one of the core texts was Stich’s then recent book. Both Stich’s book and Dretske’s reaction to it have stayed with me.

which truth is put in (cognitive) science<sup>22</sup> but only to unmask them as ‘expressive’. So the question in which I’m interested here takes the form: How might a disquotationalist understand the role played by the notion of truth in Tolman’s explanation of rats’ navigational abilities?

The Classical Disquotational Strategy is to argue that a disquotational notion of truth is all we need here and that the use of truth in such explanations is just ‘expressive’. As emphasized above, however, the ‘pure’ disquotational notion of truth will do us no good at all here. The maps that rats have in their heads are not ‘sentences I understand’,<sup>23</sup> so I will need to use the ‘extended’ disquotational notion of truth if I’m to make sense of attributions of correctness to those maps. And that means, of course, that I need to consider how to translate the rats’ maps into sentences of my language. A disquotational explanation of the rats’ success would thus have the following form:

Rats are good at running mazes because they navigate by little maps in their heads, and these tend, by and large, to be constructed in such a way that they are correctly translatable by true sentences of my language.

Or, to consider the more general case of explanations of behavior:

Whiskers attempted to run through a wall at location  $L$  because he was navigating by a cognitive map that is correctly translatable, in part, by the sentence of my language “There is an opening at location  $L$ ”.

Tolman’s explanation crucially mentions the information encoded in Whiskers’s cognitive map. If we pursue the CDS, the substitute will instead invoke translation. That should be no surprise. Translation is what disquotationalism substitutes for content.

But the substitute explanation clearly fails. It is plainly false that Tolman’s rats were good at running mazes because the maps they constructed are translatable by true sentences of my language, or of English.<sup>24</sup> That there are such things as people and natural languages has

<sup>22</sup>We’ll consider a version of this strategy in §3.3

<sup>23</sup>Gamester (2018, §§3–4) discusses the form the disquotationalists’ substitute must take if this worry is waived. (The basic idea goes back to Horwich (1990, pp. 22–3).) He argues that it fails anyway. But Gamester’s argument is focused much more on truth than on truth-conditions (it applies as well to deflationism), which are what I’m discussing here.

<sup>24</sup>Field (1986, p. 79) mentions this objection in his pre-conversion discussion of the Success Argument but does not really develop it. I stumbled upon it independently

nothing to do with rats' navigational abilities: Rats would have been just as good at running mazes even if there had never been any people, which is to say that the substitute explanations get the counterfactuals wrong.

The obvious reply is that what explains a given rat's behavior is not the existence of a certain translation but the underlying facts, whatever they may be, that make the translation correct. Talking about translation here is just a way of gesturing in the direction of those facts. Leeds (1995, pp. 28–9) compares this case to that of the meter stick: We can fix the length of a meter in terms of the length of a rod in Paris, but that doesn't mean that explanations that speak of meters somehow implicate that rod. Fair enough. But, as Leeds (1995, pp. 29–30) himself recognizes, that only raises the question which facts about the rat's map are really doing the explanatory work.<sup>25</sup> My own suspicion is that it is the representational content of the map. The disquotationalist owes us some other answer. Otherwise, they haven't actually offered an alternative to the content-involving explanation. They have just expressed the hope that there might be one.

Field (2001a, p. 154, fn. 13) raises the question, crediting Leeds, why there must be some way of specifying the facts that do the explanatory work other than indirectly, by talking about translation. But, to borrow Leeds's analogy, even if we cannot *specify* what a meter is except in terms of some rod in Paris, *what it is* for something to be a meter long had better not essentially involve relations to that rod, since otherwise explanations that speak of meters *would* implicate such relations (and so, derivatively, the rod). So disquotationalists need there to be some set of facts *E* such that:

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around 2005 when thinking specifically about cognitive maps and only later became aware of the back and forth between Field and Leeds, which I'll discuss shortly.

<sup>25</sup>I find Leeds's discussion of this issue puzzling. He ends up arguing that the crucial question is whether we can make sense of objective reasons:

If we could find a way to make sense of th[e] statement [that *A* is a good reason for *B*] without mention of ourselves and our conceptual scheme... then we would have found our correspondence theory. The idea of looking for an 'objective' notion of reasons remains... the correspondence theorist's best hope... (Leeds, 1995, p. 31)

But what do objective reasons have to do with questions about the representational content of cognitive maps in rats? Not that Leeds discusses this sort of case. But that is itself a symptom of the central problem with Leeds's discussion: that he over-intellectualizes the issue.



