Epistemically Rigid Expressions

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In this essay I propose an understanding of Chalmers' notion of epistemic rigidity. This notion applies to *expressions*, and my central assumption is that we can individuate these entities according to the *common currency conception* of words proposed by Kaplan. If we do so, I argue, we can say that an expression is epistemically rigid if for fully competent (i.e. correct and nondeferential) uses of it, one can know its extension a priori.

Introduction

In *Constructing the World*, David Chalmers introduces the notions of *epistemic rigidity*, *metaphysical rigidity* and *super-rigidity*. These notions of rigidity amount to different ways of saying that some expression *must mean* this or that. Super-Rigidity is the conjunction of the other two, and Chalmers considers it to be an alternative to semantic neutrality that is "both more fundamental and easier to grasp" (CTW: 370, n.5). The function of neutrality – or super-rigidity, respectively – in Chalmers' philosophy is, that such expressions can be used to describe *scenarios* – ways the world could be – without forbidding anything to be the case just by the way the descriptive terms contingently work. This is of some technical importance, for Chalmers uses scenarios to explain primary intensions.

All of these notions are applied to *expressions*. So epistemic rigidity is one topic that forces us to take a closer look at the meaning of 'expression'.[1] In this paper I will present two possible understandings of Chalmers' definition, stemming from a

1 Note that what I say about expressions might perhaps be relevant for other topics as well, but I won't consider in this paper any other application.

Kaplanian distinction of two ways the term 'word' can be understood: one that sees expressions essentially as letter strings and individuates them by an orthographic conception; and one that sees expressions as abstract objects – *continunants* – to which a linguistic community is referring and contributing. While we do not need to decide for one of these metaphysical theories, it does matter with which of them we work for understanding rigidity. My aim is to show that if we individuate expressions as continuants, we can equate epistemic rigidity of the expression as a whole with epistemic rigidity of any correct and nondeferential use of it.

I will start with giving the definition of the terms and presenting an initial understanding of epistemic rigidity. I will then seek a better understanding of its definition and for this reason introduce the Kaplanian distinction mentioned above. Next, I will deal with deference, which has to considered seperately for understanding epistemic rigidity. Finally, I will offer a possible clarification of the definition of epistemic rigidity.

1 Several rigidities

Chalmers defines the three notions of rigidity as follows:

> "[A]n epistemically rigid expression [is] one whose extension can be known a priori." (CTW: 367)[2]
>
> "[A]n expression is [metaphysically] rigid iff it picks out the same entity in all metaphysically possible worlds." (CTW: 366)
>
> "When an expression is epistemically rigid and also metaphysically rigid *de jure* (roughly, one can know a priori that it is metaphysically rigid), we can say that it is *super-rigid*." (CTW: 369)[3]

These are employed in (at least) two theses:

> "*Apriority/Necessity Thesis*: If a sentence S contains only super-rigid expressions, S is apriori iff S is necessary." (CTW: 377)[4]
>
> "*Super-Rigid Scrutability*: All truths are scrutable from super-rigid truths [true sentences containing only super-rigid expressions] and indexical truths." (ibid., see also 239)

2 There is another, perhaps intuitively useful characterization: "To a first approximation an epistemically rigid expression picks out the same thing in every scenario." (CTW: 366) However, this characterization is, as Chalmers notes, in danger of circularity if we define the "picking out" with the help of a *canonical description* consisting of super-rigid terms. The alternative is to think of scenarios as centred possible worlds, which again has some problems. So I will stick to the defintion given above.

3 This notion is credited to Martine Nida-Rümelin, who defines it as having a "constant two-dimensional function" (Nida-Rümelin 2003: 350).

4 Here's an interesting way of analyzing this (of which I am not fully convinced): Usually semantic ascent destroys apriority, while necessity is preserved. But epistemic rigidity has the characteristic feature that apriority is preserved in semantic ascent. Therefore apriority and necessity coincide for sentences containing only super-rigid expressions.

I will not discuss either of these theses here, but I wish to emphasize that if they turn out to be true, this shall be of philosophical interest. However, in this essay I am just concerned with a clarification of the notion of epistemic rigidity involved. This might possibly lead to a better understanding of the two theses, too.

Metaphysical rigidity is, what Kripke just calls "rigidity", a result of giving a semantics of possible worlds in which – according to Chalmers – the 'worlds' are considered as counterfactual possibilities. We have to describe these worlds using all our expressions in the way we are actually using them. I take Chalmers notion to be the uncontroversial result of re-introducing this concept in a framework of two-dimensional semantics.

2 Epistemic Rigidity

Here, I will discuss the notion of epistemic rigidity. Before discussing its defintion in greater detail, let me first give an idea of what kind of expressions are supposed to be epistemically rigid.[5] Chalmers presents 'zero' as a paradigmatic example of an epistemically rigid expression (cf. CTW: 367). 'Zero' refers to a certain number, and having understood what 'zero' means we will ascribe a certain extension to this term – say, an abstractum. We are then not declined to change this ascription due to any empirical information whatsoever – even if I note that I am a brain in a vat, I still seem to know what zero is. Likewise, the predicate '... is zero' may be understood as a singleton, containing zero, so this predicate will be epistemically rigid, too.[6]

But if the predicate '... is a philosopher' is a set, its extension will not be accessible a priori, since we do not know a priori of any individual that she is a philosopher. On the other hand the term 'philosopher' can be understood as referring to something different: a concept, an attribute or something like this. If this is the case, it seems *prima facie* possible that this expression is epistemically rigid. If I understand the concept, I know "what makes a philosopher a philosopher". So despite not knowing any philosopher-persons I could nonetheless be able to say what the extension of 'philosopher' is.

