

## Conceivability and *De Re* Modal Knowledge

**Abstract:** The paper presents a dilemma for both epistemic and non-epistemic versions of conceivability-based accounts of modal knowledge. On the one horn, non-epistemic accounts do not elucidate the essentialist knowledge they would be committed to. On the other, epistemic accounts do not elucidate everyday life *de re* modal knowledge. In neither case, therefore, do conceivability accounts elucidate *de re* modal knowledge.

### 1. Assumptions and aim

If *essentialism* is true, the set of an object's properties divides into two: the sub-set of its accidental properties, and its complementary sub-set of essential properties. *Pan-essentialism* claims that the sub-set of accidental properties is always empty. For the majority of recent and contemporary essentialists, however, neither of the two sub-sets is ever empty. At the other end of the spectrum, *extreme haecceitism* claims that the sub-set of essential properties is always empty. We have to distinguish *extreme haecceitists* from *anti-essentialists*. The former do not deny *de re* modality but ascribe *all* possibility-properties to *each* entity. By contrast, anti-essentialists deny *de re* modality altogether.

The paper proceeds under two assumptions. First, and because arguing for it would take me too far from my primary concern here, I assume the existence *de re* modality—my primary concern being its epistemology. Although this is not universally accepted,<sup>1</sup> most contemporary modal metaphysicians agree that objects have modal properties independently of the way they are thought about.<sup>2</sup>

The second assumption is that we have *de re* modal knowledge. Once we assume *de re* modality, this is a minimal assumption.<sup>3</sup> I know that the pen on my desk could be on top of the pile of papers, rather than next to it. If someone challenged this piece of knowledge, I would move the pen and place it on top of the pile of papers. As

Williamson notes, “actuality is often the best argument for possibility” (2007, 164). The interesting *de re* possibility knowledge, however, as Hale emphasizes (2004, 1), is the kind we cannot derive from actuality in this way, and we do seem to have knowledge of non-actualized possibilities as well. (I have not moved the pen. Still, I know it could be somewhere else.) Commitment to *interesting de re* modal knowledge comes in degrees. One can be moderate and commit oneself to just “easy” or “everyday life” *de re* modal knowledge, like knowledge of:

- (1) It is possible for the pen to be on the pile of papers
- (2) It is possible for me to break my left arm.

One can be less moderate, however, and claim also knowledge of essential properties—e.g., knowledge that a particular table is essentially made of wood—or, more generally, knowledge of essentialist principles—like *Essentiality of Origin* or *Essentiality of Kind*.<sup>4</sup>

Everyone would probably agree that our epistemology of modality should elucidate, at least, the knowledge we are committed to. Unfortunately, however, the answer to the question about our commitments depends on who you ask. While it is safe to say that only radical (modal) skeptics will deny the existence of “easy” *de re* modal knowledge, it is not agreed across the board that we have essentialist knowledge. Because of this, I shall suggest (*drME*) as something that everyone committed to *de re* modal knowledge can accept:

- (*drME*) An epistemology of *de re* modality must account for “easy” *de re* modal knowledge and, *if* essentialist truths and other “remote” modal facts are also knowable, it must account for their knowledge (or knowability) as well.

This paper argues that *conceivability-based accounts* do not meet the demands of (*drME*).<sup>5</sup> To do so, the paper is structured as follows. In §2, I use Yablo’s and Chalmers’ rationalist accounts to present the main differences between epistemic and non-epistemic conceivability-based accounts. I then present (§3) the so-called ‘standard objection’ to conceivability accounts and use it to formulate a first dilemma that I shall differentiate from my main criticism here—presented also in the form of a dilemma. In §§4-5, I spell out the source of the second dilemma, which is then formulated in §6. In §7, I show how Williamson’s non-rationalist account—whether constructed as epistemic or non-epistemic—suffers from this problem as well.<sup>6</sup> In §8,

I elaborate further on the consequences of the dilemma to show that neither version of conceivability can meet the demands of (*dr*ME). In §9, I consider some objections and replies.

## 2. Epistemic vs. non-epistemic conceivability-based accounts

Endorsement of some *conceivability/possibility thesis*—holding that conceivability is a good epistemic guide to possibility—is what unifies conceivability-based accounts. One of the main differences between Yablo’s and Chalmers’ is that, whereas Yablo’s is an *epistemic* account, Chalmers’ is *non-epistemic*. According to an epistemic account, “whether or not something is conceivable for a thinker depends on what the thinker knows or believes, or what concepts or modes of presentation he has available or is using to think about the situation” (Worley 2003, 17). By contrast, according to a non-epistemic account, “to be conceivable is to be true in a possible world, [...] where the possibility is determined by conceptual coherence or incoherence, and thought in terms of an ideal conceiver” (Geirsson 2005, 290). We should therefore distinguish between the notions of *conceivability* that are at work in each account. According to Yablo:

Something *p* is conceivable<sub>Y</sub> for a subject *S* if *S* can imagine a situation that *S* takes to verify *p*.

Yablo’s notion (see (Yablo 1993, 29)) is epistemic because it is relativized, on the one hand, to *S*’s state of knowledge and, on the other, to *S*’s conceptual resources plus rational capacities. It is, therefore, *subject-relative*. The Greeks, according to Yablo, could conceive<sub>Y</sub> of water being other than H<sub>2</sub>O (due to their lack of chemical concepts and their lack of knowledge that water is H<sub>2</sub>O). However, *water is not H<sub>2</sub>O* is not conceivable<sub>Y</sub> for a contemporary subject who knows that water is H<sub>2</sub>O (the idea is that *that* would require conceiving of a contradiction: H<sub>2</sub>O not being H<sub>2</sub>O).

Unlike Yablo’s, Chalmers’ notion is non-epistemic. Non-epistemic notions use *ideal conceivers*. As indicated above, there are two parameters to which conceivability<sub>Y</sub> is relativized: one, conceptual resources and cognitive capacities and, the other, states of knowledge (which include empirical non-modal knowledge like *that water is H<sub>2</sub>O*). Let me then put labels on two relevant idealizations we can construct from conceivability<sub>Y</sub>. I will use ‘Primary Ideal Conceivability’ (for short, ‘conceivability<sub>PIC</sub>’ and cognates) to refer to the kind of conceivability which results

from idealizing only the parameter about conceptual resources plus cognitive capacities and which ignores any knowledge that goes beyond what is implied by the possession of concepts. I will use ‘Secondary Ideal Conceivability’ (or ‘conceivability<sub>SIC</sub>’) to refer to Primary Ideal Conceivability supplemented with all empirical non-modal knowledge one might have about the actual world. It is no accident that I am using Chalmers’ terminology. Indeed, Chalmers uses these two sorts of *ideal conceivers*: the *primary ideal conceiver (PIC)* enjoys unlimited conceptual resources and cognitive capacities; the *secondary ideal conceiver (SIC)* is a *PIC* who *also* knows all empirical non-modal facts about the actual world (see (Chalmers 2002, 159)).

Two comments are in order. First, why are we restricting the *SIC*’s empirical knowledge to *non-modal* knowledge? As Chalmers says, “to avoid trivializing the link between conceivability and possibility” (Chalmers 2002, 159). Second, one would roughly say that the *PIC* tracks *conceptual (or epistemic)* modality whereas the *SIC* tracks *metaphysical* modality. There is no risk in sticking to this rough idea as long as we keep in mind that, according to at least some two-dimensionalists, there is a sense—at the level of *primary intensions*—in which epistemic possibility implies metaphysical possibility and, therefore, the *PIC* is not fully disconnected from the metaphysical realm.<sup>7</sup> Since two-dimensionalism is not essential to non-epistemic accounts, I will stick for now to this rough idea and will be more precise when necessary.

Given the infallible powers of the *PIC* and the *SIC*, it is intended that:

- Something *p* is conceivable<sub>SIC</sub> iff there is a metaphysical world where *p*
- Something *p* is conceivable<sub>PIC</sub> iff there is an epistemic world where *p*.

The three notions of conceivability seen here generate correspondingly different *conceivability/possibility theses* and in this paper I shall evaluate the extent to which they can help us in elucidating *de re* modal knowledge:

- (YABLO): Conceivability<sub>Y</sub> is a guide to metaphysical possibility.
- (CHALMERS<sub>PIC</sub>): Conceivability<sub>PIC</sub> is a guide to epistemic possibility.
- (CHALMERS<sub>SIC</sub>): Conceivability<sub>SIC</sub> is a guide to metaphysical possibility.

### 3. The Standard Objection and a first dilemma

The following is an example of how we would arrive at possibility-knowledge—where the specific notions of conceivability and possibility should be linked by one of the theses above.

(1) Zombies—physical duplicates of human beings that lack any phenomenal experience—are conceivable.

(2) If p is conceivable, then p is possible

Therefore,

(3) Zombies are possible.

In arguing for possibilities, therefore, two steps are necessary:

One argues that some state of affairs is conceivable, and from there one concludes that this state of affairs is possible. (Chalmers 2002, 146)

Epistemic access to conceivability facts is therefore crucial to the first step (to establish (1)-type premises), and a *conceivability/possibility thesis*, as in (2), is crucial to the second step, to reach modal conclusions of type (3). As a result, conceivability accounts must have the following two virtues:

(i) Conceivability facts are *epistemically accessible*.

(ii) The specific notion of *conceivability* entails possibility.

