The Nature of Content: A Critique of Yli-Vakkuri and Hawthorne[1]

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1. Introduction

Narrow Content, by Juhani Yli-Vakkuri and John Hawthorne, is an ambitious attempt to argue against the claim that there is a kind of thought content which is both narrow and theoretically significant. The content of a subject's thought is narrow if it supervenes locally on her intrinsic properties; it is theoretically significant if it satisfies some structural condition, such as truth-conditionality or truth-functional compositionality, or if it explains some phenomenon such as privileged access, rationality, or action. I am sympathetic to the project and agree with the overall conclusion that there is no theoretically significant narrow thought content. In this paper, however, I raise a concern about the notion of content employed in the book and hence about the book's effectiveness in establishing its intended conclusion.

Yli-Vakkuri and Hawthorne maintain that the contents of thoughts are truth-evaluable propositions. Truth-evaluable propositions, they say, provide the contents of both indexical thoughts and non-indexical thoughts alike. Their commitment to a unified treatment of indexical and non-indexical thought content is explicitly stated in the introduction: 'As far as mental content is concerned, then, there is no reason at all to posit a difference between thoughts expressed using indexical words and others.' (p. 12). The unified treatment plays a pivotal role throughout the book. Specifically, a significant number of the central arguments rely essentially on examples of indexical thought and these arguments are taken to support conclusions about the nature of thought content *per se*. Conclusions about thought content *per se*, however, are supported by indexical examples only on the assumption of a unified treatment of indexical and non-indexical thought content.

I will suggest that the unified treatment of thought content advocated by Yli-Vakkuri and Hawthorne fails to capture the distinctively mental aspects of indexical thought and that the

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[1] With thanks to Corine Besson and Michael Morris for helpful comments.

kinds of indexical examples to which Yli-Vakkuri and Hawthorne appeal can tell us, as Tyler Burge says in the very article that Yli-Vakkuri and Hawthorne cite in favour of their unified treatment, 'nothing very interesting about mental states' (Burge, 1982: 82). As a result, I will suggest that a large class of the arguments presented in Yli-Vakkuri and Hawthorne's book fail to address the question of whether thought content is narrow, at least in the sense that is relevant to characterizing a subject's mental states or processes, and hence at least in the sense that is relevant to the question of whether narrow content can explain phenomena such as privileged access, rationality and action. Yli-Vakkuri and Hawthorne's notion of content has more to say about structural conditions such as truth-conditionality and truth-functional compositionality than about the nature of mental phenomena *per se*.

The structure of the paper is as follows. In section 2, I provide an account of the distinction between indexical thought and non-indexical thought and relate it to Yli-Vakkuri and Hawthorne's unified treatment of thought content as set out in their 'Introduction'. In section 3, I look at the formal account of content provided in Chapter 1 and assess the parameter proliferation argument against narrow content presented in Chapter 2. In section 4, I make some brief remarks about the arguments presented in Chapter 3. I conclude in section 5. I focus exclusively on the first three chapters of the book because this is where standard internalism, defined in terms of supervenience on the purely qualitative aspects of the inner lives of agents, is discussed. I will not touch on the topic of rationality-theoretic properties as discussed in Chapter 4: 'Rationality and narrow content'; nor will I touch on the non-standard versions of internalism as developed in Chapter 5: Quasi-internalism' or Chapter 6: 'Relational narrowness'. Nonetheless, I have similar concerns about the arguments in these later chapters.

2. Indexical and non-indexical thought

An indexical expression is a linguistic expression whose reference depends on, and is determined relative to, a context of use.[2] Paradigmatic examples include the expressions 'I', 'here' 'now' and 'tomorrow', as well as demonstrative expressions such as 'she', 'her', 'this' and 'that'. Thus when Adam uses the expression 'I', it refers to Adam, and when Eve uses the expression 'I', it refers to Eve. David Kaplan famously introduced a distinction, for such expressions, between two kinds of meaning, which he called 'character' and 'content'

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[2] Controversy over examples is irrelevant for present purposes.

respectively.[3] The character of an indexical expression, which can be understood as its conventional linguistic meaning, is what remains constant across different contexts of use. The content of an indexical expression, in contrast, is what varies across different contexts of use. The distinction between character and content also applies at the level of indexical sentences, where an indexical sentence is a sentence that contains one or more indexical expression. Thus if Adam and Eve each utters a token of the sentence-type 'I am hungry', according to Kaplan their token utterances have the same character, which is a property of sentence-types, but their token utterances differ in content, the former being about Adam, the latter being about Eve. The content of an indexical utterance in Kaplan's sense can be understood as a truth-evaluable proposition.[4] If Adam is hungry but Eve is not, then the content of Adam's utterance is the true proposition that Adam is hungry, while the content of Eve's utterance is the false proposition that Eve is hungry. The content of a non-indexical utterance, again in Kaplan's sense, can also be understood as a truth-evaluable proposition, although the character/content distinction collapses in such cases. Thus the content of an utterance of 'Zebras have stripes' is the true proposition that zebras have stripes, and the content of an utterance of 'Knowledge does not entail truth' is the false proposition that knowledge does not entail truth. Kaplan's notion of content, then, provides a unified treatment of the content of indexical and non-indexical utterances alike.

Yli-Vakkuri and Hawthorne's way of theorizing about content is based on Kaplan's notion of content and is, as they say 'very much in line with standard formal semantics for natural languages' (p. 24). What Kaplan calls 'character', Yli-Vakkuri and Hawthorne call 'meaning', and what Kaplan calls 'content', Yli-Vakkuri and Hawthorne call 'assertoric content'. And, in a move that is intended to connect formal semantics with the nature of the mind, Yli-Vakkuri and Hawthorne go on to say 'the assertoric content of an utterance of a sentence is the same entity as the content of the thought that the sentence expresses, or, in any case, there is a one-to-one correspondence between the assertoric content of sentence utterances and the contents of the thoughts they express' (p. 13). Thus the contents of thoughts, both indexical and non-indexical, are taken to be truth-evaluable propositions.