What about 'unicorn'? For the reasons above, '... is a unicorn' is non-rigid – we do not know a priori whether there are any unicorns. However, one might claim that 'unicorn' is rigid in the way 'philosopher' is. But contrary to 'philosopher', 'unicorn' should be thought of as the attribute of belonging to a certain biological species. As in the case of 'water', it will be an empirical question what constitutes this species. If unicorns turn out to lay eggs and so on, they may be some kind of birds. So in the way we usually use 'unicorn', we are unable to know a priori

5 All of the examples in these paragraphs may be attacked – especially the way they are presented here is debateable. Roughly, the problem is that we have to exclude uses of these expressions that are incorrect or deferential. This will be discussed at some length later, for now these examples are just supposed to allow an intial understanding.

6 One may argue (as Julian does in this reader) that the predicate is not metaphysically rigid *de jure*, but merely *de facto*, which would make it non-super-rigid, but epistemically rigid.

what attribute this is. Of course, some strange biologist may use 'unicorn' as a term for a well-defined biological species – rejecting to call any egg-laying unicorn-look-alikes 'unicorn'. I think this use is deviant from our natural language, which will force us to ignore the use of 'unicorn' by this biologist, as we shall see later. The unicorn-case is similar to the well-known twin earth cases, which demonstrate that we do not know a priori what 'water' refers to.

I now turn to the definition of epistemic rigidity, which is reductive and employs three important notions: (a) 'expression', (b) 'extension' and (c) 'to be able to know something a priori'. Epistemic rigidity is the key ingredient to super-rigidity, for these rigidities will coincide in almost any case.[7]

The latter, (c), is a very important notion in Chalmers' philosophy and its definition seems quite basic: something can be known a priori iff it can be known independent of experience. Chalmers also introduces the concept of the *ideal thinker*, who can perform any kind of intellectual process, however complex. This allows a further step: something can be known a priori iff the ideal thinker knows it with justification independent of experience (cf. NES: 65-67). An important qualification is that while experience must not play a justificatory role for a sentence to be a priori, it may play an enabling role – for example because possession of the concept of 'red' is solely acquired by experience (cf. CTW: 189).

The notion of an *extension* (b) is a standard notion in philosophy of language. Chalmers writes:

> "The simplest aspect of an expression's meaning is its *extension*. We can stipulate that the extension of a sentence is its truth-value, and that the extension of a singular term is its referent. The extension of other expressions can be seen as associated entities that contribute to the truth-value of a sentence in a manner broadly analogous to the way in which the referent of a singular term contributes to the truth-value of a sentence." (SI: 135, see also CTW: 470)

Though this isn't the most precise possible clarification, I think that this should suffice to get a grip on what kind of entities extensions are. Chalmers doesn't want to presuppose a particular theory about what kind of expressions have what kind of extensions. He mentions some obvious candidates for extensions of subsentential expressions: individuals, classes, kinds and properties (cf. NES: 81).[8]

The notion I wish to highlight in this paper is that of an *expression* (a). This will demand some elaboration.

7 Chalmers discusses an exception in which there is a manipulation of scope with the help of the word 'actually', such that a sentence is true in all scenarios (for scenarios are considered *as actual*, so the word 'actually' has no effect) but false in some possible world, because these are considered *counterfactually*, so 'P' and 'actually P' are no longer equivalent. I'm not entirely convinced that this has to be accepted by possible world semantics.

8 In this place Chalmers also discusses extensions for scenarios. As I am working with the notion of epistemic rigidity that does not involve scenarios, I will skip this part.

3 Expressions

In order to understand what epistemic rigidity is, we need to unterstand of what entity it is an attribute.[9] Chalmers derives the meaning of the noun 'expression' (as similar to 'term') from the relation of expression (as in "the picture expresses anger"). He thereby states that utterances are essentially linked to their speaker's thought, if they are to mean anything at all. He then generalizes in some cases from expression-tokens to expression-types, but it is not made explicit exactly how this is to work out. Exploring possible readings or variants of this will be my main issue here.

Grounding the substantive 'expression' in the relation of expression, Chalmers contrues it as a relation between utterances and mental states. He does not give a definition, but he demands that if the relation holds, both relata must have the same truth-value. This notion excludes cases in which utterances express thoughts that the speaker is not actually thinking (cf. CTW: 73-4 and NES: 66). By this stipulation I can refer to the Montblanc using the expression 'the world's highest mountain', if I am convinced that the Montblanc is in fact the world's highest mountain.[10] Expressions in the "term-ish" sense would then be concrete utterances that are related to mental states which both relate to their common statement's truth value in the same way.

Chalmers distinguishes expression types from expression tokens. In the same manner he distinguishes types and tokens of sentences, which is natural, as he conceives of sentences as complex expressions. Sentence tokens are (at least initially) what epistemic possibility and apriority apply to (cf. NES: 63, 67).[11] Intuitively, an expression token is a particular utterance (or possible utterance) at a certain time by a certain speaker etc., while an expression type is what tokens standing in the sameness-relation essentially have in common. But the latter is very unsatisfactory, for it will not clarify the question whether two expression tokens belong to the same type or not. A theory about what expressions essentially are would be very helpful – or at least a way of individuating them sensibly. Not only is this important to understand what rigidity is all about, but it is also crucial to see which statements (in the preliminary type-sense) are a priori.