According to what is known as ‘the Standard Objection’, conceivability accounts do not satisfy (ii).<sup>8</sup> Worley (2003), however, has convincingly argued that, whereas epistemic accounts are susceptible to the Standard Objection, this is not so for non-epistemic accounts. However, she continues, non-epistemic accounts fail to satisfy (i). Worley’s objection to non-epistemic accounts, together with the *Standard Objection* (to epistemic ones), generates, therefore, the following dilemma:

(D) If conceivability is epistemic, it does not satisfy (ii). If, alternatively, it is non-epistemic, it does not satisfy (i). Since conceivability is either epistemic or non-epistemic, no notion of conceivability satisfies both desiderata.

We can grant that epistemic accounts satisfy (i) since, for this, we only need to grant that it is normally transparent to a subject whether she is imagining a situation that

“she takes to verify p”. Let us see why, however, they do not satisfy (ii). Crudely, on an epistemic account, someone who does not know that water is H<sub>2</sub>O can conceive<sub>Y</sub> of water being other than H<sub>2</sub>O, despite the fact that this is (metaphysically) impossible. Consequently, epistemic accounts do not have available (2)-type premises. The opposite applies for non-epistemic accounts. As illustrated above, non-epistemic notions of conceivability are defined in a way that secures the satisfaction of (ii). This, however, comes at the cost of not satisfying desideratum (i). Worley argues that, since human beings cannot be assumed to be ideal conceivers, the maneuver of using an idealized notion of conceivability is defective when our aim is to elucidate *human* access to modal truth. Furthermore, epistemic and non-epistemic notions of conceivability are known not to be coextensive. This, together with the fact that non-epistemic accounts have not elucidated (even less guaranteed) *human* epistemic access to *ideal* conceivability facts, suffices to say that non-epistemic accounts do not have available (1)-type premises.

This dilemma is pressing, but not devastating. There are two ways one can try to escape (D). At an *individual* level, it would suffice to argue that we, as we are, are *local* ideal conceivers (i.e., that some contents are simple enough for us, as we are, to have sufficiently reliable modal judgments about them). Still at an *individual* level, someone like Yablo—working with an epistemic notion—could require his *locally* ideal conceivers not to give any role to their *lack* of knowledge. Let me illustrate why this would help, to some extent: The Greeks could find it conceivable that Hesperus is not Phosphorus because of their *lack of knowledge* that Hesperus is Phosphorus. A Greek who would have behaved as a *local* SIC would rather have required *knowledge that Hesperus is not Phosphorus* for him to judge it conceivable that *Hesperus is not Phosphorus*. Given that this knowledge is impossible—for its negation is true—that *Hesperus is not Phosphorus* will never be conceivable if we do not allow *lack of knowledge* to play a role in *conceivability*.

At a *community* level, one can say that the state of knowledge that is relevant to define *conceivability* is the big union (BU) of the states of knowledge of the individuals of the *conceiving community*. Arguably, (BU) is much closer to the SIC’s state of knowledge, and even more and more so as time passes. Therefore, at this community level, epistemic conceivability can be said to approximate non-epistemic conceivability. Admittedly, this response requires a notion of conceivability different

from the three above (for it must be defined in terms of a collection of individuals instead of single subjects). Yet, there is no principled reason why it could not be a workable notion. Furthermore, suitably combining *first-hand* conceivability knowledge and *deferential* conceivability knowledge could be argued to generate possibility knowledge that, if not infallible, would be reliable enough.

I think that responses along these lines are possible and that, to some extent, they have already been started.<sup>9</sup> Let us grant, then, that the first manifestation of (D) is solvable. In this paper, I am concerned with another dilemma which, despite the fact that it can be worded exactly like (D), has a completely different source, and I shall make the difference between the two dilemmas salient in due course. By way of anticipation, I shall argue that, even if humans could be said to behave (individually or collectively) like *SIC*'s, conceivability—or, at any rate, conceivability *alone*—cannot be our route to *de re* modal knowledge. Some preliminaries on modal error are needed before we look at the second dilemma.

#### 4. Modal error and essentialist principles

Modal rationalists—in line with their rationalism—identify only two sources of modal error. Either we are unaware of empirical-but-non-modal truths or we are unaware of *a priori* (possible modal) truths.<sup>10</sup> If we are conceivabilists, Yablo's model of modal error will help explain what has gone wrong:<sup>11</sup>

- (a)  $q$ ;
- (b) if  $q$  then  $\Box\neg p$ ; and
- (c) that I find  $p$  conceivable is explained by my unawareness or denial that (a) and/or my unawareness or denial that (b).

Let me illustrate how the model works. Assume that Essentiality of Origins ('EO' for short) is true, and let  $a$  be a human being actually originated from  $b$  and  $c$ , sperm and egg cell respectively (in symbols, ' $Oa,b,c$ '). Suppose that we find it conceivable that  $Oa,d,e$  (where  $d$  and  $e$  are different from  $b$  and  $c$ ). Let  $q$  now be the non-modal proposition that  $Oa,b,c$ , and  $p$  the non-modal proposition that  $Oa,d,e$ . By finding it conceivable that  $a$  originates from  $d$  and  $e$ , we would infer (erroneously, by the first assumption) that  $\Diamond Oa,d,e$ . According to the model of modal error, our modal mistake would be explained by—has its source in—either our unawareness or denial of the non-modal fact that  $Oa,b,c$ , and/or our unawareness or denial that this non-modal fact

implies the modal one that  $\Box\neg Oa,d,e$ . Sometimes, therefore, the source of modal error is our unawareness or denial of conditionals of the form of (b)—if  $q$  then  $\Box\neg p$ .

According to the conceivabilist, the conceivability method allows us to establish these kinds of modal conditionals—continuing with the example:

$$(*) \quad Oa,b,c \rightarrow \Box\neg Oa,d,e$$

How, then, do we know conditionals like (\*)? Following Kripke (1972/1980), Yablo suggests that pretending the antecedent ( $Oa,b,c$ ) we will find  $Oa,d,e$  inconceivable-under-the-scope-of-the-pretense:

How do I test the credibility of the conditional claim that if  $q$  then  $p$  is impossible? [...] Suppose I want to decide whether, if salt = sodium, it is impossible for the ocean to contain more sodium than salt. Pretending that salt = sodium, I find it inconceivable that the ocean should contain these in different amounts; abandoning the pretense, I endorse the conditional. (Yablo 1993, footnote 66)

Although this quotation involves a conditional with an identity statement in the antecedent, it is to be expected that the procedure will be the same for the case of (\*); notice indeed the generality of Yablo's question at the beginning of the quote. This is also the procedure that, less explicitly, Kripke uses in *Naming and Necessity* as a first step towards establishing (EO). In order to establish (\*), therefore, we first pretend that  $Oa,b,c$  and see whether, under the scope of that pretense, we find it conceivable that  $Oa,d,e$ . If we find it inconceivable (and, as a consequence, impossible-under-the-scope-of-the-pretense), we abandon the pretense and endorse the intended conditional ( $Oa,b,c \rightarrow \Box\neg Oa,d,e$ ).<sup>12</sup>

Kripke (1972/1980) suggested further how we can establish *general* principles like (EO). Roughly, we would infer them from the truth of conditionals like (\*), which we would have previously established by this conceivability exercise:<sup>13</sup>

This is fairly explicit in Kripke's discussions [...] of the essentiality of origins (pp.111-14); while instances are used as examples, Kripke is clearly arguing for the general principles. (Sidelle 1989, 35)

To know (EO), therefore, we would first establish conditionals like (\*), which would ground instances of (EO), like ( $Oa,b,c \rightarrow \Box Oa,b,c$ ), which, in turn, would ground (EO):  $x,y,z(Ox,y,z \rightarrow \Box Ox,y,z)$ .

Three questions must be addressed at this point:

- What is involved in the pretense-game?
- What does it take for something to be inconceivable?
- Will the method yield the right results?

I will address the first two questions here and the third one in the next section, using the answers to the first two. What, then, is involved in the pretense-game? A theory-neutral answer, suggested by Dowell (2008), is that, when we pretend  $p$ , we (try to) put ourselves in a state that mimics the belief that  $p$ . This is a good approximate answer, but not informative enough. The following is an urgent question. Suppose that a subject  $S$  is trying to put herself in a state that mimics the belief that  $p$ , and suppose further that  $S$ 's doxastic box includes beliefs that are incompatible with  $p$ . While pretending that  $p$ , must  $S$  *imagine away* those beliefs? Answers to this question will be less theory-neutral than Dowell's. One might be inclined to think that the obvious answer is 'yes'. However, while Yablo and Chalmers might agree with it, we will see later (when discussing (HF) in §7) that Williamson's answer is 'not always'. For current purposes, compatibly with Dowell's views, it suffices to understand pretenses as the kind of imaginative exercises that is involved in counterfactual evaluation (see (Williamson 2007, Ch.5)).<sup>14</sup>

As for the second question—what does it take for something to be inconceivable?—it is a recurrent thought in conceivability approaches that the conceivability of  $p$  depends either on there being no contradiction in  $p$  (for a non-epistemic account) or on the subject not being aware of any contradiction in  $p$  (for an epistemic account). However, this is still too ambiguous because what the relevant kind of contradiction is depends on the technical notion of conceivability that is at work in each case. The relevant options, however, are two: metaphysical contradiction (something is metaphysically contradictory iff it contradicts metaphysical laws) or conceptual contradiction (in the standard sense). Arguably, these contradictions are, in conjunction with some auxiliary premises, equivalent to logical contradictions. This, as we will see in §7, is more explicit in Williamson (2007). Still, the  $p$ 's need not be logically contradictory themselves and, therefore, I will continue to speak of metaphysical and conceptual contradictions.