This is a perfectly legitimate use of the term 'thought content', and Yli-Vakkuri and Hawthorne are free to adopt it. But this notion of thought content, while theoretically adequate for some purposes, will not be suitable for others. Consider, once again, Adam and

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[3] Kaplan (1989).
[4] This is the understanding adopted by Kaplan. There is no implication n Kaplan's part that a proposition is a structured entity containing objects and properties.

Eve. In uttering their respective tokens of the sentence-type 'I am hungry', there is a sense in which Adam and Eve say the same thing, and a sense in which they say different things. The semantic commonality is marked by Kaplan's use of the term 'character' and the semantic difference is marked by Kaplan's use of the term 'content'. The terminological distinction between character and content allows us to keep track of the different semantic phenomena. This is important because each phenomenon has a different theoretical and explanatory role, and an adequate semantic theory needs to acknowledge both. Similarly, when Adam and Eve think their respective thoughts, there is a sense in which they think the same thing, and a sense in which they think different things. So in the realm of indexical thought we also need a terminological distinction, this time to keep track of the different psychological phenomena.[5] Here too, this is important because each phenomenon has a different theoretical and explanatory role, and an adequate theory of mental phenomena needs to acknowledge both. However, while Kaplan's terminology is generally acknowledged in the philosophy of language to mark the relevant semantic distinction, there is no standard terminology in the philosophy of mind that serves to mark the relevant psychological distinction. Instead, the expression 'thought content' is used ambiguously in the indexical case, by some, such as Burge, to denote the element of indexical thought that remains constant across different contextual applications, and by others, such as Yli-Vakkuri and Hawthorne, to denote the element of indexical thought that varies across different contextual applications.

Discussions concerning the nature of indexical thought must be clear on the distinction in question in order to avoid spurious arguments that involve illicit slides between the different notions of content. But the Kaplan-style distinction goes hand-in-hand with the recognition that there is a psychological difference between indexical thought on the one hand and non-indexical thought on the other. This parallels the semantic distinction between indexical utterances on the one hand and non-indexical utterances on the other. Just as the distinction between character and content applies to indexical but not to non-indexical utterances, the analogous psychological distinction applies to indexical but not to non-indexical thought. This means that discussions concerning the nature of thought generally must be clear on the difference, this time in order to avoid spurious arguments that involve illicit slides between the different kinds of thought. In order adequately to address the

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[5] 'Psychological' isn't, perhaps, the best label for the phenomena, but it will suffice given that the point here is merely to distinguish claims about indexical sentences from claims about indexical thought.

question of whether there is a theoretically significant kind of narrow content, then, we need a framework within which the relevant phenomena are distinguished.

The phenomena are not clearly distinguished within the framework advocated by Yli-Vakkuri and Hawthorne. Yli-Vakkuri and Hawthorne do discuss, in Chapter 2, §1.5.4., attempts to model thought content on Kaplan's notion of character. The discussion at this point in the book, however, concerns theories such as the two-factor theory of content advocated by Jerry Fodor and Brian Loar, as well as the two-dimensional account of content proposed by David Chalmers and based on David Lewis's notion of a centred world.[6] But two-factor theories of content and two-dimensional theories of content are theories of non-indexical thought.[7] As such, discussion of them is tangential to my main concern with Yli-Vakkuri and Hawthorne's framework, which is that it fails to distinguish between indexical and non-indexical thought. Yli-Vakkuri and Hawthorne also draw, in Chapter 3, §3.1., on Kaplan's theory of *de re* thought.[8] Kaplan's theory of *de re* thought is clearly relevant to the nature of indexical thought, and hence to the distinction between indexical and non-indexical thought. However, Yli-Vakkuri and Hawthorne's appeal to it again fails to do justice to the fundamental distinction between indexical and non-indexical thought. I return to Kaplan's theory of *de re* thought and Yli-Vakkuri and Hawthorne's appeal to it briefly in section 4 below.

The phenomena are clearly distinguished, however, within the framework advocated by Burge.[9] Looking at Burge's framework, then, will help to explain why I think Yli-Vakkuri and Hawthorne's arguments are largely irrelevant to the question of the individuation of mental states. Both parties to the debate agree that sentences attributing propositional attitudes relate a subject to what is indicated by a that-clause. But according to Yli-Vakkuri and Hawthorne, what is indicated by a 'that'-clause is always a proposition that admits of truth or falsity. According to Burge, in contrast, what is indicated by a 'that'-clause is sometimes a proposition that admits of truth or falsity, and sometimes a propositional fragment that admits of 'being true of some entities and false of others' (Burge, 1980: 53). Specifically, a 'that'-clause in a *de dicto* attribution indicates a complete proposition, while a 'that'-clause in a *de re* attribution indicates a propositional fragment together with an object or sequence of objects to which the propositional fragment is taken to be contextually

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[6] See Fodor (1987), Loar (1988), Lewis (1979) and Chalmers (2003).
[7] For arguments against these kinds of views see Sawyer (2007). The core problem is that narrow content understood along these lines is not representational, and hence not a form of content that is recognisable as such.
[8] See Kaplan (1968).
[9] See, for example, Burge (1977a, 1980, 1982, 2007).

applied. The attribution of a *de re* thought, then, consists in 'applying or relating an incompletely interpreted content clause, an open sentence, to an object or sequence of objects, which in effect completes the interpretation' (Burge, 1982: 83). *De re* thought is, says Burge, 'fundamentally predicational' (Burge, 1982: 83).