For the plausibly most basic kind of expressions – *words* – David Kaplan of-

9 What I say about expression will extend to metaphysical rigidity and super-rigidity, too; otherwise we cannot make sense of super-rigidity.

10 This is counterintuitive. Stating this is of course not an objection against defining 'expression' this way as it is a technical term here. Furthermore he explicitly allows for weaker notions of expression.

11 However, sentences containing only epistemically invariant expressions have a special status. An expression is invariant iff there are no competent utterances of them in different contexts that "support differences in apriority" (NES: 67). Unsurprisingly, apriority will apply to types of these sentences as well. Furthermore, these sentences are used for an epistemic construction of scenarios: They are the key feature of what Chalmer calls an "ideal language": A language consisting only of invariant expressions and allowing for sentences of infinite length (cf. NES: 75). This construction of scenarios then will clearly not allow for apriority to be explained in terms of "verification by all scenarios", for the notion of apriority is already presupposed in the notion of epistemic invariance.

fers two possible theories (which will naturally extend to complex expressions) in his 1990 paper *Words*. The first one is commonplace, the second one is more philosophically sophisticated; Kaplan wishes to advocate the latter theory.

The first theory is supposed to offer the least problematic understanding of the type/token distinction regarding words:

> "The token/type model best fits what I call the *orthographic* conception of a word, the typesetter's conception. According to this conception, expressions of the language consist of strings of atoms called 'letters', certain strings form words. The letters are abstract entities whose tokens, for the typesetter, are individual pieces of type." (Kaplan 1990: 98)

This model cannot, as Kaplan emphasizes, cope with the fact that 'color' and 'colour' seem to be different writings of the same word. However, it seems to me that this is not a deep philosophical problem[12] and I don't want to argue against using this model for some (other) purposes.[13] Quite to the contrary, I think that the orthographic conception fits best our use of the word 'word' in natural language.[14]

However, Kaplan offers a second model, which – for some philosophical purposes – seems useful to me, too:

> "I propose a quite different model according to which utterances and inscriptions are *stages* of words, which are the *continuants* made up of these interpersonal stages along with some more mysterious *intra*personal stages. I want us to give up the token/type model in favor of a stage/continuant model. This is not, I think, simply another way of doing the metaphysics of types under the old token/type conception, but a quite different conception of the fundamental elements of language. I think of my conception of a word as a *naturalistic* conception. Because the interpersonal transmission of words is so central to my conception, I adopt a phrase of Kripke's, and I call my notion the *Common Currency* conception of a word." (ibid.)

According to Kaplan, words are made out in a manner that is reminiscent of the Kripkean theory of names: baptisms and causal links are paradigmatic factors, but he can allow for more complex linguistic 'rules' in the background. Orthographic attributes (as well as other kinds of resemblance) are only relevant in an indirect way – natural languages (contingently) tend to usually avoid othographically indistinguishable expressions, for they cause confusion. One disadvantage of this is

12 A natural way of dealing with it would be appealing to resemblance – this is what Kaplan himself mentions (but harshly criticizes) later in his paper (cf. Kaplan 1990: 106).

13 John Hawthorne and Ernest Lepore argue similarily (though they are more cautious admitting this theory is any good) in their paper *On Words*. They also raise objections against Kaplan's view that I will not be discussing here because I think they don't threaten my point. They formulate a theory of their own, tellingly called "abstracta-articulations-theory" that perhaps can do the same job as well but seems more metaphysically loaded to me – for they subscribe to what they call the *Coincidence Constraint* (cf. Hawthorne & Lepore 2011: 459): two utterances may count as utterances of different words though they do not differ in sound, shape or language community.

14 One important addition will be the fact, that words don't need to be letter strings, but may also be spoken and will then essentially be individuated by their phonetic shape (cf. Hawthorne & Lepore 2011: 449).

immidiately apparent: while orthographic attributes are easy to spot, the common currency conception cannot individuate expressions at the first sight; there will usually be need for a closer look at the behaviour of many speakers before we can say if two stages belong to the same continuant or not.[15] So if we make use of this conception, we will often be in need of explanation and sometimes lack the linguistic resources to give a good one. But I think this cannot be a categorical objection against the common currency conception; it still seems to make sense.

Kaplan pretty much condemns the orthographic onception of words, but I do not wish to share this radical conclusion. My point is: the term 'word' – and similarily the term 'expression' – can be understood in two ways, depending on which of the two Kaplanian models one is having in mind. First, if one advocates the orthographic conception, one will think of expressions as entities that are written and spoken a certain way, and this will be the criterion of their identity. What a given expression means then will not depend on a feature intrinsic to it, since the expression is – roughly speaking – just a string of letters. Regarding meaning, one will have to refer to either additional rules concerning the use of the expression in a language community or a more subjective sort of speaker meaning.