- (i) *E* can play the role that representational relations play in intentional explanation;
- (ii) *E* does not involve semantic notions such as truth and reference (or anything to which they might be reduced); and yet
- (iii) *E* does not involve translation.

Disquotationalists can hardly expect the rest of us to agree that some such notion is available, so they need to say something about what facts *E* might comprise.

As we'll see in the next section, Field does sketch such an account. But, before we discuss his proposal, note that, once the need for such an account has been conceded, the Classical Disquotational Strategy has failed. For what has been conceded is precisely that the use of truth in Tolman's explanation cannot be regarded as merely 'expressive': *His* use of "true" is not disquotational, even in the extended sense, since (i) the extended notion *is* explained in terms of translation but (ii) translation cannot figure in Tolman's explanation. I take this to show that there are possible (even actual) explanatory projects for which a non-disquotational notion of truth is *prima facie* necessary.

The reason this point has been missed is that disquotationalists tend to think of the truth-predicate as fundamentally a device of generalization. So their response to the Success Argument has tended to have two parts (see esp. Field, 2017, pp. 541–3). First, *particular* explanations of success need not use the notion of truth at all, because applications of the truth-predicate to *particular* sentences can be eliminated through disquotation. Second, *general* reliability can be explained by generalizing over particular explanations of particular successes: That's where truth makes its contribution. Anil Gupta (1993, p. 67) has raised serious questions about the second part. But the first part has not received the same scrutiny,<sup>26</sup> and that has made it seem as if the only role plausibly played by the truth-predicate here is the very one that disquotationalists like to emphasize (Horwich, 1990, pp. 22–3, 48–9). In fact, however, the first claim is also mistaken: The Disquotation Principle, by itself, cannot help us explain behavioral success, even in particular cases, because serious explanations of behavioral success invoke mental representations, and

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<sup>26</sup>Gamester (2018) is again an exception. A similar sort of explanation is sometimes offered of the reliability of our mathematical beliefs. That makes me suspect that the argument Linnebo (2006) gives against that view could also be deployed here. (Indeed, in some ways, Linnebo's remarks anticipate Gamester's.)

mental representations are not ‘sentences we understand’. So we have to make use of the extended notion of disquotational truth, but that means invoking translation, and that dooms the CDS.

That does not mean that the disquotationalist cannot answer the Success Argument. What it means is that the ‘promise of disquotationalism’ cannot be fulfilled. Just like verificationists and anti-realists, disquotationalists owe us an alternative to the truth-conditional conception of content: a specification of what non-semantic facts can do the work that truth-conditions do in Tolman’s explanation.

### 3.3 Truth and Indication

The question we have been discussing is how a disquotationalist might understand the role apparently played by representational content in map-based explanations of navigation. Appealing to translation does not help. It just begs the question what makes a given translation correct. Whatever that is, that is what does the real explanatory work. So what *does* do the real explanatory work, according to the disquotationalist?

It would be unfair to complain that disquotationalists have not given us a full answer to this question. It is not as if it is clear just how representational content enters into psychological explanation. But the request is not for a philosophical account of psychological explanation but just for some plausible suggestion about what might replace the appeal to representational content in Tolman’s story about rats.

The only attempt I know to sketch such an alternative is due to Field (2001a).<sup>27</sup> Now, Field has of course made important contributions to the study of how mental representations contribute to the explanation of behavior, beginning with his now classic paper “Mental Representation” (Field, 1978). In that paper and elsewhere, Field claims that intentional explanations can always be recast as purely computational explanations (Field, 1986, p. 84; 2001a, pp. 155–6; 2001b, pp. 72–6). If we assume, as Field does, that mental processes are implemented computationally (i.e., assume something like the language of thought hypothesis), then of course some computational process must always underlie any given intentional explanation. Moreover, the familiar objection that the computational story by itself cannot explain rats’ navigational abilities depends upon our regarding computation as ‘narrow’. If we instead take it to be ‘wide’—in the sense that “features of the external world [can] appear in

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<sup>27</sup>In a more recent paper, Field (2017, p. 542) briefly reiterates this account.

the computational story. . .”—then relations in which the rats stand to their environments become part of the computational story; it is then not so obvious that we can’t explain rats’ navigational abilities in *wide* computational terms (Field, 2001b, p. 74).<sup>28</sup> The question thus becomes: What relations between a given rat’s map and the environment in which it lives might take over, in a disquotational explanation, the role that representational content plays in Tolman’s account?