A look at Burge's logical notation, will help to clarify both the distinction between the different elements of indexical thought that map onto Kaplan's semantic distinction between character and content, and the related difference between indexical and non-indexical thought. Throughout this section, I will treat the pairs of expressions 'indexical' / 'non-indexical' and '*de re*' / '*de dicto*' as equivalent. There may be reason to distinguish the two, but the equivalence will simplify the dialectic and will cause no harm in the present context.[10] It will be clear to anyone familiar with the literature that Burge's account of the distinction between *de re* and *de dicto* thought has its roots in Quine's work on the distinction between relational and notional belief.[11]

Suppose Alfred sincerely utters the following two sentences:

(1) Zebras have stripes.
(2) That is a zebra.

Alfred's utterance of (1) expresses a non-indexical belief. Alfred's utterance of (2), in contrast, expresses an indexical (demonstrative) belief. Let us suppose that Alfred utters (2) while pointing to Zed, a particular zebra. The logical form of the attributions of these beliefs to Alfred can be represented, in Burge's notation, by (3) and (4) respectively:

(3) B_d (Alfred, ⌜Zebras have stripes⌝)
(4) B_r (Alfred, <Zed>, ⌜That (x) is a zebra⌝)

'B_d' indicates that the belief attributed is *de dicto* (non-indexical), while 'B_r' indicates that the belief attributed is *de re* (indexical). The corner quotes, says Burge, 'may be regarded as a convenience for denoting the proposition [in the *de dicto* case], or component of proposition

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[10] Burge, for example, maintains that simple mathematical thoughts are plausibly *de re* but not indexical. See Burge (1977a, 2007). Moreover, there is a complication introduced by the fact that there can be *de re* ascriptions of *de dicto* attitudes. It is the logical form of the representational contents of the attitudes themselves that is of primary interest here.

[11] See Quine (1956).

[in the *de re* case], expressed by the symbols they enclose' (Burge, 1977: 341). The corner quotes in the *de re* case contain one or more free variables in order to indicate that a *de re* thought involves the contextual application of a propositional fragment to one or more objects. The pointed brackets, which also feature in the *de re* case only, contain a symbol or symbols representing the object or objects to which the propositional fragment is contextually applied.[12]

The notation brings out the fundamental difference between indexical and non-indexical thought. In so doing, both the element of indexical thought that remains constant across different contextual applications, and the element of indexical thought that varies across different contextual applications are clearly identified. Imagine a counterfactual situation in which Alfred utters (2) while pointing instead to Dez, a cleverly disguised donkey who appears the same to Alfred in the counterfactual situation as Zed appears to Alfred in the actual situation. The logical form of the relevant belief-attribution can be represented by (5):

(5) B_r (Alfred, <Dez>, ⌜That (x) is a zebra⌝)

Alfred's actual belief is a true belief about Zed, while his counterfactual belief is a false belief about Dez. Thus there is a very good sense in which the *beliefs* are different. Alfred believes that Zed is a zebra; counterfactual Alfred believes that Dez is a zebra. But, since the corner quotes indicate the *representational elements* of thoughts, the notation allows us to see that the representational element of Alfred's actual belief is the same as the representational element of Alfred's counterfactual belief. Thus there is a very good sense in which the *content* of the beliefs is the same. Alfred is simply making contextually different applications of that content to different entities. Alfred believes *of* Zed that he is a zebra; counterfactual Alfred believes *of* Dez that he is a zebra. This use of the term 'content' succeeds in identifying the representational elements of indexical and non-indexical thoughts alike. Indexical thought contents are, Burge says, 'indexically infected counterparts of non-indexical thought contents' (Burge, 1980: 54-5).

Alfred's actual and counterfactual beliefs differ in truth-value. This means that in Yli-Vakkuri and Hawthorne's sense of the content of a thought as a truth-evaluable proposition,

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[12] Understanding the *de dicto* / *de re* distinction in this way provides solutions to problems relating to quantification into belief contexts, substitutivity principles and the logic of exportation. For discussion of such issues see for example Quine (1956), Kaplan (1968) and Burge (1977a, 1977b). Note also that the demonstrative term 'that' in (2) contributes a conceptual element to the thought expressed and hence accommodates, for example, the concern about essential indexicals articulated in Perry (1979).

the content of Alfred's belief is not narrow. But the reason this tells us 'nothing very interesting about mental states' (Burge, 1982: 82) is that the mentality of an indexical thought lies solely in its representational element, constituted by the thinker's concepts. And this specifically representational element of indexical thought is not identified in Yli-Vakkuri and Hawthorne's framework.