The contradiction relevant to conceivability<sub>SIC</sub> is the metaphysical one. The contradiction relevant to conceivability<sub>PIC</sub> is the conceptual one. In the case of conceivability<sub>Y</sub>, it can be either, depending on the subject, as the following explains. According to Yablo's epistemic notion, a subject, S, who does not know that water is H<sub>2</sub>O, could conceive<sub>Y</sub> of water being other than H<sub>2</sub>O. It follows from here that there is no (standard) conceptual contradiction in the thought that *water is not H<sub>2</sub>O*. The lack of *conceptual* contradiction, therefore, will help explain, in those cases, the conceivability<sub>Y</sub> of *water is not H<sub>2</sub>O*. However, according to Yablo, a subject knowing that water is H<sub>2</sub>O will find that content metaphysically contradictory, even if not conceptually so. For this subject, awareness of the *metaphysical* contradiction is sufficient for inconceivability<sub>Y</sub>.

Briefly stated, therefore, this is what it takes for something to be inconceivable: The lack of conceptual contradiction is necessary and sufficient for conceivability<sub>PIC</sub>. The lack of metaphysical contradiction is necessary and sufficient for conceivability<sub>SIC</sub>. For Yablo's non-ideal conceivers, *awareness* of conceptual contradiction is sufficient for inconceivability and so is *awareness* of metaphysical contradiction (as in *water is not H<sub>2</sub>O*); similarly, *unawareness* of contradiction of *both* kinds is necessary for conceivability. (*Unawareness* here can have different sources: unawareness due to the lack of contradiction, unawareness due to not being PIC's or SIC's, and unawareness due to not having even considered the relevant content. When a relevant content is being considered, unawareness of contradiction of both kinds is necessary *and sufficient* for conceivability.)<sup>15</sup>

## 5. The source of a non-standard objection

Recall that the paper assumes *de re* modality. For the sake of discussion and ease of exposition, I will also assume (EO). This is allowed here because the conclusion I am aiming at is that the suggested conceivability method cannot establish essentialist truths and, generalizing from (EO), I will argue for this by showing that, if there are any such truths, we could establish them neither with epistemic nor with non-epistemic notions of conceivability.

Because of the essentialist assumption, the argument is not targeting conceivabilists who are also *extreme-haecceitists*, if there are any. According to Extreme Haecceitism (EH), chairs could be numbers. Since (EH) is unpopular even among the friends of *de re* modality, the fact that the argument does not target (EH) is

not, dialectically, especially worrying. If the argument below is correct, even someone like Mackie (2006), who defends a *minimalist essentialism*, should dislike conceivabilism. For, despite the fact that, according to her, there are not many essential properties, there are some nonetheless. If there are some, and because the argument below (which uses (EO) as an assumption) generalizes to any essential property, conceivabilism will not constitute a satisfactory epistemology of *de re* modality.

On the assumption that (EO) is true, then, will the method yield the right results? The method requires that, pretending that  $Oa,b,c$ , we find it inconceivable that  $Oa,d,e$ . That is, under that pretense, we need to find it contradictory that  $Oa,d,e$ . What kind of contradiction are we looking for? It does not really matter how we answer this, since no contradiction, conceptual or metaphysical, will be arrived at—the ultimate conclusion being, therefore, that no matter which notion of conceivability we are working with,  $Oa,d,e$  will be conceivable-under-the-scope-of-the-pretense.

*No conceptual contradiction:* Independently of whether or not  $a$  originates from  $b$  and  $c$ , the proposition (or thought) that  $Oa,d,e$  is not conceptually contradictory. This is agreed across the board, since everyone agrees that  $Oa,d,e$ —like *water is XYZ*—is conceivable<sub>PIC</sub>. In other words, the mere possession of the concepts involved in  $Oa,d,e$  is not sufficient to rule out its truth. Furthermore, even if we pretend (or know) that  $Oa,b,c$ , the content that  $Oa,d,e$  remains conceptually non-contradictory. The reason is that the pretense that  $Oa,b,c$  is not a pretense about conceptual constitutive relations. Instead, it is a pretense of facts about entities at the level of reference that, crucially, and for the reasons above, do not enter the possession conditions for our individual concepts for them.<sup>16</sup> Consequently, if (let us assume) we are already aware of the lack of conceptual contradiction in  $Oa,d,e$ , the mere pretense that  $Oa,b,c$  cannot change this—i.e., that pretense will not force us to *imagine away*, from our doxastic box, *that  $Oa,d,e$  is not conceptually contradictory* (neither will it, therefore, force us to imagine in *that  $Oa,d,e$  is conceptually contradictory*).

It might seem more likely, therefore, that the relevant kind of contradiction is the *metaphysical* one. (For under the current assumption of (EO), the proposition that  $Oa,d,e$  would, under the pretense that  $Oa,b,c$ , contradict the metaphysical law that  $\Box Oa,b,c$ .)

*However, no metaphysical contradiction either:* The pretense that  $Oa,b,c$  is a non-modal one and, in particular, it is different from pretending  $\Box Oa,b,c$  (and it *must* be so; otherwise the method would either overtly beg the question or else establish only the rather trivial conditional:  $\Box Oa,b,c \rightarrow \Box \neg Oa,d,e$ ). This non-modal pretense alone, therefore, cannot reveal (even when under the scope of the pretense) a metaphysical contradiction in  $Oa,d,e$ , since such a non-modal pretense is incapable, by itself, of ruling out metaphysical possibilities. Consequently, that pretense alone will not force us to imagine in *that*  $Oa,d,e$  is metaphysically contradictory.

To clarify this, let me stress that it is not enough that  $(Oa,b,c \wedge Oa,d,e)$  is metaphysically contradictory—which it presumably is. This is not the contradiction we are looking for. It should happen that  $Oa,d,e$  itself is metaphysically contradictory under the mere pretense that  $Oa,b,c$ —which arguably it is not. One can see that it is not by comparing it with the fact that, for strictly analogous reasons, the method also does not establish—correctly, we would say in this case—other conditionals of the form of (b), like:

(\*\*) *If I am sitting, I am necessarily not standing*

(One must be aware that (\*\*) is not: “Necessarily, if I am sitting, I am not standing”.) Plausibly enough, my being seated does not imply that I am necessarily not standing—even when I am sitting I still retain the modal property of *possibly standing*. Therefore, looking back to (b)—if  $q$  then  $\Box \neg p$ —we can say that it is not a contradiction between  $p$  and  $q$  that we should arrive at. This would fatally overgenerate essentialist claims, as the case of (\*\*) illustrates. Rather, we had to arrive at a contradiction in  $p$ , metaphysical or conceptual, under the pretense that  $q$ . However, we have not found *these* kinds of contradictions. As a result, the mere pretense that  $Oa,b,c$  is not enough to find  $Oa,d,e$  inconceivable. This allows us to conclude that none of the three notions of conceivability can establish (\*)— $Oa,b,c \rightarrow \Box \neg Oa,d,e$ —by playing with (non-modal) pretenses. This is the source of the dilemma to be constructed in the next section.

If (EO) were already available as an independent auxiliary premise, however, (\*) could be established with either of conceivability<sub>Y</sub> or conceivability<sub>SIC</sub>. For, in that case, the pretense that  $Oa,b,c$  would amount to the pretense that  $\Box Oa,b,c$  and, under that pretense,  $Oa,d,e$  would indeed be (judged) metaphysically contradictory. However, at this dialectical point, on pain of begging the question, (EO) cannot be

assumed or used. For, for all we have been told, (EO) is supposed to be grounded on the prior availability of particular instances of it (like  $Oa,b,c \rightarrow \Box Oa,b,c$ ) which would in turn be grounded on conditionals like (\*).<sup>17</sup> We could also establish (\*) if, alternatively, we knew that *it is essential to a that she originates from b and c*. Also in this case, however, the problem is that that knowledge is not supposed to be independent of knowledge of (\*).

## 6. A Non-Standard Dilemma

The problem above has been formulated independently of whether the notion of conceivability is epistemic or not. The reason why this could be done is because the use of pretenses is palliative of the (potential) lack of knowledge of the pretended non-modal facts in the antecedent. Someone may not know that water is H<sub>2</sub>O. Provided she possesses the relevant concepts and has sufficient cognitive capacities, however, even Yablo would grant that she is in as good a position as the SIC to know, for instance, that *if water is H<sub>2</sub>O then it is necessarily not XYZ*.<sup>18</sup> Therefore, with respect to the particular method to establish (b)-type conditionals, epistemic and non-epistemic accounts are on a par. (Again, provided we can assume sufficient cognitive capacities and conceptual resources to handle these conditionals, which, in the example at hand, is quite a minimal assumption.) The differences between epistemic and non-epistemic accounts, however, locate them on different horns of the dilemma.

### 6.1. The horn of the dilemma for epistemic accounts

Since  $Oa,d,e$  is conceivable<sub>Y</sub> even under the pretense that  $Oa,b,c$ , Yablo should conclude, after all, that it is possible that  $Oa,d,e$ . For the conceivability<sub>Y</sub> of  $Oa,d,e$  under the pretense that  $Oa,b,c$ —that is, when palliating the epistemic nature of the account—allows us not only to say that (\*) is false but also to establish instead:

$$(*)' \quad Oa,b,c \rightarrow \neg\Box\neg Oa,d,e$$

If, as assumed,  $Oa,b,c$  is actually true, we can discharge the antecedent and claim that *a could originate from d and e*. This is bad for Yablo because it shows that he should after all deny essentialist claims, and this is not his intended conclusion (nor was it Kripke's). In general, and beyond what is Yablo's view with respect to essentialism, the argument gives essentialists (even minimalist ones, like Mackie) a reason not to endorse epistemic conceivability accounts as their epistemology of *de re* modality.