Second, if one has the common currency conception in mind, things look different. Here the history of an expression will be highly relevant to questions about identity (cf. Kaplan 1990: 100-6). Utterances will have to be linked causally in an appropriate way for identity of expressions. For example, ambiguous letter strings will often be treated as different words (cf. Kaplan 1990: 100). A good illustration of this can be drawn from one of Chalmers' own examples: The statement "Bill is William" may express a priori knowledge for one speaker, while it does not for another one, although both are competent (cf. NES: 67). This is due to the fact that the first speaker is using 'Bill' as an abbreviation for 'William', while the second is not. On the common currency view, this will be due to the fact that for the first speaker both names in the sentence "Bill is William" are stages of the same continuant, while for the second speaker they are not.[16]

15 One example that illustrates this problem might be the following: Chalmers uses the expression 'zombie' for physical duplicates of us that differ only insofar as they do not have any (non-physical) experiences. But I know other people that consider it to be essential to zombies that they eat brains; they would rather be willing to accept brain-eating zombies who do have experience. (And it seems like a completely different third use is present in the Cranberries-song.) The Kaplanian view allows us to claim that there are two epressions 'zombie' (Chalmers-style zombies and brain-eating zombies), but we cannot just claim this without giving any independent reasons (this will be discussed under 'Possible objections'). Perhaps Chalmers introduced a new expression (that was alluding to an existent one for reasons of coolness) when first stating his zombie-argument. But we might also wish to say that there is just one expression 'zombie' and that perhaps Chalmers is not talking about "real zombies".

16 It is less clear whether this is the right strategy to deal with Chalmers second example for context-dependence of a priori relations: Chalmers claims that "If someone is bald, they have no hair" will be a priori in some context, where in others it is not. Given the common currency view it seems possible to me that this claim is rejected – some people just have not got the word 'bald' right. (I seem not to be getting the point of the example anyway: Is it that 'bald' and 'no hair' can both be understood as referring only to the head or to the whole body, or is it that people with a bit of hair on the head are sometimes also called

It is a consequence of the common currency view that allowing for conceptual change (and we *should* allow for this) we can only be talking of the extension of a continuant at a given time: the continuant stays the same over time, but its substance can be heavily changing (cf. Kaplan 1990: 101). The classic example for this (due to Gareth Evans) is 'Madagascar', which was used as a name of a part of the African continent 1000 years ago. Then Marco Polo misapplied it to an island, but this application became very common and the old application ultimately vanished, so that nowadays we can clearly say that an utterance of 'Madagascar' refers to an island. All uses of the expression are temporal, so we can still say that a 12th century utterance of 'Madagascar' referred to mainland. But today, all uses – as much as *the expression itself* – refer to an island. So let us say that an expression's continuant refers to x at t if all uses at t of this continuant refer to x. This is not a disadvantage of this conception since we have to make the same addition for orthographic types if we want to claim that 'Madagascar'-utterances thousand years ago and now belong to the same type (which is natural on the understanding of the orthographic conception presented).

It seems to me that there is a way of talking about stages and continuants using the terms 'token' and 'type'.[17] I am not entirely sure to what extent Chalmers might not even be having something like this in mind.[18] In what follows I will discuss the results for epistemic rigidity of individuating expressions according to both ways concluding that perhaps Chalmers *should* be casting the definition of epistemic rigidity in terms of the common currency conception.

Given the orthographic conception, there are two general options what 'expression' can be referring to. First it might be that epistemic rigidity is an attribute of expression tokens. But if we are able to use a given expression with an arbitrary primary intension, then there will either be no epistemically rigid expressions at all or there will be (possible) tokens of epistemically rigid uses for every expression type – at least some which represent a brute misuse of the linguistic expression.[19] Or second, epistemic rigidity might be applied to expression types. But since there will also be a possible token of every expression that is such that the extension

'bald'?)

17 Also, Kaplan remarks: "I don't mind if you want to continue to call utterances and inscriptions 'tokens', although I'd prefer 'utterance' or 'inscription', as long as we do not get caught up in the metaphysics of the token/type model." (Kaplan 1990: 101)

18 There is at least some tension between his use of the type/token distinction and the common currency conception. He states clearly that epistemic intensions are usually associated with expression tokens, while only allowing for them to be associated with expression types in the case of complete invariance of the expression (cf. SI: 174), which seems odd if there were a somewhat clear-cut continuant. In *Constructing the World* he suggests that I may use expressions in an arbitrary way, e.g. contrary to what the language clearly demands me to do (cf. CTW: 280-1, which is discussed below). Kaplan would describe these cases as uses of two different expressions that just share their othographic attributes.

19 To make this point in another way: It seems that epistemic rigidity has to be concerned with linguistic meaning (something "common to all tokens of an expression type" (SI: 142)) of an expression if it is to serve the purposes of Super-Rigid Scrutability and the Aprioriity/Necessity Thesis. But the extension is not common to all tokens (says Chalmers, cf. ibid.). So we have to state the condition more carefully.

cannot be known a priori, there will be no type of expression whose tokens all satisfy the criterion for epistemic rigidity. The most plausible initial reading seems to be that an expression is epistemically rigid iff some token that represents a *correct* use of this expression type fits the criterion. Here something more might be demanded of these tokens; I will return to this later.