Consistently throughout his writings on this topic, what Field has offered as an alternative to representational content are what he calls *indication relations* (e.g. Field, 1994, pp. 254–5). I have been unable to find in Field a detailed explanation of what indication relations are, but, for our purposes here, what we need to know is just this: What a particular belief-state indicates is just a matter of how the world tends to be when the subject is in that state—and so is uncontroversially reducible to physicalistically acceptable materials. In many cases, of course, belief-states will be reliable indicators of their truth-conditions. That is just another way of saying that many of our beliefs are true. But, as Field emphasizes, there will also be cases in which what a belief-state indicates has little to do with its truth-condition. Someone’s political beliefs might indicate only what has recently been said by their favorite political commentator (Field, 1986, p. 89); my beliefs about what is happening in Afghanistan might correlate only with what has recently been written in the *The New York Times*. That, says Field (1994, p. 255), makes any proposed reduction of truth-conditions to indication relations “at best a gleam in the eye of some theorists”.<sup>29</sup>

Despite this divergence, Field (2001a, p. 154) argues, we can still use indication relations to explain behavioral success. Consider someone who is trying to land a plane. An intentional explanation might posit beliefs about airspeed and about what actions it is appropriate to take under various conditions. But we can instead simply posit that there are mental states  $C_{\text{low}}$ ,  $C_{\text{good}}$ , and  $C_{\text{high}}$  with the following properties: When Goldilocks is in  $C_{\text{low}}$ , she increases speed; when she is in  $C_{\text{good}}$ , she maintains speed; when she is in  $C_{\text{high}}$ , she decreases speed. And Goldilocks tends to be in  $C_{\text{low}}$  when the speed is too low;  $C_{\text{high}}$ , when it is too high; and  $C_{\text{good}}$ , when it is just right.

<sup>28</sup>That is: Field’s view is not vulnerable to the criticisms that Burge (1979; 1986a) makes of methodological solipsism (Fodor, 1980), because Field’s view is not individualistic.

<sup>29</sup>Dretske (1981), Stalnaker (1984), and Fodor (1987; 1990) all attempt reductions that might be so described.

Obviously, none of this is to be taken terribly seriously. Still, it is hard not to be struck by its quasi-behavioristic simplicity. The story sketched is one of stimulus and response. To be sure, Field is as aware as anyone that mental states, in general, do not ‘correlate’ with external conditions in the simple way that this sketch supposes they do, either on the input side or on the output side. His response is to admit the over-simplification and to insist that an appropriately similar story can be told by a functionalist: This is just a simplified version of the wide computational story mentioned a few paragraphs ago (Field, 2017, p. 542). But I do sometimes wonder what gleam is in whose eye.

A more serious problem is that there are familiar reasons to believe that any notion of content suitable for the purposes of psychological explanation must be compositional: systematicity, productivity, and all that (see e.g. Fodor and Lepore, 2002). But it is at best unlikely that indication relations are compositional: Only certain of my beliefs about Afghanistan reflect what is written in the *Times*. Still, it is not news that conceptual role theories have a problem with compositionality (Fodor and Lepore, 1993), and Field’s view is a wide conceptual role theory.

But it is really quite easy to see that behavior cannot be explained in terms of indication relations. This is an immediate consequence of the fact, mentioned above, that indication relations and truth-conditions can come dramatically apart.