For the argument shows that, if essentialism is true, conceivability<sub>Y</sub> does not entail possibility, and it does not entail it for reasons that have nothing to do with the account being an epistemic one (since, as indicated above, the pretenses are palliative of the potential lack of knowledge). Independently of the “Standard Objection”, therefore, epistemic accounts do not satisfy desideratum (ii), from §3.

In the next sub-section, I shall locate non-epistemic accounts on the other horn of the dilemma. However, if the problem for epistemic accounts is, as suggested, independent of their epistemic nature, how will I be able to do so? The next section is, partly, an answer to this question. To anticipate, I shall qualify the conclusion in this section and say that the problem seen here is independent of the epistemic/non-epistemic nature of the accounts *as we have been induced to think of it*:

(EP-1) If we idealize cognitive capacities plus conceptual resources *and non-modal knowledge*, we overcome the epistemic nature.

The qualified conclusion will then be this: even when idealizing *along the lines of (EP-1)*, conceivability does not entail possibility.

## **6.2. The horn of the dilemma for non-epistemic accounts**

Someone whose conceivability notion is defined in terms of a *SIC* might insist that her relevant notion of conceivability (*conceivable<sub>SIC</sub>*) secures the satisfaction of (ii) because the definition is designed precisely to secure the following extensional equivalence: *p is conceivable<sub>SIC</sub> iff there is a metaphysical world where p*. Consequently, if *Oa,d,e* is indeed not possible, the *SIC* will find it *inconceivable<sub>SIC</sub>*, whether or not she is pretending that *Oa,b,c*. To the extent that non-epistemic accounts secure (ii), however, the *SIC* will turn out to be more harmful than (EP-1) suggests. In a new, more pressing way—which will reveal the real scope of their non-epistemic nature—non-epistemic accounts will fail to satisfy (i). Let us see why.

Assume that (ii) is satisfied. The argument in §5 shows that knowledge (or pretense) of the non-modal fact that *Oa,b,c* is not what is doing the work—this is *not* what makes the *SIC* find *Oa,d,e* *inconceivable<sub>SIC</sub>*. In the absence of essentialist knowledge, pretending merely that *Oa,b,c*—and granting enough conceptual and cognitive capacities—still leaves room for the conceivability of *Oa,d,e*. Only if we already had essentialist knowledge could (b)-type conditionals be established. By our current assumption—the satisfaction of (ii)—therefore, the *SIC* possesses essentialist

knowledge. The problem we noted at the end of §5 is that essentialist knowledge is not supposed to be independent of knowledge of (b)-type conditionals. To avoid begging the question, therefore, the first thing to note is that non-epistemic accounts should deny this dependence claim. Let us assume that this can be done without much problem. The serious problem comes from the fact that, if the *SIC* is to secure the extensionally right results, she must already possess, when engaging in conceivability exercises, essentialist knowledge of some sort. As a result, *contra* (EP-1) and *contra* what Chalmers suggests (2002, 159), my main claim here is that the *SIC* cannot be someone who merely enjoys unlimited conceptual resources and cognitive capacities and possesses all *non-modal* knowledge about the actual world.

(Someone could object at this point that my argument against (EP-1) is not sufficiently strong. *If* concepts somehow encoded *essentialist* truths—for instance, by being part of our concept of *origin* that origins are essential, or by being part of our individual concept for *a* that *a essentially* originates from *b* and *c*—then, an *ideal conceiver* will have access to those essentialist truths and, therefore, she could, with conceivability methods alone, arrive at the right results. I shall address this worry, in the different forms in which it may arise, in §9. For now, let me just note that this is not a way of denying that the *SIC* needs essentialist knowledge, but rather a way of *primitively* equipping her, through concept possession, with the essentialist knowledge she needs. Consequently, while—admittedly—this amounts to saving the *letter* of (EP-1), it does not amount to denying the *spirit* of my main claim here. Until §9, I will ignore this possible move and continue to assume that concepts are not so trivially loaded with essentialist truths.)

There is a tension, therefore, between (EP-1) and the satisfaction of (ii)—that conceivability<sub>SIC</sub> entails possibility. If, following Chalmers, we understand the *SIC* as (EP-1) depicts her, the arguments in §5 and §6.1 show that *Oa,d,e* should turn out to be conceivable<sub>SIC</sub>. In this case, non-epistemic accounts are not non-epistemic enough: certain lacks of knowledge—i.e., lack of essentialist knowledge—could still lead the *SIC* astray. If, by contrast, we follow Chalmers in his suggestion that conceivability<sub>SIC</sub> entails possibility, the epistemic nature is not *suitably* overcome by idealizing in the way (EP-1) suggests. This is how we should conceive of *suitable* ideal conceivers:

(EP-2) If we idealize cognitive capacities and conceptual resources, non-modal knowledge *and essentialist knowledge*, we overcome the epistemic nature.

Once we realize the implications of suitably-non-epistemic accounts, the reason why they do not satisfy (i) is immediate, and more pressing than the reason supporting the first manifestation of (D)—the dilemma in §3. The elucidatory power of non-epistemic accounts is now reduced to the following: The *SIC* obtains modal knowledge by already possessing essentialist knowledge. This comes on top of Worley’s objection (2003) according to which non-epistemic accounts fall short of meeting the challenge that arises for *human* modal knowledge. For now, in order to know whether something is *conceivable<sub>SIC</sub>* or not, we would already need essentialist knowledge. The reason why this is more pressing than Worley’s objection is because elucidating essentialist knowledge was precisely part of the epistemic challenge to be met. In other terms, Worley’s objection amounts to saying that, while non-epistemic accounts *might* elucidate the *SIC*’s modal knowledge, they do not elucidate *human* modal knowledge. The current criticism amounts to saying that non-epistemic accounts do not elucidate the *SIC*’s modal knowledge to begin with—instead, to the extent that they stick to (ii), they just take it for granted. This leaves *human* epistemic access to conceivability facts (desiderata (i) from §3) less explained than ever. The closer the *SIC* is to securing (ii), the further the account is to elucidating modal knowledge *tout court*.

Whether Chalmers himself is an essentialist, and whether he intends conceivability methods to elucidate *de re* modal knowledge are interesting questions which I answer in the affirmative<sup>19</sup> (although there might be room for controversy). The question I am most interested in, however, is whether suitably-non-epistemic accounts (independently of who might endorse one such account) can elucidate essentialist knowledge, and I have argued here for the negative answer.

## **7. Williamson’s conceivability-based account**

So far, I focused only on *rationalist* conceivability accounts. I will now present the reasons why Williamson’s conceivability account, in (Williamson 2007), is not in a better position. There are two main reasons why I treat his separately. First, because his account can be made compatible with both epistemic and non-epistemic versions; and, second, because Williamson’s conceivability method is less general than the one explored in §5—it is, indeed, a particular case of it. One more difference between Williamson’s account and those of Yablo and Chalmers is that, while the latter are conceived as *rationalist* accounts, Williamson’s is not. What follows, therefore, also

supports the claim that the problem explored in this paper is independent of whether the account at hand is a rationalist one or not.

According to Williamson, we know that something,  $p$ , is possible, by knowing that no contradiction follows counterfactually from it. Whether or not something follows counterfactually from  $p$  is decided with the help of the *background knowledge* one has available.<sup>20</sup> I will identify the main differences between Williamson and the rationalists by commenting on these claims:

$$(G) \quad \diamond p \text{ iff } \neg(p \Box \rightarrow \perp)$$

$$(R-1) \quad \neg \diamond p \text{ iff } \begin{array}{l} \text{(i) } \exists q (q \Box \rightarrow (p \Box \rightarrow \perp)), \text{ where } q \text{ is a non-modal} \\ \text{pretense; and} \\ \text{(ii) a } q, \text{ witness of (i), is actually true.} \end{array}$$

$$(R-2) \quad \diamond p \text{ iff } \neg \exists q (q \Box \rightarrow (p \Box \rightarrow \perp)), \text{ provided } q \text{ is a non-} \\ \text{modal pretense.}$$

Although these claims provide truth-conditional equivalences, their right-hand sides enjoy epistemic priority: the associated epistemic thesis is that we know the left-hand sides by knowing the right-hand sides. The right-hand side of (G) provides, ultimately, the conditions for *conceivability*. We have already seen (§4) that, according to Yablo and Chalmers,  $p$  being conceivable depends, to different extents, on there being no contradiction in  $p$ . This is what Williamson offers as well, and he spells out what he means by this with the help of his epistemology of counterfactuals. The epistemic thesis associated to (G) is that *we know that something is possible by knowing that it is conceivable*. The name ‘(G)’, therefore, is due to the fact that (G) is generally accepted (though spelled out in (superficially) different ways).