If we wish to define epistemic rigidity of expressions as presented by the common currency view, we can proceed in a somewhat more straightforward way. We would clearly have to apply epistemic rigidity to the continuant expression at a given time, such that an expression is epistemically rigid at t iff its continuant fits the criterion at t. Misuses would not be appropriate representaions of the continuant, and speakers that actually use an epistemically rigid expression without being in a position to know its extension a priori could be doing so due to the division of linguistic labour, without affecting rigidity.[20]

4 Semantic deference

But wait: can we really know a priori what expressions like 'zero' refer to? Don't we need familiarity with the term to be able to do so? True, the fact that we are able to use the expression correctly depends on our having learned the language and having done elementary math at school – but these seem to be clear examples of what Chalmers calls enablers above. But even further it seems that what 'zero' refers to also depends on the more professional mathematicians. For example, I think 'zero' and 'number' are both plausible candidates for epistemically rigid expressions. But there might be someone using both terms correctly without being herself sure about the truth of "zero is a number". On the other hand, professional mathematicians will be sure about this.

What happens here can be described as a case of *semantic deference*; i.e. the non-mathematicians are deferring to the mathematicians. The standard examples for this are from Tyler Burge's *Individualism and the Mental*. Although it is somewhat debateable how widespread this phenomenon is, its existence is uncontroversial.

The example above indicates that 'zero' can be used with semantic deference – and there are reasons to think that (almost) any expression *can* be used deferentially – for example Chalmers mentions, that expressions can be used by speakers intending their meaning to be fixed by "The most common use of this expression". (E21: 3). I wish to emphasize, that these uses are often linguistically correct (as contrary e.g. to using 'donkey' referring to what ordinary speakers refer to with 'zero'). Nonetheless deferential uses of expressions will never fit the criterion for epistemic rigidity – which means that for figuring out whether a certain expression type/continuant is epistemically rigid we cannot simply look at *some* corrrect use of it.

How are we to understand deference? I quote Chalmers position:

> "I will say that an expression is used *deferentially* by a speaker when the referent of the speaker's use of the expression depends on how others in the

20 Of course another possible reason will be the fact that they are non-ideal thinkers.

> linguistic community use the expression. [...] It is certainly possible to use an expression nondeferentially: one can coin an entirely new term (e.g. 'glub'), deliberately use an existing term with a new meaning (e.g. stipulate that 'horse' will pick out the number two), or use a term with its correct meaning but insensitively to the use of others (e.g., stipulate that 'bachelor' picks out unmarried men, regardless of how others use the term). [...] One can test for deference [...] by asking: if it were to turn out that others use the term 'bachelor' for something other than unmarried males, would the speaker's utterance of 'Bachelors are unmarried men' be true or false? [...] Whether an expression is used deferentially or nondeferentially plausibly depends on the intentions and/or dispositions of the speaker[.]" (CTW: 280-1)

On Chalmers' view, one can use an expression in a way that is deviant from the rules of language – this results from seeing expressions as a relation between thoughts and utterances that guarantees sameness of truth-value. If I honestly use 'horse' and 'two' co-extensionally, other speakers will certainly frown upon this, but according to Chalmers my utterances of these expressions will be referring to the same thing.[21] The occurence of deference as understood by Chalmers will always depend on a speaker's (sometimes subconscious) readiness to let the language community influence the choice of the referent of the expression. This is formally represented in the primary intension of the expression.

The quote above quite clearly applies deference to expression tokens (or certain ways of using an expression type). We have seen that apparently any expression *can* be used deferentially. On the other hand, the examples in the quote above are supposed to show that it is also always possible to use any expression nondeferentially. If we accept Chalmers third example, it may be added that there are even always ways to use any expression *correctly* with and without deference.[22]

If an expression token represents a deferential use, it will not fit the criterion for epistemic rigidity. If a speaker's use of the expression makes the referent dependent on the language community, one will need empirical information to evualuate what this use of the expression actually refers to, so one does not know this a priori.[23]

21 This explains why Chalmers names the phenomenon in question "deference", but avoids using the – also quite common – term "social (semantic) externalism". The latter term suggests that if I try to use 'horse' as picking out a number, I will nonetheless be referring to horses because the meaning of the term 'horse' is external to me. If one prefers the social externalist view, one will perhaps reject the last two examples of how expressions can be used nondeferentially. But I think the first example (introducing a new term) should be accepted even by advocates of this more Burgean view, for it is implausible that an expression's referent can depend on its use by others if no one else is using the term yet. So at least this example should suffice to show that not *every* expression token is deferential.

22 This will require a strong reading of the third example: Any expression can be used with its correct meaning but insensitively to the use of others. Perhaps there are good counterexamples (e.g. terms whose meaning is something intrinsically dependent on the actual behaviour of speakers) that would support a reading according to which this is at least possible for some expressions.

23 It is implausible to claim that the empirical information in some case is just an enabler of the a priori knowledge. This is most clear in the case of a different speaker, who uses the expression himself differently, evaluates the first speaker's use of it – and the definition of epistemic rigidity (for good reasons) demands, that the extension can be known a priori not

Accordingly Chalmers will be using the notion of epistemic rigidity in a way that gestures towards certain correct uses of the expression type that do not defer.

Let me try to give an illustration of this: concerning the term 'transcendental', many people are deferring to Kant – they wish to use this expression roughly the way Kant used it (of course, 'Kant' in the sense of: the person who wrote the critiques). Kant himself seems to have referred to some property more directly – he had something[24] specific in mind, and if other people had used this term quite differently, he would at best have admitted that there is another legitimate way of using this term (and perhaps that he had awkwardly chosen an ambiguos term that allows for misunderstandings of his philosophy).