Here’s a real case. In December 2016, Edgar Welch drove from Salisbury, North Carolina, to the Comet Ping Pong pizzeria in Washington D. C.—about 350 miles—where he opened fire with an assault rifle. He did so because he believed that the restaurant was being used by associates of Hillary Clinton as a front for a child sex ring. What Welch’s beliefs *indicated*, it would seem, had more to do with what was being posted on certain conspiracy-obsessed websites than with anything approximating reality.<sup>30</sup> To be sure, a complete account of why Welch did what he did would have to dig deep into ‘fake news’ and the culture of the alt-right. But that has nothing to do with why, *psychologically* speaking, Welch did what he did: He drove to Washington D. C., etc., because of *what he believed*, namely, that a child sex ring was operating out of Comet Ping Pong. (That was the truth-condition of Welch’s belief.) Similarly, even if what my beliefs about Afghanistan ‘indicate’ is what’s been reported in the *Times*, what I *do* as a result of my having those

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<sup>30</sup>See <https://tinyurl.com/CometPing> for the account of this episode in the *New York Times*.

beliefs—avoid Afghanistan, send money to Afghanistan—will be determined by *what* it is that I've come to believe (by the truth-conditions of my beliefs).

To take one of Field's own examples, imagine that my beliefs about height are

systematically exaggerate[d], so that my believing a sentence of the form 'It is  $n$  feet high' is strongly correlated with the object before me being  $f(n)$  feet high, where  $f(x)$  starts dropping off rapidly from  $x$  after about 6 feet or so. (Field, 1994, p. 255)

To be even more concrete, suppose that, if I see an object that is 6 feet 2 inches tall, I believe that it is 6 feet 4 inches tall. Now suppose that I need to fit that object through a portal that I have just measured to be 6 feet 3 inches tall. Will what I do be determined by how tall I believe the object is or by what my belief indicates about how tall it is?

The reason this point has been missed, I suggest, is because of the focus on explanations of behavioral *success*. If a particular piece of behavior is successful because the beliefs that explain it are true, then that more or less implies that indication relations and truth-conditions will coincide in that case, which will make it hard to choose between them. But, as I emphasized earlier (see page 13), what matters here is the role that the truth-conditions of beliefs play in the explanation of behavior, not just the role that *true* beliefs play in the explanation of *successful* behavior. It is not just successful behavior that is explained in terms of representational content. Indication relations cannot substitute for truth-conditions in the general case, for the simple reason that the two diverge. One might well say, then, that it is the role that *falsity* plays in the explanation of *unsuccessful* behavior that turns out to be crucial.<sup>31</sup>

To circle back: All these points apply just as well to rats' cognitive maps. If we were somehow to arrange, in the case of some particular rat, for indication relations to diverge from truth-conditions, it would still be the content of the rat's map that explained its behavior, not what the map indicated. Indeed, Tolman's point was precisely that the role cognitive maps play in the explanation of navigation cannot be reduced

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<sup>31</sup>There is something deeply satisfying about the way in which falsity emerges here as the crux: It is, after all, the possibility of *misrepresentation* that demands some notion of representational content (Dretske, 1986).

to stimulus (what the map indicates) and response: Tolman made his proposal at a time when behaviorism dominated American psychology, and it is explicitly presented as an alternative to a behaviorist account. Indeed, it is one of the earliest examples of what would later come to be called ‘cognitive science’.<sup>32</sup>

I conclude, then, that indication relations cannot play the role that truth-conditions are supposed to play in intentional explanation. And the argumentative strategy generalizes: That role cannot be played by *any* relation between mental representations and the external world that diverges from truth-conditions;<sup>33</sup> we’ll always be able to construct counter-examples that exploit the divergence. Arguably, then, nothing but truth-conditions (or whatever grounds them) can do the explanatory work they do. But it will suffice for now to observe that nothing else seems to be on offer.

#### 4 Disquotationalism and Reduction

Field (1994, pp. 249–51) argues that attempts to articulate an alternative to truth-conditional approaches to content have tended to flounder because they have accepted that very burden: to articulate a notion of content other than the truth-conditional one and, in some cases, even to re-characterize the notion of truth itself. Disquotationalism is meant to be an heir to such views that allows us to reject the demand for such alternatives. It insists that there are utterly unproblematic notions of truth and of truth-conditions, characterized in terms of disquotationalism, that everyone must accept. And it conjectures that, on examination, it will turn out that the only theoretical role the notions of truth and truth-conditions are ever really needed to play—whether in philosophy, linguistics, logic, or psychology—is the ‘expressive’ role for which the disquotational notions are custom-built. The Classical Disquotational Strategy amounts to an attempt to prove that conjecture, one case at a time.