By contrast, (R-1) and (R-2) are, for all we know, only explicitly endorsed by the rationalists—although not *denied* by Williamson. The right-hand side of (R-1) says that *some actual, pretended, non-modal  $q$  shows  $p$ ’s counterfactual contradictoriness*. Although my arguments above show that we have reasons to doubt it, we have seen that, according to the rationalist conceivabilists, the actuality of  $Oa,b,c$  would rule out the possibility of  $Oa,d,e$ , and that pretending the former should make evident *some* contradiction in the latter.<sup>21</sup> The right-hand side of (R-2) says that no matter what we pretend (provided it is non-modal),  $p$  will not appear to us as being

contradictory. For example, even when we pretend that *my left arm is unbroken*, the content *I break my left arm* will remain non-contradictory.<sup>22</sup>

Let me now explain the similarities and differences between Williamson and the rationalists a bit less crudely. First, they are different with respect to how many routes to *possibility* or *impossibility* they offer, but those routes are not incompatible. According to (R-1) and (R-2), the route is to pretend  $q$  and see whether, under that pretense, we find  $p$  contradictory. If things go well, we will be able to establish a conditional, whose antecedent will be discharged if (and only if) it is true. According to (G), by contrast, there is no need to play with  $q$ -pretenses. Instead, if we only play with the  $q$ 's that we know to be true, we can skip the first two steps in (R-1) and (R-2)—establishing the conditional and then discharging, if we can, its antecedent—and judge straightforwardly whether the relevant  $p$  counterfactually entails a contradiction or not. Whereas the rationalists are in principle happy with both routes, Williamson only mentions the one corresponding to (G)—which can be seen as a particular case of the longer routes: the case in which  $q$  is true.<sup>23</sup>

The second difference between them—arguably terminological—concerns the weight they give to the empirical elements exploited. It is because the elements in our background knowledge are often empirical (despite the fact that we can use them while sitting in the armchair) that Williamson is reluctant to classify modal knowledge as *a posteriori* or *a priori*. By contrast, and because of (R-1) and (R-2), the rationalists conditionalize those modal judgments upon the content of the pretenses (as seen in §4) and claim the (*purely*) a priori knowability of the relevant conditionals, and this is why they still think that there is room for rationalism in modality.

Despite these differences, the problem in §5 also applies when the method is (G) rather than (R-1) or (R-2). For, ultimately, the pieces of background knowledge that we must exploit according to (G) play exactly the same role as the pretenses we make according to (R-1) and (R-2). We have seen that with non-modal pretenses alone we fail to establish contradictions in the consequents of the intended conditionals. Analogously, unless there is something *else* in our background knowledge—apart from non-modal  $q$ 's—that allows us to modalize the  $q$ 's, we will not be able to judge that  $p \Box \rightarrow \perp$ . So why does Williamson think otherwise?

According to Williamson's epistemology of counterfactuals, when evaluating whether  $p \Box \rightarrow \perp$ , some items of our background knowledge must be imagined away (thereby ceasing to be exploitable), and some others must be held fixed. Potentially anything that we hold fixed, and only what we hold fixed, can be exploited in order to, in conjunction with  $p$ —the counterfactual supposition— arrive at a contradiction. Intuitively, therefore, we should expect that, to obtain the extensionally right results, this must be the case:

(HF) Whenever a  $q$ , from our background knowledge, is inconsistent with  $p$ :  
 $q$  is held fixed iff it is a constitutive fact.

The reason is as follows. If, in counterfactual evaluation, we held fixed that *my left arm is not broken*, a contradiction would counterfactually follow from *my left arm is broken*, from which we would erroneously conclude the corresponding impossibility. So, if we hold  $q$  fixed, it must be a constitutive fact or we will obtain extensionally wrong results. Conversely, if  $Oa,b,c$  is constitutive of  $a$  but we do not hold it fixed, no contradiction would counterfactually follow from  $Oa,d,e$ , from which we would erroneously conclude the corresponding possibility.

Williamson is aware that something like (HF) must be true: “part of the general way we develop counterfactual suppositions is to hold such constitutive facts fixed” (Williamson 2007, 164). But if (HF) is the case, the epistemic significance of Williamson's account is jeopardized (as it was in the case of suitably-non-epistemic accounts). For, if our counterfactual judgments are to amount to counterfactual knowledge, it cannot be a matter of chance that we just *happen* to hold fixed (*the*) constitutive facts. We must *knowledgeably* hold them fixed. And because of the link between *constitutive facts* and *what we hold fixed* that (HF) makes explicit, it seems that knowing *what we need to hold fixed* requires us to know *what is constitutive*. Knowledgeably following the pattern stated in (HF) is, therefore, a *pre-condition* for counterfactual evaluation to be knowledge-conducive. As a pre-condition, constitutive knowledge cannot come *as the output* of counterfactual evaluation. The problem is that, as a result, constitutive knowledge is not the output of conceivability exercises. Here as well, as in §6.2, the problem is that Williamson's account does not address a substantial part of the original epistemic challenge—the part concerning essentialist knowledge.

Let me recapitulate what has been developed so far in the paper and preview the content of the next section. So far, we have seen that the second dilemma can be worded exactly like (D)—the first dilemma—despite the fact that their sources are different. We can phrase the second dilemma, however, in a different, more informative way. For we have seen that either conceivability accounts do not establish essentialist principles—this is the horn of epistemic accounts—or, if they do, it is because they take for granted essentialist knowledge—this is the horn of (*suitably*) non-epistemic accounts. In relation to my aim in this paper, the problem that emerges from this disjunction is as follows. If they take for granted essentialist knowledge—the second disjunct—something *outside the method* of conceivability will be needed to explain this kind of knowledge they are committed to. In the next section, I will argue that, if they do not establish essentialist principles—the first disjunct—something *outside the method* of conceivability will be needed to elucidate “easy” *de re* modal knowledge. Either way, conceivability cannot be the whole story in *de re* modal epistemology.

### 8. Widening the scope of the deficit: easy *de re* modal knowledge

Assume once more the truth of (EO) and that  $Oa,b,c$ . We have seen above that not only do epistemic notions fail to establish (\*)— $Oa,b,c \rightarrow \Box \neg Oa,d,e$ —but they establish instead:

$$(*)' \quad Oa,b,c \rightarrow \neg \Box \neg Oa,d,e$$

Using the second assumption, therefore, we can discharge the antecedent and conclude, erroneously—by both assumptions—that  $\Diamond Oa,d,e$ .

Now assume that *a's left arm is not broken*. By strictly analogous reasons, not only do epistemic accounts fail to establish (s):

$$(s) \quad a \text{ has not broken her left arm} \rightarrow \Box \neg a \text{ breaks her left arm.}$$

but they establish instead:

$$(s)' \quad a \text{'s left arm is not broken} \rightarrow \neg \Box \neg a \text{ breaks her left arm.}$$

Using the assumption, we can discharge the antecedent and conclude that  $\Diamond a \text{ breaks her left arm}$ . It is probably safe to say that no one—apart from pan-essentialists—endorses the principle-like claim that if an arm is not broken, it is essentially not broken. Nearly everyone, therefore, will be happy with the conclusion that  $\Diamond a \text{ breaks}$

*her left arm*. However, the relevant question is whether we can be said to know that conclusion *via* conceivability. Arguably, the answer is ‘no’.

Despite the fact that this might be an extensionally sound result, its extensional adequacy should not distort the real issue about its epistemic adequacy. The problem is that we know, generalizing the argument in §5, that the conceivability method is *insensitive* to whether (s) or (s)’ are true or false—as we saw with (\*) and (\*)', the output of the method will be the same independently of their truth values. Therefore, even if (s)' is true, essentialists are not in a position to say that we know this *by conceiving*; or, at any rate, by *conceiving alone*. It could be objected that this looks as a mere skeptical worry. It is not. The insensitivity of the conceivability method with respect to the truth value of (b)-type conditionals is pressing from the moment we realize that conceivabilists intend to use their method non-uniformly. Let me put my concern like this: If conceivabilists were to neglect the outcomes of the method with respect to (\*)'—or any other essentialist principle—but not with respect to (s)', their methodology would be biased by something *outside the method*. This something, furthermore, would be doing the real explanatory work in elucidating easy *de re* modal knowledge, and conceivabilists should spell it out.

To conclude thus far, while conceivability accounts might be able to account for *de dicto* modality—nothing developed here suggests otherwise—it is not clear how they could account for *de re* modality. The route to this conclusion is two-fold. First, if we have essentialist knowledge, conceivability methods do not account for it. If we do not have essentialist knowledge, we need a non-conceivability-based account to elucidate easy *de re* modal knowledge. The conclusion forced upon us is that, as far as the epistemology of *de re* modality is concerned, conceivability cannot be the whole story. These are especially uncomfortable results in connection with (*dr*ME) because they show that, in either case, what would be doing the real work in meeting the demands of (*dr*ME) would be alien to conceivability.

## **9. Objections and replies.**

To conclude, let me consider possible objections. The first three are fairly general, whereas the rest are formulated using the particularities of some specific account. I intend this section to clarify further what has been developed hitherto.

*Objection 1: Conceivability-based accounts were never meant to elucidate de re modal knowledge.* Rather, conceivability exercises are a source of *de dicto* modal knowledge, but not necessarily a source of *de re* modal knowledge.

*Reply 1:* I do not see how this is an objection rather than a concession. A conceivabilist who replied along these lines would be defending her usage of conceivability exercises but not denying my main thesis. My main thesis is not: Conceivabilists are wrong in thinking that conceivability can explain *de re* modality. (For the record: I do think they believe so and that endorsement of (YABLO) or (CHALMERS<sub>SIC</sub>) is sufficient for this, but I am ready to be told that I am wrong.) My main, non-exegetical thesis is, however, that conceivability alone cannot guide us to *de re* modal knowledge—this epistemology suffers from fundamental deficits.

*Objection 2: Conceivability-based accounts were never meant to elucidate essentialist principles.* Essentialist principles are not established as described in §4—through the prior availability of (b)-type conditionals. Rather, they become available to us in a different way and, from there, using conceivability as described in §4, we arrive, non-question-beggingly, at *de re* modal knowledge.

*Reply 2:* This has been addressed in §6.2. A substantial part of the original epistemic challenge would not be met by conceivability-based accounts, so conceivability cannot be the whole story in elucidating *de re* modal knowledge.