But here, I think, an advantage of individuating expressions according to the common currency conception gets visible: If most other philosophers in Kant's time had used 'transcendental' in some very different way (which even Kant could not rule out a priori), it would seem plausible to say: here we seem to have two different terms. In the history of these terms, there might either be two different origins, or (more probably) a point of division into two continuants. This division might initially have been due to a misunderstanding, which became so common that the term was ultimately applicable with the new meaning. It might also have been due to some kind of concept-reformatory project, as sometimes happens in philosophy. Only if one party is clearly still trying to use the same expression as the other but yet clearly means it differently, we would say that one party is misusing the expression (in most cases, the minority). In this case we would say that they are using the term incorrectly and are incompetent with the term.[25]

5 More definitions of epistemic rigidity

Before I am able to give a definition of epistemic rigidity that incorporates the points made above, I have to say a word about correctness and competent speakers. *Correctness* is, perhaps, an intuitive notion. Nonetheless I recognize that one may object to many positions in philosophy of language that appealing to correctness is somewhat problematic and unclear. I here have in mind a notion of correctness that is stronger than just demanding semantic correctness in a sense in which one can correctly use 'gross' as 'more than clear'. An indicator seems to be that other speakers of the language use it the same way or accept my way of using it. Much of

just by the speaker herself.

24 According to Soames, this "something" is best understood as a universal (cf. Soames forthcoming: 4).

25 A tricky problem for the othographic understanding might arise from expression types that can be correctly used in two different ways, such that for both uses the speaker knows the extension a priori but these two extensions are not identical. Then these expressions would count as epistemically rigid on the orthographic conception, but would pose counterexamples to Super-Rigid Scrutability and the Apriority/Necessity Thesis. These cases would have to be explicitly excluded and a disambiguation strategy (as discussed below) would have to be applied to such expressions in order to construe two more suitable, artificial expressions. For the common currency view this problem does not arise, for we can plausibly spot two different expressions here.

our understanding of correctness will depend on the choice of sides e.g. concerning the semantic/pragmatic distinction. I will avoid this discussion here and stay with an intuitive notion hoping that no unexpected problems arise from it.

Given correctness, we may also wish to talk about linguistic *competence*. We can understand two senses of competence as follows: a speaker is competent in the weak sense if she is able to use a given expression correctly, and a speaker is competent in a strong sense if she is able to use a given expression correctly and nondeferentially. The latter roughly matches Chalmers' understanding of a fully competent utterance as a correct and nondeferential use of expressions (cf. CTW: 74). I shall say that a speaker is fully competent with an expression if all her uses of this expressions are fully competent (i.e. are correct and nondeferential).[26]

So making the points of the last two section more explicit, I hope the following is an appropriate re-statement of the definition of epistemic rigidity as intended by Chalmers:

> An expression type e is epistemically rigid at t iff a fully competent speaker can know the extension of some correct use at t of e a priori.

This definition is compatible with the orthographic conception, but I made clear that it is not the optimal solution to make use of it.[27] If we now go ahead and individuate expressions as Kaplan wants us to do, we can use a shorter definition:

> An expression e is epistemically rigid at t iff a fully competent speaker can know e's extension at t a priori.[28]

6 Possible objections

I will close with discussing five possible objections that seem to be at hand.

26 This understanding may seem counterintuitive, for we would perhaps wish to say say that someone is a fully competent speaker regarding a certain expression even if she were intentionally using it incorrectly, e.g. to irritate someone. But first, this notion is here used as a technical term and second, I think on Chalmers view of expressions there are no intentional misuses of expressions, since the speaker herself in fact knows what her utterance *really* means and still accepts this as the meaning. Humpty-Dumpty, on the other hand, seems to be an incompetent speaker because of his incompetence on a meta-level.

27 This definition, if we assume the orthographic conception, will lead to trouble because it allows for expressions to be epistemically rigid whose extension can be known a priori only in some contexts. We might substitute 'some' by 'all' to avoid this, but then any expression that can be used deferentially will be non-rigid. Facing this we might additionally subsitute 'correct' by 'fully competent', but this will need the presupposition that any expression can be used nondeferentially – wich I consider to be problematic. (If we do not assume so, expressions that are always used deferentially will be epistemically rigid, which is absurd.)

28 If we prefer talking more figuratively, we might also appeal to the 'ideal thinker' – as used by Chalmers concerning the apriori – and to the 'ideal speaker' – someone fully competent with all expressions at any time. Then, for any expression type e and any point of time t:

> Iff an ideal thinker and speaker knows the extension of e at t independent of experience, e is epistemically rigid at t.

6.1 Context-dependence

One might first object that there are expressions that have to be used in different ways because they mean something different in different contexts. The ideal speaker will then, of course, do so. But if in some contexts they are such that their extension can be known a priori and in others they are not, does this expression pass the test or not? (According to the first definition in the last section we would have to say that the expression is in fact rigid, but this seems faulty.)

Chalmers considers as examples of such expressions the Bill/William case and the case of "If someone is bald, they have no hair" (NES: 67). As above, I think the first case can be solved by individuating expressions by the common currency view. The second is very unclear to me, and I tend to reject it (i.e. claim that this sentence is never a priori, if used correctly). One might also wonder if there are cases similar to 'Neptune', for which the associated intension (in fact both intensions) change over time. But we have relativized epistemic rigidity to a point of time. Conceptual change can never be ruled out a priori, so if someone is fully competent at t_1, this is no guarantee that she will still be so at t_2.