Burge's paper 'Other Bodies', to which Yli-Vakkuri and Hawthorne appeal in defence of their position, contains an extended argument for anti-individualism focused exclusively on instances of *de dicto* thought. And yet it opens with a 2-page discussion of *de re* thought. Burge's aim in this passage is not, as Yli-Vakkuri and Hawthorne's discussion suggests, to demonstrate that *de re* beliefs fail to supervene locally on a subject's intrinsic properties. Rather, it is to warn of the dangers of 'an oversimplified picture' (Burge, 1982: 83) of the contribution of the environment to our cognitive lives which is suggested by the *de re* case. According to the oversimplified picture 'it remains possible to divide off contextual or environmental elements represented in the propositional attitude attributions from more specifically mentalistic elements', where 'the specifically mental features of the propositional attitude can, according to this picture, be understood purely in *individualistic* terms' (Burge, 1982: 83, original emphasis). The point of Burge's discussion of the *de re* case, then, is not that it supports anti-individualism directly, but, rather, that it is liable to mislead us into thinking that the environment does not affect our mental states in any deep and interesting way, and hence liable to mislead us into thinking that mental content is *narrow*. The relevance of Burge's discussion of the *de re* case is thus missed by Yli-Vakkuri and Hawthorne. They are wrong, then, when they say: 'Burge thinks it's already obvious that certain kinds of content aren't determined by inner goings-on. In particular, the contents of thoughts that we specify using 'that'-clauses which contain names like 'Jim' and 'London' and by demonstratives like 'this' and 'that' will, by Burge's own lights, not be fixed by inner goings-on.' (p. 9). These are paradigm examples of *de re* thoughts, and whether their contents are fixed by inner goings-on will depend, according to Burge, on whether the propositional fragments that constitute their contents contain conceptual elements that are anti-individualistically individuated; it is not determined by the (obvious) fact that those propositional fragments can be applied to different objects in different contexts. The bulk of 'Other Bodies' is then devoted to showing why mental content, marked out by the corner quotes in both the *de dicto* and the *de re* case, should not be conceived as narrow. Yli-Vakkuri and Hawthorne are thus also wrong to claim that 'Burge himself recognised' (p.11) that indexical sentences such as 'I am human' or 'I am an author of *Narrow Content*' express

thoughts with different contents in different contexts (pp. 11-12). Their interpretation of Burge rests on a misunderstanding of Burge's notion of content. The real problem, however, is that their misinterpretation of Burge stems from a failure to recognise the distinctive nature of *de re* thought.[13]

3. Alethic parameters

Yli-Vakkuri and Hawthorne's formal account of content is set out in Chapter 1, where the key notion of content is said to be 'that of a function from a configuration (sequence) of alethic parameter values to the two truth values, Truth (T) and Falsehood (F)' (p. 24). Following Lewis, they call 'any possible configuration of values of *all* of the alethic parameters an *index*', and call 'any function from indices to truth values an *intension*' (p. 24, original emphasis). Taking '*i*', '*i′*', '*i″*', ... as variables for indices and using '$\mathbf{I}$' to designate the set of all indices, each content C is thus said to determine a function f from indices to truth values such that, for each $i \in \mathbf{I}$, $f(i) = T$ if C is true at i and F otherwise. This function is said to be the *intension of C*. The account is intended to be neutral between a coarse-grained conception of contents, according to which the content of a thought is identified with its intension, and a fine-grained conception of contents, according to which two distinct thought contents can have the same intension. The sense in which an index is a possible configuration of values of all of the alethic parameters is, they say, combinatorial. Thus if $\mathbf{X}_1, ..., \mathbf{X}_n$ are all of the alethic parameters, then '$\mathbf{I}$ is the set of all sequences of length n whose first member is drawn from $\mathbf{X}_1, ...,$ and whose nth member is drawn from $\mathbf{X}_n$' (p. 25), which is represented as follows:

$$\mathbf{I} = \mathbf{X}_1 \times ... \times \mathbf{X}_n$$

Different kinds of sentences will have contents that depend for their truth value on different parameters. That is, some contents will have truth values that are relative only to a world, while other contents will have truth values that are relative, for example, to triples of worlds,

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[13] There is some reason to think that the psychological explanation of action requires this understanding of the content of *de re* thoughts. See for example Noonan (1986, 1991) and Segal (1989). See also Perry (1979) on the essential role of indexical thought in action-explanation. Such arguments provide additional reason to think Yli-Vakkuri and Hawthorne's understanding of content does not get to the heart of specifically mental phenomena. The relevant arguments connect with Yli-Vakkuri and Hawthorne's fourth explanatory condition (E4) on the theoretical significance of narrow content (p. 42). The condition is stated by Yli-Vakkuri and Hawthorne but they do not discuss it.

agents and times. But the first, and primary alethic parameter is the set of all metaphysically possible worlds, **W**, and Yli-Vakkuri and Hawthorne call the hypothesis that the world is the only relevant parameter (i.e. the hypothesis that **I** = **W**) 'the simplest hypothesis' (p, 26). **W** is the first, and primary alethic parameter, according to Yli-Vakkuri and Hawthorne, because although there is a sense in which the hypothesis that **I** = **W** involves the relativity of the truth values of contents to worlds, the relativity involved is plausibly not irreducible. Relativity to other parameters, in contrast, is, they say, plausibly irreducible. Consequently, Yli-Vakkuri and Hawthorne maintain that the simplest hypothesis is a form of non-relativism, while its denial (the view that the world is not the only parameter) is a form of relativism. That **I** = **W** is, they say, 'a core part of the classical conception of content, according to which contents ... have their truth values *simpliciter'* (p. 65).

The main line of argument in Chapter 2 depends on the semantic framework just described together with two key notions. The first key notion is that of truth-conditionality, which is the first of the structural conditions satisfaction of which would render narrow thought content theoretically significant. Truth-conditionality, as Yli-Vakkuri and Hawthorne understand it, 'requires that, necessarily, the content assigned to a thought determines the genuine truth value of the thought at the index of the thought' (p. 64). The second key notion is that of *Doppelgänger*-related thoughts. To say that two thoughts are *Doppelgänger*-related is to say that they are duplicate thoughts that differ in truth value. Yli-Vakkuri and Hawthorne maintain that 'if there is a narrow content assignment that is also truth-conditional, then, if it is possible that there are thoughts that are *Doppelgänger*-related with respect to a certain sequence of parameters, then those parameters are not all and only the parameters of the indices' (p. 69).[14] The argument against a truth-conditional narrow content assignment (and hence against a theoretically significant form of narrow content) proceeds on the basis of a series of examples in which we are invited to share the intuition that the relevant thoughts are *Doppelgänger*-related, and from which we are asked to conclude that there must be yet another parameter relative to which the truth value of the thoughts is determined. As the examples progress and the alethic parameters proliferate, the relativism to which the narrow content theorist appears to be committed becomes increasingly implausible.