*Objection 3: Conceivability does establish essentialist principles, but not in the way described in §4.* As suggested in §6.2 when anticipating an objection against my argument against (EP-1), it could be said, for instance, that it is part of our concept of *origin* that origins—allegedly, things like  $\langle b, c \rangle$ —are essential to originated entities. If this is so, the negation of (EO) is already inconceivable<sub>PIC</sub>. Therefore, conceivability<sub>PIC</sub>—we do not even need conceivability<sub>SIC</sub>—already establishes (EO).

*Reply 3:* This objection relies on a theory—let us call it ‘T’—about our concept of *origin* that is both controversial and not mandatory. To make the objection stronger, however, let us assume that our concepts are loaded with essentialist truths such as T, and let me now explain why, even granting T, this objection is of no help. We have to distinguish two interpretations of the truth of T. According to the first, it is by crude stipulation that our concept *origin* encodes the essentiality of origins. Thus interpreted, this assumption cannot help us answer our *metaphysical* question about (EO)—although, admittedly, the stipulative truth of T would force us to change the way we ask it. Our T-neutral, *metaphysical* question is whether origins like  $\langle b, c \rangle$  are

essential to individuals. If origins are made, by stipulative definition, essential to individuals, the old, metaphysical question, formulated now in T-terms, must be whether  $\langle b,c \rangle$  is an origin of  $a$ . This newly worded—but not new—question, T does not answer. For T does not guarantee that *T-origin* has a non-empty extension. In other words, if  $\langle b,c \rangle$  is not part of  $a$ 's essence,  $\langle b,c \rangle$  is not a *T-origin*. While this might be a way of securing a priori knowledge—like (b)-type conditionals—it is not necessarily a way of answering metaphysical questions. The second way of interpreting the assumption that T is true is by saying that *origin* encodes the essentiality of origins because we know that origins—e.g.,  $\langle b,c \rangle$ —are essential to originated entities and have let this piece of knowledge partially constitute *origin*. While this would help us answer metaphysical questions, it cannot engender a satisfactory answer to our epistemological worries. For the question *how do we know that origins are essential* would still need an answer and, by the nature of the case, *conceivability* will not be relevantly involved in such an answer. (Chalmers, without disambiguating between the two possible interpretations, can be read at some places as *possibly* having something along these lines in mind.<sup>24</sup>)

In §§5-6, in order not to trivialize the link between conceivability and possibility, I implicitly assumed that concepts are not essentially loaded in this way. If conceivabilists were to endorse T under any of these two interpretations, they would be able to establish (b)-type conditionals. Apart from the specific problems that each of the two interpretations has, the general objection should start by noting that, if T is true, the claim that 'x is y's origins' is already an essentialist claim. From here, this kind of conceivabilists should think of (b)-type conditionals as hardly informative—for ideal conceivers at least—and of instances of (EO) as not informative at all.<sup>25</sup> In addition, phrases like 'the non-modal pretense that  $Oa,b,c$ ' should be objected to when said by one such conceivabilist. There is simply no room for non-modal talk about T-origins. We should join and extend Lowe's objection at this point.<sup>26</sup>

*Objection 4, on behalf of epistemic accounts:* If epistemic accounts were to endorse T too, they could bite the bullet and grant that they would need to elucidate the essentialist principles that are built into our concepts. Yet, by doing this, they could at least establish (b)-type conditionals and, as a result, block the argument in §8.

*Reply 4:* Not even so. First, to secure extensionally right results *throughout*—something required to effectively block the argument in §8—it is not sufficient that some essentialist principles are encoded in certain concepts. It *must* happen that our

concepts encode enough essentialist principles to generate, via conceivability, all essentialist truths. Let me note, therefore, that it is a big bullet that they would be biting. Second, to secure the right results throughout, it must happen also that conceivers are never wrong about the essentialist truths encoded in their concepts. Consequently, they could only block the argument in §8 by idealizing conceptual resources (now loaded with essentialist truths) and cognitive capacities—i.e., by collapsing *conceivability<sub>Y</sub>* into *conceivability<sub>PIC</sub>* also loaded with essentialist truths. In short, biting the big bullet is not sufficient for epistemic accounts to block the argument in §8—they would also need to stop being epistemic<sub>PIC</sub>.

*Objection 5, on behalf of non-epistemic accounts: To show that non-epistemic accounts rely on essentialist knowledge is not a serious objection.* According to a non-modal account of the notion of essence—most notably Fine’s (1994)—essential properties are not modal properties, so essentialist knowledge is not modal knowledge. Consequently, conceivability-based accounts do explain *modal* knowledge: they tell us that we obtain modal knowledge from essentialist knowledge.

*Reply:* This would be a good objection if I was arguing that conceivability-based accounts are circular, but this is not what I am arguing. Even if I believed that essentialist knowledge is modal knowledge, I would not think that non-epistemic accounts are circular. I am identifying the following, substantial *explanatory deficit*: on non-epistemic accounts, modal knowledge depends on a particular kind of knowledge, namely essentialist knowledge (whether modal or not). This knowledge is not elucidated and it *must* be. The reason why it must be is that Fine’s ontological divorce between the *modal* and the *essential* realms does not amount to a divorce in epistemic worries. The challenge of *de re* modal knowledge is a challenge concerning *modal* and *essentialist* knowledge (whether ‘and essentialist’ is redundant or not).

*Objection 6, on behalf of the two-dimensionalists: The resources of two-dimensionalism can block the dilemma.* It is agreed across the board that the contradiction in *water is not H<sub>2</sub>O* is not conceptual. However, the two-dimensionalist agrees with it only in one of two senses. While it is not *primarily* conceptually contradictory, it is *secondarily* conceptually contradictory—the contradiction amounting to *H<sub>2</sub>O is not H<sub>2</sub>O*. Because of this, a two-dimensionalist could insist that *conceivability* can still guide us to *de re* modal knowledge.

*Reply:* It is true that the contradiction in *water is not H<sub>2</sub>O*—or in *Oa,d,e*—are secondary-conceptual as well as metaphysical. This, however, will not help. Wright (2002) calls our attention to this:

The impression that the Counter-Conceivability Principle is all at a sea as soon as necessities originating in rebus are countenanced *turns on the tacit assumption of a separation between concept and essence [...]. That assumption simply misunderstands what is being proposed about the character of the relevant concepts that feature in necessities of identity, origin and constitution.* (Wright 2002, 410; my emphasis)

There should be no doubt that essential properties (and only essential properties) are what secondary intensions consist of.<sup>27</sup> H<sub>2</sub>O is assumed to be the essence of water and it is also assumed to be, by two-dimensionalists, the secondary intension of *water*. (This is, therefore, another way in which concepts can be loaded with essentialist truths.) Crucially, unless we endorse some version of T—and its analogues—this is the reason why conceivability<sub>SIC</sub> can be said to coincide with metaphysical possibility. (Let me spell out the reasons: Suppose that it is essential to *a* that she originates from *b* and *c*. Suppose further that *Oa,b,c* is not included in the secondary intension of *a*. In this case, *Oa,d,e* would *not* be secondary conceptually contradictory, despite the fact that, by assumption, it is impossible. Conversely, if we let some accidental truths—e.g., *a has exactly two hands*—constitute secondary intensions, some possibilities—e.g., *a has exactly one hand*—would be secondarily contradictory.) Because of this, the problem for non-epistemic accounts seen in §6.2 is both easier and more difficult to see when dealing with two-dimensionalist accounts. It is easier to see because, given that secondary intensions consist in essential properties, it is more palatable that the *SIC* possesses essentialist knowledge (this is a different way in which the *SIC* can be primitively equipped with essentialist knowledge). It is also more difficult to see because it is not straightforward to realize what Wright realizes: the essentialist load of secondary intensions. That this is not straightforward is due to the fact that they are not formulated in essentialist terms. Rather, the essentialist load resides in the claim that  $\lceil x \text{ is } C\text{'s secondary intension} \rceil$ . This is Chalmers' objectionable move. He intends us to believe that the SIC knows about secondary intensions *merely by knowing* all non-modal facts about the actual world. This cannot be the case. For surely not all the non-modal facts that the SIC knows enter secondary intentions—in particular,

contingent facts must not and all essential ones must. So the SIC must know *in addition* which non-modal facts do and which ones do not enter secondary intentions. By primitively providing the SIC with knowledge of secondary intentions, therefore, Chalmers is providing the SIC with non-elucidated essentialist knowledge.

Whether easier or more difficult to see, the problem is still the same: the *SIC* obtains modal knowledge by already possessing essentialist knowledge.

*Objection 7, on behalf of Kripke: You have neglected the use of rigid designators. Had you not, you would have been able to establish essentialist principles via conceivability.* (This turns out to be a version of the previous objection, which is why Wright’s remark applies to Kripke also.)

*Reply:* The use of rigid designators is not epistemologically helpful. To obtain the right results with the imaginative exercises, the *accidental intrinsics* of Queen Elizabeth, for instance, must not be part of what is being referred to by ‘Queen Elizabeth’. However, all her essential properties must—the reason being analogous to the one spelled out in the previous reply. For the use of rigid designators to be *epistemologically* helpful in imaginative exercises, therefore, we would need to know *exactly what* is being referred to by rigid designators (in Chalmers’ terms, exactly what *secondary intentions* are). It is simply not enough to know (intensionally) that they pick up essential properties. Unless we know whether *origins* are amongst them, we will not know whether, in trying to imagine Queen Elizabeth as coming from different parents, we are imagining *her* or not. Consequently, Kripke’s suggestion that, when attempting to imagine Queen Elizabeth as the daughter of Mr. and Ms. Truman we are not imagining *her*, simply assumes too much.