6.2 Ambiguity

Secondly, it may be objected that many expressions are ambiguous, so they cannot be rigid. The reply is the same: ambiguous expressions are, according to the way of individuating expressions I am proposing, quite often different expressions. The common currency view allows that there is *the* meaning of an expression at a given point of time in much more cases than the orthographic conception does.[29] There are ambiguous expressions, but only in cases where, for example, someone intentionally created an ambiguous term or the like.

The strategy of dealing with context-dependence and ambiguity by separating two expressions has something in common with Chalmers' strategy to deal with these cases (that apply to orthographic expressions, too):

> "[For natural kind terms] there will often be an invariant term in the vicinity. In the case of theoretical terms, for example, these might be used by different speakers with somewhat different theoretical reference-fixers, but we can stipulate an invariant term in the vicinity with a fixed theoretical reference-fixer. Something similar applies to most context-dependent terms. For most context-dependent terms in a used context, there will be a possible term that is not context-dependent in this way. For example, if 'know' is context-dependent because of variation in standards, there will be possible terms such as '$\text{know}_{\text{high}}$' and '$\text{know}_{\text{low}}$' that are not context-dependent in this way." (NES: 75)

So Chalmers wants (roughly) to disambiguate existing terms in order to get certain artificial invariant terms. This suggest that he is adhering to the orthographic

29 As above there is no need to claim that this is the only reasonable way of individuating expressions. So Chalmers statement that there is in general "no need to settle the question [whether there] is *the* meaning or content of an expression" (FS: 104) is not contradicted hereby – I am not trying to establish a metaphysical theory of expressions here.

conception of terms. Adherents of the common currency view should rather claim that there already are different expressions at work, that are often confused because they are spelled and spoken the same way and share part of their extension. Of course, in cases of varying standards we do not have to say that there are different expressions at work. Here, the more plausible analysis seems to be that there is a concept of knowledge demanding no specific standard of justification, but rather a justification that is somewhat "appropriate to the case".[30]

So there are two ways to ensure that there are sufficient expressions for Super-Rigid Scrutability: First we might say that analyzing expressions that are actually used, we might often find that they are not epistemically rigid, but that there are ways to change the underlying concept such that we can "build" an epistemically rigid expression eligible for scrutability. Or second, we can accommodate the common currency conception and then claim that although there are a lot of verbal items that look like epistemically non-rigid expressions at first sight, these will sometimes turn out to be different, context-independent expressions some of which are already epistemically rigid. The latter view has the appeal that it is not constructing artificial expressions and instead works with existing terms in just the way they actually function. Though this is clearly no knock-down point, I think it makes better sense of the move from concepts or tokens to language as a whole. So prima facie we are better off individuating expressions as continuants.

6.3 Vagueness

I take it that many expressions (like 'heap', 'bald', 'great') are inherently vague, which may roughly mean that they do not have a clearly delimited extension. These expressions should better count as epistemically non-rigid, for it would be odd to say that anyone knows their extension. This goes likewise for both understandings presented above, and I think it is alright.

But the common currency conception seems to allow for another kind of vagueness: a vagueness about the point of time at which the meaning of an expression changes. The correct meaning is evaluated by looking at the causal history, but the details must be far more complex than indicated above. It will often be hard to spot a point of time at which there is an event of conceptual change. For example, in the case of 'Madagascar' it seems to me that Marco Polo was clearly *mis*applying the term when using it for an island. His crew, that copied this use, seem to have been doing so, too. But after that, there was no authority that declared a change of meaning of 'Madagascar'. Nonetheless the meaning *has* changed, but apparently this was a long process rather than a temporally located turn-over. Also, there might have been a period during which one part of the language community was using the expression one way, while another part was using it the other way.

Here two replies are possible: first, this vagueness might be denied postulating a sort of epistemicism about meaning. Second, it might be noted that during times of conceptual change sometimes the continuant "splits" and later reunites

30 This will mean that 'know' is not epistemically rigid, even if its extension were a pure universal. But I see no reason why it should be.

(in the common currency conception of personal identity, something like this is called 'fission' and 'fusion'). I favor the second reply, which draws a picture of the situation the following way: When Marco Polo returned, a lot of people were taking him as an authority for information about distant parts of the world. Telling his story, he was then in the position to baptize the island he saw as 'Madagascar'. He thereby generated a new expression, that orthographically matched the existing term 'Madagascar'. For a longer period of time then, there were two expressions in play, until this perhaps caused too much confusion. Ultimately, the first use was given up – and if this happened intentionally to allow for the Marco-Polo-use, this may be described as a reunion.[31]

6.4 Phenomenal expressions

There is a worry whether phenomenal expressions can be rigid.[32] The private phenomenal concept of 'red' is something whose extension I am clearly able to spot a priori. Meanwhile, the expression 'red' as used by me and other members of my language community is used deferentially *by all the speakers* actually belonging to the community. If a random speaker finds out (however this may be possible) that all the others are having a different phenomenal impression of tomatoes and sunsets (say, the one she is having of grass and trees), she will no longer wish to refer to her impressions caused by tomatoes using the term 'red'. So no actual speaker can know the extension of 'red' a priori. Anyway, I think that this reflects a general sceptical trouble about phenomenal properties. Chalmers insists that it is sufficient that *if we knew* what impressions are caused by tomatoes to all the others, *we would also know* what 'red' refers to. I may add that even in this case the phenomenal property associated with 'red' (if any) is already part of the continuant even if nobody knows this. We can also stipulate that the ideal speaker knows about things nobody else knows (including phenomenal truths), so the test above can still be used (cf. II: 7). So expressions of phenomenal properties are not excluded from epistemic rigidity in principle.