Yli-Vakkuri and Hawthorne illustrate the basic point as follows. Let *w* be a world that contains both Earth and Twin Earth, as was originally stated by Putnam.[15] The thought that

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[14] This appears in formal terms as their 'Proposition 2'.
[15] Putnam (1975).

Oscar would express by an utterance of 'Water contains hydrogen' is true, since water contains hydrogen, while the thought that Twin Oscar would express by an utterance of 'Water contains hydrogen' is false, since twin water does not contain hydrogen. Since Oscar and Twin Oscar are intrinsic qualitative duplicates, their thoughts are duplicate thoughts that differ in truth value, and hence their thoughts are *Doppelgänger*-related. But since the thoughts are located in the same world, w, the world parameter cannot be the only parameter relevant to the determination of their truth value. This means that the simplest hypothesis that $\mathbf{I} = \mathbf{W}$ is false, and we are set on a path to find additional parameters relative to which the truth value of a thought might be determined.

The same point can, according to Yli-Vakkuri and Hawthorne, be illustrated by thoughts expressed by sentences containing indexical expressions, proper names and first-personal pronouns (pp. 70-1). Thus suppose Varnsen is looking at a half empty bottle while Twin Varnsen is looking at a full bottle which appears half empty. The thoughts they express by their respective utterances of 'This is half empty' will be duplicate thoughts that differ in truth value. Similarly, Varnsen's utterance of 'Vandelay has drunk my Westy' might express a true thought about Vandelay, while Twin Varnsen's corresponding utterance expresses a duplicate but false thought about Twin Vandelay. Finally, Varnsen's utterance of 'I occupy the dustiest office in the universe' might express a true thought while Twin Varnsen's duplicate thought is false. In each case, the thoughts are *Doppelgänger*-related but located in the same world, and hence we are asked to conclude that the world is not the only alethic parameter.

The addition of an agent-parameter, $\mathbf{A}$, according to Yli-Vakkuri and Hawthorne, fixes the cases above, since Oscar and Twin Oscar are different agents, as are Varnsen and Twin Varnsen. The next suggestion, then, is that $\mathbf{I} = \mathbf{W} \times \mathbf{A}$. This hypothesis is also argued to be consistent with *Doppelgänger*-related thoughts, however. Let w_{ER} be a world of eternal recurrence and let Loop Lady be a character whose life 'can be divided into non-overlapping hundred-year epochs in such a way that the temporal part of Loop Lady that exists during any epoch is a qualitative intrinsic duplicate of the temporal part of Loop Lady that exists during any other epoch' (p. 73). Suppose further that Loop Lady switches between Earth and Twin Earth whenever a new epoch begins. When she utters the sentence 'Water contains hydrogen' in one epoch, on Earth, it will express a true thought; but when she utters 'Water contains hydrogen' in an adjacent epoch, on Twin Earth, she will express a false thought. Since her

thoughts are *Doppelgänger*-related, we are asked to conclude that the current suggestion that $I = W \times A$ is false.

The addition of a time parameter, T, according to Yli-Vakkuri and Hawthorne, fixes the case of Loop Lady, and so we move to the suggestion that $I = W \times A \times T$. This is brought under pressure by appeal to Time Travelling Loop Lady, which leads to the introduction of a parameter for personal time, P, and the suggestion that $I = W \times A \times T \times P$. This is brought under pressure by appeal to Mirror Man, who is perfectly qualitatively symmetric along some plane, but inhabits a world in which to his left stands Kit Fine, and to his right stands an indistinguishable wax model of Kit Fine. With the left hemisphere of his brain he thinks a true thought about Kit Fine, which he would express by the sentence 'Kit is human', and with the right hemisphere he thinks a false thought about Waxwork Kit Fine that he would also express by an utterance of 'Kit is human'. Since the thoughts are *Doppelgänger*-related, and yet the world, agent, time and personal time are identical, an additional parameter is once again needed. This leads to the introduction of a parameter for location, L, and the suggestion that $I = W \times A \times T \times P \times L$. This in turn is brought under pressure by Mirror Angel, who has no location. And finally we arrive at a choice between 'thought relativism' (p. 80), the radical view that the thought itself is included in its index, and 'extension assignment relativism' (p. 81), the radical view according to which there are 'special constituents' of thoughts whose extensions are invariant (p. 81). I agree that neither of these views is plausible, but the argument from parameter proliferation can be resisted from the outset.

The examples on which the argument depends fall into two categories: indexical cases, which include the use of demonstratives, names and personal pronouns, and non-indexical cases, which do not. In the former category, the intuition that the pairs of thoughts are *Doppelgänger*-related is almost universally accepted.[16] But each of the examples in this category can be set aside as irrelevant to the question of whether there is a theoretically significant kind of narrow content because each of the examples can be reconstrued, along the lines suggested in the previous section, in terms of the 'true of' and 'false of' locution. On this understanding, the fact that the pairs of thoughts are *Doppelgänger*-related is consistent with their representational contents being identical and hence narrow. There is no reason to accept Yli-Vakkuri and Hawthorne's claim, then, that a difference in truth value between duplicate indexical thoughts leads to parameter proliferation.

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[16] McDowell's commitment to *de re* senses provides an exception. See McDowell (1977, 1984).