*Objection 8 on behalf of Williamson: It is explicit in (Williamson 2007) that background knowledge need not be knowledge.* Counterfactual-evaluators typically rely on *folk physics* to make their judgments and, despite the fact that *folk physics* as a whole is not known—for it is false—the judgments arrived at by exploiting our “grasp” of it often constitute knowledge.

*Reply:* This is indeed said in (Williamson 2007, 145-146). However, that *folk physics* is not known as a whole does not imply that the bits and pieces of it that are exploited in a particular case to make a counterfactual judgment are not known. I am inclined to think that this must be the case for the output to be, in that particular case, *knowledge*. Because of this, I am more sympathetic to the way Yablo and Chalmers conceive of *states of knowledge*—as knowledge—than to the way Williamson thinks

of his *background knowledge*. Yet, to make the objection stronger, let us assume that Williamson is right and that “background knowledge” need not be knowledge. This will not help. The argument in §7 shows that, despite what he suggests at some early points (p. 146), folk *physics*—a sense of how nature works—will not do. If nomic necessities are not metaphysical necessities, our judgments will easily go wrong (and if they happen to be metaphysical necessities but we do not know it, our judgments will be extensionally correct, but not epistemologically adequate). Williamson is aware of it and, as seen above, at some later point (p. 164) he starts speaking instead of holding fixed *constitutive facts*. Furthermore, he thinks that they do not coincide with nomic facts: “conceivability is certainly no good evidence for the restricted kinds of possibility we mainly care about in natural sciences and ordinary life. We easily *conceive* particles violating what are in fact physical laws” (Williamson 2007, 135; my emphasis). The rule that governs our conceivability exercises, therefore, is not *folk physics* but rather *folk metaphysics*—a sense of how *metaphysical* nature works. Indeed, *if* conceivability judgments are extensionally correct—something which my argument in §7 granted for the sake of argument—*folk metaphysics* must constitute the counterfactual evaluator’s “background knowledge”. A first problem is that Williamson thinks that there is nothing like *folk metaphysics*: “Humans evolved under no pressure to do philosophy” (Williamson 2007, 136). The burden of the argument is then on Williamson. He must tell us what exactly this background knowledge is that: is not knowledge; is not *folk*; and encodes the truths about the constitutive realm. After clarifying this, the most important task will still need to be done—he will still need to tell us in virtue of what, and how, human beings can know, or merely grasp, constitutive truths.<sup>28</sup>

## References

- Adams, Robert. (1979) “Primitive Thisness and Primitive Identity”, *The Journal of Philosophy*, 76/1: 5-26
- Brueckner, Anthony. (2001) “Chalmers’s Conceivability Argument for Dualism”, *Analysis*, 61:187-193.
- Carnap, Rudolf. (1947) *Meaning and Necessity*, Chicago, Phoenix Books, University of Chicago Press. Reprinted in 1988, Midway Reprint.
- Chalmers, David. (2002) “Does Conceivability entail Possibility?”, in Gendler and Hawthorne (eds.), *Conceivability and Possibility*: 145-200.

- Chalmers, David. (Ms.) “Ontological Anti-Realism”.
- Divers, John. (2007) “Quinean Scepticism About De Re Modality After David Lewis”, *European journal of Philosophy*, vol.15/1: 40-62
- Dowell, Janice. (2008) “Empirical Metaphysics: The Role of Intuitions About Possible Cases in Philosophy”, *Philosophical Studies*, 140: 19-46.
- Forbes, Graeme. (1985) *The Metaphysics of Modality*, Clarendon Press, Oxford.
- Forbes, Graeme. (2001) “Origins and Identities”, in *Individuals, Essence and Identity, Themes of Analytic Metaphysics* (Bottani, Giaretta and Carrara, eds.): 319-340.
- Fine, Kit. (1994) “Essence and Modality”, *Philosophical Perspectives*, 8, Logic and Language, 1-16.
- Fine, Kit. (2005) *Tense and Modality: Philosophical Papers*. Oxford: Clarendon Press
- Geirsson, Heimir. (2005) “Conceivability and Defeasible Modal Justification”, *Philosophical Studies*, 122(3): 279-304.
- Gendler, Tamar and Hawthorne, John (eds.) (2002). *Conceivability and Possibility*, Clarendon Press, Oxford.
- Hale, Bob. (2003) “Knowledge of Possibility and of Necessity”, *Proceedings of the Aristotelian Society*, CIII, pp. 1-20.
- Kripke, Saul. (1972/1980) *Naming and Necessity*, Harvard University Press, Cambridge, Massachusetts.
- Lewis, David. (1986) *On the Plurality of Worlds*, Oxford: Basil Blackwell.
- Loux, Michael and Zimmerman, Dean (eds.). (2003) *The Oxford Handbook of Metaphysics*, OUP.
- Linsky, Bernard and Zalta Ed. (1994) “In Defense of the Simplest Quantified Modal Logic”, *Philosophical Perspectives 8: Philosophy of Logic and Language*, Atascadero, CA: Ridgeview: 431-458
- Linsky, Bernard and Zalta Ed. (1996) “In Defense of Contingently Non-Concrete”, *Philosophical Studies* (Special Issue: Possibilism and Actualism), 84/2-3: 283–294.
- Lowe, Jonathan. (2002) *A Survey of Metaphysics*. Oxford: Oxford University Press.
- Lowe, Jonathan. (2007) A Problem for A Posteriori Essentialism Concerning Natural Kinds. *Analysis* 67: 286-292
- Mackie, Penelope. (2006) *How Things Might Have Been*. Oxford: Clarendon Press.
- Oderberg, David. (2001) “How to Win Essence Back From Essentialists”, *Philosophical Writings*, 18: 27-45.
- Plantinga, Alvin. (1969) “De Re et De Dicto”, *Noûs*, 3/2: 235-258.

- Peacocke, Christopher. (1999) *Being Known*. Oxford University Press, Oxford.
- Peacocke, Christopher. (2002) "Principles for Possibilia", *Noûs*, 36:3, 486-508.
- Putnam, Hilary. (1975) "The Meaning of 'Meaning'", in *Mind, Language, and Reality*, Cambridge University Press, Cambridge.
- Quine, Willard V.O. (1953) "Three Grades of Modal Involvement" in Proc. XI International Congress of Philosophy, 14: pp. 65 – 81
- Quine, Willard V.O. (1951) "Two Dogmas of Empiricism" *The Philosophical Review*, 60: 20-43.
- Quine, Willard V.O. (1960) *Word and Object*. Cambridge Mass.: MIT Press
- Rohbraugh, Guy and deRosset, Louis. (2004) "A New Route to the Necessity of Origin", *Mind*, vol.133: 705-725.
- Salmon, Nathan. (1981) *Reference and Essence*, Princeton University Press, Princeton.
- Sidelle, Alan. (1989) *Necessity, Essence, and Individuation*, Cornell University Press.
- Sider, Ted. (2003) "Reductive Theories of Modality", in M. J. Loux and D.W. Zimmerman, eds., *The Oxford Handbook of Metaphysics* (OUP, 2003): 180–208
- Vaidya, Anand (2007). "The epistemology of modality", Stanford Encyclopedia of Philosophy.
- Van Inwagen, Peter. (1998) "Modal Epistemology", *Philosophical Studies*, vol.92: 67-84.
- Williamson, Timothy. (1998) "Bare Possibilia", *Erkenntnis* 48: 257–273.
- Williamson, Timothy. (2002) "Necessary Existents", in A. O'Hear, ed., *Logic, Thought and Language*, Cambridge: Cambridge University Press, 2002, pp. 233-251
- Williamson, Timothy. (2007) *The Philosophy of Philosophy*, Blackwell Publishing.
- Worley, Sara (2003). "Conceivability, Possibility and Physicalism", *Analysis*, 63:15-23.
- Wright, Crispin. (2002) "The Conceivability of Naturalism", in Gendler and Hawthorne (eds.), *Conceivability and Possibility*: 401-440.
- Yablo, Stephen. (1993) "Is Conceivability a Guide to Possibility" *Philosophy and Phenomenological Research*, 53: 1-42.
- Zalta, Ed. (2004) "Essence and modality", *Mind* 115(459):659-694