I argued in §3.2 that the CDS fails in the case of psychological explanation.<sup>34</sup> It is, of course, open to disquotationalists to offer alternatives

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<sup>32</sup>Special thanks here to Dilip Ninan and Marcus Gianquinto.

<sup>33</sup>Understood here as sets of metaphysically possible worlds: Finer-grained notions of truth-conditions cannot be motivated in these same terms (which is not to say that they cannot be motivated).

<sup>34</sup>I have argued elsewhere that it also fails in the case of context-dependent utterances (Heck, 2021a).

to truth-involving explanations rather than to attempt to reconstrue them disquotationally, though doing so means giving up the very real advantages that the CDS had. I argued in §3.3 that the only such attempt known to me fails, and I've suggested that the arguments given there will generalize.

All of that is purely negative, of course, and I admit that I have done nothing here to address the question how truth-conditions can play a significant role in psychological explanation. But I've started to wonder whether part of what underlies the disagreement between disquotationists and intentional realists is a different disagreement about what work actually needs to be done here.

In early discussions of deflationary theories of truth (e.g. Horwich, 1990), the relevant alternatives were often correspondence theories, coherence theories, and the like. But it was quickly pointed out that opponents of deflationism need have no interest in any of those alternatives (see e.g. Davidson, 1990, 1996). There is a dangerous ambiguity in the phrase "theory of truth". Such a theory can be one about the nature of truth, such as the correspondence theory, or it can simply be one that is 'about truth' in much the same way that Dedekind–Peano arithmetic is a theory about the natural numbers. Maybe no theory of truth's 'nature' is possible, not because truth is 'insubstantial', but because, as Gottlob Frege (1984, opp. 59–60) thought, truth is too fundamental to be definable in other terms. To defend the semantical viewpoint, then, we do not need a theory of truth's nature. We just need a theory in which truth plays an important role.

All of that is widely appreciated nowadays. But the corresponding points about content are not. I mentioned earlier that Field's own embrace of disquotationism seems to have been motivated, at least in part, by the failure of various attempts, throughout the 1980s, to reduce semantical notions to broadly physical ones. Those, of course, were 'theories of content' in the sense in which the correspondence theory is a theory of truth. But one might wonder why the failure of the reductionist project should have surprised anyone. As Jerry Fodor (1989, p. 413) famously quips, "... nothing ever seems to reduce to anything...", and yet that does not disqualify the unreduced notions from doing serious explanatory work, or so Fodor (1974) famously argues in "Special Sciences". No doubt, there's a great deal more to be said about this, but that is very much my point. Absent further argument, the irreducibility of semantic notions to physical ones merits no more than a shrug unless you assume some strong form of reductionism.

I suggest, then, in closing, that we should at least consider the possibility that it is with content as it is with truth (see Burge, 1986b, p. 719). To defend the truth-conditional viewpoint, we do not need a theory of content's nature, one that reduces content to more basic notions. It is enough to have a well-motivated theory in which representational content has a central role to play. Such a theory would tell us about truth-conditional content by making some true claims about it. Cognitive science, or so I have argued, contains at least one example of such a theory, and there are many more, including in the branch of cognitive science known as linguistics. Of course, any such theory might be false; maybe all of the extant ones are. But the sorts of arguments presented here plausibly apply to any psychological explanation that makes serious use of a notion of representational content. Maybe the idea that the mind is an information-processing device will eventually prove ill-founded. But that sort of question is not going to be settled by conceptual analysis of the word "true".<sup>35</sup>

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<sup>35</sup>This paper descends from the second half of an earlier paper, "Against Disquotation". Talks based upon that paper were presented at the University of St Andrews, McGill University, the Institute of Philosophy at the University of London, the University of Toronto, and Washington University in St Louis. Thanks to everyone who attended for their questions and comments, which did much to improve the paper. Special thanks are due to Imogen Dickie, Marcus Gianquinto, Geoff Grossman, Dilip Ninan, Crispin Wright, and Byeong-uk Yi. Thanks also to Tyler Burge and to anonymous referees for their comments on the paper.



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