Note that I am following Yli-Vakkuri and Hawthorne in treating examples involving proper names as indexical examples. They group together examples involving names and demonstratives as amongst those for which it is 'already obvious' that their contents are not fixed by inner goings-on' (p. 8); and in their use of examples they distinguish those involving natural kind terms on the one hand from those involving names, demonstratives and personal pronouns on the other. Moreover, Mirror Man demonstrates quite clearly why thoughts expressed by sentences containing proper names should be treated as indexical thoughts at least for present purposes. This is because Mirror Man's thoughts are assumed to be duplicate thoughts, and hence the difference between them must lie in the different contextual applications of the different tokens of the same type of mental constituent, the one to Kit Fine on the left, and the other simultaneously to Waxwork Kit Fine on the right. Crucially, treating examples involving proper names as indexical examples does not rest on the contentious (even if true) theory that names are predicates with a demonstrative element in their singular use, but merely follows from what Yli-Vakkuri and Hawthorne say.[17] I therefore take the assumption to be uncontroversial for the purposes of my argument.

It may help to pause for a moment in order to clarify the issue. The semantic framework adopted by Yli-Vakkuri and Hawthorne does have the resources to distinguish between indexical and non-indexical thought. Non-indexical thought can be characterized as thought that conforms to the simplest hypothesis—thought whose content determines a truth-value relative to the world parameter only; and indexical thought can then be identified as thought whose content determines a truth value relative to more than just the world parameter—as thought that does not conform to the simplest hypothesis and is hence irreducibly relative. The concern, then, is not that the semantic framework cannot distinguish between the two. Rather, the concern is that the way in which it draws the distinction is blind to the different representational natures of indexical thoughts on the one hand and non-indexical thoughts on the other. In effect, the semantic framework fails to capture the nature of indexical thought because it fails to distinguish between the distinct natures of the representational elements of indexical and non-indexical thoughts. Instead, it construes the content of both indexical and non-indexical thoughts as determining a truth value in the same

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[17] Burge does not, as Yli-Vakkuri and Hawthorne claim, hold a version of the predicate theory of proper names according to which 'a proper name 'N' is synonymous with a definite description along the lines of 'the such-and-such thing that is called 'N'' (p. 105). Burge's view, unlike the view with which he is attributed, can accommodate *de dicto* readings of sentences containing names as well as the insight that names are rigid designators. As such, the misattribution affects Yli-Vakkuri and Hawthorne's line of argument in Chapter 3, §3.1.2. I do not have the space to discuss these issues fully here. See Burge (1973). See also Sawyer (2010).

way. But, as we have seen, a difference in truth value between duplicate indexical thoughts is consistent with the representational content of those thoughts being identical, and hence narrow. The 'true of' and 'false of' locution is a way of avoiding, at least for indexical cases, what Yli-Vakkuri and Hawthorne take to be an inevitable slide, by the narrow content theorist, into an unacceptable form of relativism. Given the essentially predicational nature of such thoughts, there is reason to think that the determination of truth value is irreducibly contextual rather than independently codifiable as a set of parameters, and hence that the search for a specifiable set of parameters relative to which the truth value of an indexical thought is determined is misguided at its core.[18]

Setting aside the indexical examples, then, we are left with the examples of Oscar and Twin Oscar, of Loop Lady, and of Time Travelling Loop Lady. None of the later stages in the argument, from Mirror Man on, could, so far as I can see, be run with anything other than indexical examples. This means that the slide into relativism is halted midway. But there is a way for the narrow content theorist to avoid the slide into relativism altogether. The argument from parameter proliferation assumes that the content of a thought determines a truth value not *simpliciter* but relative to a world. This assumption is embedded in the 'simplest hypothesis' that $\mathbf{I} = \mathbf{W}$. But this assumption builds a kind of relativity into the picture from the start, and hence stacks the decks against the narrow content theorist. It is, after all, this relativity that opens up the possibility of non-indexical *Doppelgänger*-related thoughts. The narrow content theorist, then, can stop the slide into relativism by rejecting the assumption that truth values are determined relative to parameters at all and by maintaining instead that the content of a thought determines a truth value *simpliciter*. Indeed, so long as we assume that content determines extension, and hence truth value, Yli-Vakkuri and Hawthorne's 'simplest hypothesis' flies in the face of the internalist claim that what determines the content of a thought is the intrinsic properties of the subject. If the intrinsic properties of a subject determine the content of her thought, and the content of her thought determines its extension, and hence truth value, then it will be impossible for duplicate non-indexical thoughts to differ in truth value. This means it will be impossible for there to be non-indexical *Doppelgänger*-related thoughts. The kind of internalist position advocated by Segal, which Yli-Vakkuri and Hawthorne call 'sectarian internalism' (p. 97), is committed to both of these claims: that the intrinsic properties of a subject determine the content of her thought, and that the content of a

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[18] The point that the determination of truth value is irreducibly contextual connects with the irreducible nature of *de re* thought. It is, as it happens, also built into Davidson's attempts to provide a theory of truth for a natural language. See for example Davidson (1967).

subject's thought determines its extension.[19] The upshot may be surprising—indeed it is not clear whether Segal himself recognises this implication of his view—but it is an implication of the view nonetheless. As such, sectarian internalism stops the argument from parameter proliferation by rejecting the claim that the truth value of a non-indexical thought is relative to any parameter, even to a world.[20]

4. *De re* thought revisited

In Chapter 3, Yli-Vakkuri and Hawthorne make a suggestion, on behalf of the sectarian internalist, that bears a *prima facie* similarity to my own suggestion concerning the treatment of indexical examples outlined in section 2, but which differs from the suggestion concerning the treatment of non-indexical examples I make in section 3. Yli-Vakkuri and Hawthorne appeal to Kaplan's treatment of *de re* belief ascriptions and suggest, as a first step, that the sectarian internalist treat all occurrences of singular terms in 'that'-clauses as *de re*. Consider the belief ascription given in (6):

(6) Kit believes that Aristotle was a philosopher.