- 
- <sup>1</sup> Paradigmatically, Quine (1951 and 1953) and Carnap (1947) reject *de re* modality. Recently, Divers (2007) offers arguments against it by calling into question the usefulness of *de re* modal discourse.
- <sup>2</sup> Some examples: Chalmers (2002 and ms.); Fine (1994 and 2005); Forbes (1985 and 2001); Kripke (1972/1980); Lewis (1986); Linsky and Zalta (1994 and 1996); Lowe (2002 and 2007); Peacocke (1999 and 2002); Putnam (1975); Roghrbogh and deRosset (2004); Salmon (1981); Williamson (1998, 2002 and 2007); Yablo (1993); and Zalta (2004), among others. Even Mackie, who defends (2006) a *minimalist essentialism*, is not yet an extreme haecceitist, and even less an anti-essentialist.
- <sup>3</sup> Although there is conceptual room for a believer in *de re* modal properties who is also a global skeptical about *de re* modal knowledge, this position is not very attractive. Even van Inwagen (1998), who overtly defends *modal skepticism*, believes everyday life *de re* modal knowledge.
- <sup>4</sup> Van Inwagen (1998) distinguishes between “everyday life” and “remote” modal knowledge, and is skeptical only about the latter. Although the distinction between “easy” and “non-easy” modal knowledge need not coincide (intensionally or extensionally) with van Inwagen’s, the underlying epistemological motivation is similar.
- <sup>5</sup> The label ‘*conceivability-based account*’ is borrowed from (Vaidya 2007).
- <sup>6</sup> Williamson’s account is better known as a *counterfactual-based account*, and there are good reasons why this is so. (Roughly, because his strategy involves arguing that modal claims are logically equivalent to certain counterfactuals claims and then arguing for the epistemic priority of the latter.) However, it is also—and emphatically—a *conceivability-based account* (Williamson 2007, 163).
- <sup>7</sup> This is how Chalmers puts it: “These [primary possible] worlds are all first-class metaphysical possibilities.” (Chalmers 2002, 165)
- <sup>8</sup> See (Brueckner 2001) and (Worley 2003).
- <sup>9</sup> At an *individual* level, Chalmers’ notion of *secunda facie* conceivability is making efforts in this direction (see (Chalmers 2002, §2)); also van Inwagen (1998) seems to be working in this direction. At a *community* level, Geirsson (2005) offers an account of *degrees of justification* for modal beliefs that takes into account disagreements among different subjects and times. Yablo himself (1998) seems to have something like this in mind when he talks about *modal dialogue*.
- <sup>10</sup> Yablo is more explicit than Chalmers about models of modal error and, therefore, I follow Yablo more than Chalmers here. However, see Chalmers on: (a) how *prima facie* conceivability is an imperfect guide to possibility, and (b) how ideal primary conceivability is a bad guide to secondary possibility, to notice that Chalmers has a similar model in mind. (Chalmers 2002, 159 and §4)
- <sup>11</sup> This way of presenting it merges the two models in (Yablo 1993, 34-35).
- <sup>12</sup> The reason why I am shifting to conditionals which do not have an identity statement in the antecedent is that the problem below is clearer if we do so. This is not an objectionable move, however, and I will justify that it is not in footnote 17 (by which time we will have enough material).
- <sup>13</sup> For textual evidence supporting this interpretation, see (Kripke 1972/1980; footnotes 56 and 57).

- 
- <sup>14</sup> This is, again, theory-neutral. For the kind of imaginative exercise that is involved in counterfactual evaluation is susceptible to a question very much like the one above. When S is considering the counterfactual scenario that  $p$ , must she imagine away anything that contradicts  $p$ ? Williamson says ‘not always’, whereas the friends of false counterpossibles might need to say ‘yes’.
- <sup>15</sup> One might want to distinguish two ways in which a *possibility claim* can go wrong. The first is Yablo’s general model of modal error: we find  $p$  possible when it is in fact impossible because we are unaware of a  $q$  that rules out  $p$ ’s possibility. The second one (also contemplated by Yablo) is this: we find  $p$  possible when it is in fact impossible because we fail to notice that it is contradictory (and, had we noticed a contradiction, we would have found it inconceivable). Are they substantially different models? Arguably not. Let us see how the second model is subsumed by the first. Whenever  $p$  is contradictory,  $\neg p$  is our  $q$ : since  $\neg p$  is tautological, it rules out  $p$ ’s possibility. Let us see now how the first model is subsumed by the second, with an appropriate qualification. The second model makes it explicit that awareness of a contradiction is sufficient for *inconceivability*. In the main text, however, I pointed out that  $p$  can be either *metaphysically* or *conceptually* contradictory. Admittedly, this means that  $p$  need not always be *logically* contradictory itself. However, as suggested in the main text, it will be inconsistent with other elements in our state of knowledge and/or our pretences. For example, *that water is XYZ* is not *logically contradictory*. However, under the pretense (or knowledge) *that water is H<sub>2</sub>O* we can arrive at—or so it is claimed—*H<sub>2</sub>O is not H<sub>2</sub>O*. In other words, a metaphysical or conceptual contradiction will generate a logical contradiction *in conjunction with*—this is the qualification—some other pieces of knowledge or appropriate pretenses. This dependence upon other elements in our state of knowledge (or pretenses) will be more clear in §7 when discussing Williamson’s account.
- <sup>16</sup> It might be objected that this begs the question against two-dimensionalists since I am assuming here that concepts are individuated by their possession conditions, which surely a two-dimensionalist would deny. I deal with this objection in §9, objection 6.
- <sup>17</sup> We are now in a position to justify the shift indicated in footnote 12. The reason why I shifted to cases of *essentiality of origin* is because, if I had continued with conditionals with identity statements in their antecedents, the general principle we would need is  $(x=y \rightarrow \Box x=y)$ . This principle (although challenged by the friends of contingent identity) is probably too obvious for me to clearly motivate the worry. The point is not (neither depends on) how obvious these needed general principles are, but rather whether/how conceivability methods could establish them, and that the point is *this* is clearer if we first focus on a not-too-obvious principle. The claim that nothing essential depends on it commits me to saying that the conceivability method explored here does not establish either  $(x=y \rightarrow \Box x=y)$  and I am happy with this because the problem with this method is, I believe, structural. (Note, *en passant*, that Kripke did not establish *that* principle via conceivability.)
- <sup>18</sup> Lowe (2007) offers a criticism (to which I am sympathetic) to conceivability which is independent of the current one and which focuses only on principles involving identity claims. According to him, the claim that *water is H<sub>2</sub>O* already involves hidden essentialist premises.

- 
- <sup>19</sup> About the standard Kripkean cases, Chalmers says that while “they might be prima facie secondarily conceivable for a subject lacking relevant empirical knowledge [...] they will not be ideally secondarily conceivable” (Chalmers 2002, 161). At the very least, therefore, his claim that *water is not H<sub>2</sub>O* is ideally secondarily inconceivable commits him to water being essentially H<sub>2</sub>O. It is frustrating that he does not explicitly mention the case of *essentiality of origins*. Yet, given the generality with which he talks of “Kripke’s examples” one should expect that his attitudes towards Kripke’s examples are homogeneous—or, at any rate, that, if they were not, he would (or should) make the difference explicit. Furthermore, his attitudes seem to be the same in “Ontological Anti-realism”, where he still writes things like: “What cannot be ruled out a priori is possible (setting aside Kripkean phenomena that are irrelevant [there])” (Chalmers *ms.*, 26, fn.15).
- <sup>20</sup> This is why there could be both epistemic and non-epistemic versions of Williamson’s account, depending on how inclusive we take this background knowledge to be and how fallible/infallible the counterfactual evaluator is assumed to be.
- <sup>21</sup> Clause (ii) is needed because, in its absence, the case in which *q* is not actually true would constitute a counterexample to the right-to-left direction. *Reason*: Assume that actually *Oa,b,c*. Conceivabilists claim that pretending *Oa,d,e* will reveal that, under the scope of that pretense, *Oa,b,c* is inconceivable. This would yield the conditional (*Oa,d,e* → □¬ *Oa,b,c*), which would be true despite the fact that, by assumption, *Oa,b,c*. We would be wrong, therefore, if we were to infer, from the truth of that conditional, the impossibility of *Oa,b,c*.
- <sup>22</sup> We can therefore construct the rationalist conceivability method explored above as involving a *double* conceivability exercise. The first one, in pretending that *q*. The second one, nested in the first, in evaluating whether *p* would, in the *q* scenario, be contradictory.
- <sup>23</sup> I intend this to clarify further footnote 15.
- <sup>24</sup> “The two-dimensional semantics in question will be grounded in a priori conceptual analysis plus non-modal facts about the actual world. (The first dimension is grounded straightforwardly in a priori conditionals. The second dimension is grounded in a priori conditionals, such as ‘if water is H<sub>2</sub>O, it is necessary that water is H<sub>2</sub>O’, plus empirical non-modal facts, such as ‘water is H<sub>2</sub>O’.)” (Chalmers 2002, 194)
- <sup>25</sup> Chalmers (personal exchange) agrees that this is more or less his view. Although he disagrees with my illustrative example of *origin*, he agrees that, on his view, concepts like *water* or *human* encode modal truths and also that knowledge of (true) b-type conditionals is something rather trivial, and no more mysterious than knowledge of, for instance, ‘bachelors are unmarried men’.
- <sup>26</sup> In relation to footnote 18, this objection extends Lowe’s (2007) to cases other than identity claims.
- <sup>27</sup> More accurately, I should qualify this by saying that essential properties are what secondary intensions of *rigid terms* consist of. Thanks to David Chalmers for pressing me to qualify this.
- <sup>28</sup> Many thanks to all my colleagues in the Department of Philosophy at the University of Stirling and all the members of the Logos Research Group in Barcelona for their valuable comments on earlier drafts of this paper, discussed at various work-in-progress seminars; special thanks to Manuel

---

García-Carpintero, Alan Millar and Peter Sullivan. Thanks also to the audience of the VIII TIF conference, and especially to my commentator on that occasion, Jordi Valor. Many other people have also helped me to improve the paper. Thanks to Eline Busck, Óscar Cabaco, Ross Cameron, Marta Campdelacreu, David Chalmers, Fabrice Correia, Jose Díez, Esa Díaz-León, Bob Hale, Dan López de Sa, Genoveva Martí, Manolo Martínez, Chris Peacocke, Luís Robledo, Sven Rosenkranz, Tuomas Tahko and Elia Zardini. Two anonymous referees for this journal, to whom I am also very thankful, went far beyond the call of duty: their comments, objections and suggestions have greatly helped me to improve the paper.

The paper was written in part with financial support from the project HUM2006-09923 (MEC).

Thanks also to Mike Maudsley for his linguistic corrections.