6.5 Meaning explained by meaning?

While the orthographic conception individuates expressions independent of any semantic attribute, this may seem less clear for the common currency conception. One might take it to claim that it ultimately individuates expressions by their meaning.[33] In one sense, this is exactly what the theory aims to do. It tries

31 I note that this reply is not entirely clear, for it does not state any conditions under which someone is able to create a new expression rather than simply misusing an existent one. It seems to me that we can only judge about this retrospectively, but this of course is unsatisfactory.

32 If phenomenal properties are fundamental, then there have to be super-rigid (and therefore epistemically rigid) expressions for them in order to allow for Super-Rigid Scrutability.

33 Which is different from individuating expressions by their extension. In the case of indexicals this would clearly be nonesense.

to get rid of trouble stemming from ambiguous and perhaps context-dependent expressions by claiming they are in fact distinct expressions.

That is not to say that these expressions are distinct *because* they mean something different. If differences in meaning were the criterion for distinctness of expressions, it would lead us into deep trouble. It would then seem very hard to explain how anyone can use an expression incorrectly, since there would always be the possibility of appealing to a different expression that is such that a given use can be said to be correct. On this way of seeing it, it seems hard to understand how a common meaning gets off the ground in the first place.

So it is important to highlight that common currency does not work this way. Rather, as alluded to in the Kaplan quote, it appeals to things like baptisms, causal chains and plausibly certain metalinguistic principles. I admit that it is not a well worked-out theory and I have been timid about getting concrete. Nonetheless I think it's the best thing to work with and that linguistic elaboration can help us to clarify the principles underlying it.

Conclusion

I have tried to work out an understanding of epistemic rigidity. This notion is important in Chalmers philosophy, since he can make his talk of 'scenarios' plausible only if he offers an understanding of what precisely these are. One way of doing so is defining them as given by canonical descriptions, given in a language that is eligible for describing any epistemic possibility – for which this language must be clear independent of any empirical matter. It is plausible that this role can be played by super-rigid expressions.

In order to understand these expressions I have made a Kaplanian distinction between different ways of individuating expressions. I have further argued that for epistemic rigidity it is best to use the common currency conception of expressions, understanding them as continuants. This allows us to define it straightforwardly and it avoids trouble with context-dependendent expressions.

To make sense of super-rigidity, it will be required to apply the same individuation of expressions to all forms of rigidity. It remains an open question how we are to individuate expressions in other places. For Chalmers philosophy, I think, this question will be relevant at places where we move from individual uses, or tokens, to a more general concept of expression like types. So perhaps we can also make sense of the common currency conception for the field of attitude ascriptions – but well, this is clearly beyond the scope of this paper.

References

[Burge 1979] Tyler Burge, *Individualism and the Mental*, in: *Midwest Studies in Philosophy* 4 (1979), pp. 73-121.

[Hawthorne & Lepore 2011] John Hawthorne and Ernest Lepore, *On Words*, in: *Journal of Philosophy* 108 (2011), pp.447-485.

[Nida-Rümelin 2003] Martine Nida-Rümelin, *Phänomenale Begriffe*, in: Ulrike Haas-Spohn (ed.), *Intentionalität zwischen Subjektivität und Weltbezug*, Mentis 2003, pp. 321-368.

[Soames forthcoming] Scott Soames, *Epistemic Intensions*, forthcoming in *Philosophy and Phenomenological Research*, online at `dornsife.usc.edu/assets/sites/678/docs/Forthcoming\_Publications/Epistemic_Intensions.pdf` (accessed 09.03.2014).

[Kaplan 1990] David Kaplan, *Words*, in: *Proceedings of the Aristotelian Society, Supplemantary Volumes* 64 (1990), pp. 93-119.

Works by David Chalmers cited

[CTW] *Constructing the World*, Oxford 2012.

[E21] *Constructing the World, Twenty-First Excursus: Twin-Earthability and Internalism*, online at `http://consc.net/books/ctw/extended.html` (accessed 06.03.2014).

[FS] *The Foundations of Two-Dimensional Semantics*, in: Manuel Garcia-Carpintero and Josep Macia (eds.), *Two-Dimensional Semantics: Foundations and Applications*, Oxford 2006, pp. 55-140.

[II] *Intensions and Indeterminacy: Reply to Soames, Turner, and Wilson*, forthcoming in *Philosophy and Phenomenological Research*, online at `consc.net/papers/intensions.pdf` (accessed 09.03.2014).

[NES] *The Nature of Epistemic Space*, in: Andy Egan and Brian Weatherson (eds.), *Epistemic Modality*, Oxford 2011, pp. 60-107.

[SI] *On Sense and Intension*, in: *Philosophical Perspectives* 16 (2002), pp. 135-182.