According to Kaplan, the logical form of the sentence in (6) can be represented as (7) [21]:

(7) $(\exists\alpha)(R(\alpha, \text{Aristotle, Kit}) \wedge B(\text{Kit}, \ulcorner\alpha \text{ was a philosopher}\urcorner))$

According to Kaplan, then, *de re* belief is a 2-place relation (denoted by 'B') between a thinker and a proposition (the content of which is indicated by corner quotes). In this sense, 'belief' is unambiguous, denoting a 2-place relation both in the *de re* case and in the *de dicto* case. This lack of ambiguity in the notion of belief marks a difference between Kaplan's treatment of *de re* beliefs on the one hand, and those of Quine and Burge on the other. What makes *de re* belief *de re*, according to Kaplan, is, instead, a distinctive conceptual element involved in the relevant proposition. In the *de re* case, the proposition to which the thinker stands in the belief relation contains one or more individual concepts (an example of which is denoted in (7) by 'α') which are the mental correlates of names and which function as names *of* objects *for* the thinker. *De re* belief, then, is a 2-place relation that invokes one or more 3-

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[19] See Segal (2000).
[20] See Sawyer (2018a) for the development of this line of thought.
[21] Kaplan (1968).

place relations (denoted by 'R') between an individual concept, an object and a thinker. These 3-place relations are absent in the *de dicto* case.

Kaplan's framework allows for *Doppelgänger*-related thoughts, as Kaplan himself recognised. Consider the belief ascription given in (8):

(8) Twin Kit believes that Twin Aristotle was a philosopher.

According to Kaplan, the logical form of the sentence in (8) can be represented as (9):

(9) $(\exists\alpha)(R(\alpha,$ Twin Aristotle, Twin Kit$) \wedge B($Twin Kit, ⌜α was a philosopher⌝$))$

Kit's *de re* belief may be a true belief about Aristotle, while Twin Kit's belief is a false belief about Twin Aristotle. But the propositional content of each belief is identical, as shown by the identity of what appears in the corner quotes in (7) and (9). Thus Kit and Twin Kit's thoughts are *Doppelgänger*-related.

Kaplan's account does, then, appear to provide a possible line of defence against the parameter proliferation argument at least when attention is restricted to examples involving 'that'-clauses containing singular terms. For present purposes, I set aside critical discussion of Kaplan's account on its own terms.[22] I also set aside the concern that Yli-Vakkuri and Hawthorne's suggestion that the sectarian internalist adopt Kaplan's account for *all* examples involving 'that'-clauses containing singular terms rides rough-shod over Kaplan's intention to distinguish belief-ascriptions that license exportation and belief-ascriptions that do not.[23] This is because there is a more pressing, deep-seated concern with their suggestion. In order for the account to provide a possible line of defence against the externalist implications of the Twin Earth thought experiments, Kaplan's account of *de re* belief attributions would need to be accepted not just for beliefs attributable by sentences involving singular terms, but for beliefs attributable by any sentence containing a term that is considered 'Twin-Earthable'. This is recognised by Yli-Vakkuri and Hawthorne, who move from what they call 'The Singular Term Exportation Rule' (p. 105), which generates Kaplan's *de re* account of belief-

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[22] Kaplan's account is motivated by an apparent failure in Quine's account to accommodate the phenomenon of suspended belief. Burge (1977b) has since shown that the phenomenon of suspended belief can in fact be accommodated within a Quinean framework. As a result, it would seem that Kaplan's own view lacks motivation.

[23] See for example Kaplan's discussion of the dubbing in absentia of the first child born in the twenty-second century as 'Newman 1'. Kaplan (1968: 200-1).

sentences containing singular terms, to what they call 'The Generalized Exportation Rule' (p. 107), which is intended to generate a *de re* account of belief-sentences generally. But given the wide variety of terms that are considered 'Twin-Earthable', this move effectively eradicates the distinction between indexical and non-indexical thought by rendering all thought *de re*.[24] As such, if the sectarian internalist were to accept Yli-Vakkuri and Hawthorne's proposal, they would have to relinquish the intuitive thesis that content determines extension across the board.[25] The sectarian internalist position outlined in the previous section, in contrast, is able to preserve the distinction between indexical and non-indexical thought, and hence able to preserve the plausible thesis that content determines extension for a wide range of thought constituents. It is also a position that is actually held by a proponent of sectarian internalism in the literature. It involves rejecting the existence of *Doppelgänger*-related non-indexical thoughts, of course, but the standard interpretation of Twin Earth-style thought experiments for non-indexical thoughts is, in any case, an externalist interpretation. As such, it is unclear why the internalist would want to retain it. Once the distinction between indexical and non-indexical thought is recognised, it is clear that the sectarian internalist need not resort to such a radical stance as the one proposed by Yli-Vakkuri and Hawthorne.

I finish this section with a brief comment. Although Yli-Vakkuri and Hawthorne do not take the difficulties facing sectarian internalism to be 'completely decisive' (p. 98), they say that they are 'extremely pessimistic that the challenges to sectarian internalism [they] discuss can be met' (p. 98). They take the most pressing such challenge to come from an argument by Yli-Vakkuri that 'the combination of sectarian internalism and the broadness of truth is inconsistent with the commonplace that, necessarily, a belief is true iff its … content is true' (p. 98).[26] I have argued against this alleged 'commonplace' elsewhere on the grounds that it, too, fails to distinguish indexical from non-indexical thought.[27] I will not rehearse the argument here.

5. Conclusion

In this paper, I have raised a concern about the notion of content employed in Yli-Vakkuri and Hawthorne's book. Specifically, if the content of an indexical thought is understood as a

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[24] Yli-Vakkuri and Hawthorne themselves note the wide-ranging application of the Twin Earth considerations. See for example p. 11.
[25] The thesis that content determines extension appears in formal terms as 'Extension-Determination' (p. 98).
[26] Yli-Vakkuri (2018).
[27] Sawyer (2018a).

truth-evaluable proposition, the fact that it is not narrow is unsurprising and largely irrelevant to the nature of distinctively mental phenomena. Yli-Vakkuri and Hawthorne are not alone in conflating the content of indexical and non-indexical thought. Indeed, such a conflation is relatively commonplace in the literature on anti-individualism, where discussion vacillates back and forth between examples involving names and examples involving predicates. There are obvious parallels between the two. But there are also significant differences. A proper understanding of mental phenomena requires close attention to the distinction between *de re* and *de dicto* thought as well as to the role of *de re* thought in our mental lives.[28]

References

Burge, T. 1973. "Reference and Proper Names." *The Journal of Philosophy*, 70: 425-39.

Burge, T. 1977a. "Belief *De Re*." *The Journal of Philosophy,* 74 (6): 338-62.

Burge, T. 1977b. "Kaplan, Quine, and Suspended Belief." *Philosophical Studies,* 31: 197-203.

Burge, T. 1979. "Individualism and the Mental." *Midwest Studies in Philosophy*, 14: 73-122.

Burge, T. 1980. "The Content of Propositional Attitudes." *Noûs*, 14 (1): 53-8.

Burge, T. 1982. "Other Bodies." In *Thought and Object,* edited by A. Woodfield, 97-120. Oxford: Oxford University Press. Reprinted in T. Burge. 2007. *Foundations of Mind,* 82-99. Oxford: Oxford University Press.

Burge, T. 2007. "Postscript to 'Belief *De Re*'." In his *Foundations of Mind,* 65-81. Oxford: Oxford University Press.

Chalmers, D. 2003. "The Nature of Narrow Content." *Philosophical Issues,* 13: 46-66.

Davidson, D. 1967. "Truth and Meaning." *Synthese,* 17: 304-23.

Fodor, J. 1987. *Psychosemantics.* Cambridge, MA: MIT Press.

Kaplan, D. 1968. "Quantifying In." *Synthese*, 19 (1): 178-214.

Kaplan, D. 1989a. "Demonstratives." In *Themes from Kaplan,* edited by J. Almog, J. Perry & H. Wettstein, 481-563. Oxford: Oxford University Press.

Kaplan, D. 1989b. "Afterthoughts." In *Themes from Kaplan,* edited by J. Almog, J. Perry & H. Wettstein, 565-614. Oxford: Oxford University Press.

Lewis, D. 1979. "Attitudes *De Dicto* and *De Se.* " *Philosophical Review,* 88: 513-43.

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[28] Burge himself distinguishes the two quite clearly, including at the beginning of his two most widely-cited papers in favour of anti-individualism: Burge (1979, 1982). Moreover, he maintains that anti-individualism itself is grounded in the fundamentally predicational nature of *de re* thought, which he takes to be the primary notion. It is ironic, then, that so many discussions of anti-individualism fail to acknowledge its distinctive, irreducible nature.

Loar, B. 1988. "Social Content and Psychological Content." In *Contents of Thought,* edited by R. Grimm & D. Merrill, 99-110. Tucson. AZ: University of Arizona Press.

McDowell, J. 1977. "On the Sense and Reference of a Proper Name." *Mind,* 86 (342): 159-85.

McDowell, J. 1984. "*De Re* Senses." *The Philosophical Quarterly*, 34 (136): 283-94.

Noonan, H. W. 1986. "Russellian Thoughts and Methodological Solipsism." In *Language, Mind and Logic*, edited by J. Butterfield, 67-90. Cambridge, Cambridge University Press.

Noonan, H. W. 1991. "Object-Dependent Thoughts and Psychological Redundancy." *Analysis*, 51: 1-9.

Perry, J. 1979. "The Problem of the Essential Indexical." *Noûs*, 13 (1): 3-21.

Putnam, H. 1975. "The Meaning of 'Meaning'." *Minnesota Studies in the Philosophy of Science*, 7: 131-93.

Quine, W.V.O. 1956. "Quantifiers and Propositional Attitudes." *Journal of Philosophy*, 53 (5): 177-87.

Sawyer, S. 2007. "There is No Viable Notion of Narrow Content." In *Contemporary Debates in Philosophy of Mind,* edited by B. McLaughlin & J. Cohen, 20-34. Oxford: Blackwell Publishers Ltd..

Sawyer, S. 2010. "The Modified Predicate Theory of Proper Names." In *New Waves in Philosophy of Language*, edited by S. Sawyer: 206-25. New York: Palgrave MacMillan Press.

Sawyer, S. 2018a. "Is There a Deductive Argument for Semantic Externalism? Reply to Yli-Vakkuri." *Analysis,* 78 (4): 675-81.

Sawyer, S. 2018b. Review of Yli-Vakkuri and Hawthorne's *Narrow Content. Mind* (forthcoming).

Segal, G. 1989. "The Return of the Individual." *Mind*, 98: 39-57.

Yli-Vakkuri, J. 2018. "Semantic Externalism without Thought Experiments." *Analysis,* 78: 81-89.

Yli-Vakkuri, J. & Hawthorne, J. 2018. *Narrow Content*. Oxford: Oxford University Press.