

Concepts and the epistemology of essence

Sonia ROCA-ROYES[†]

ABSTRACT

This paper is an exploration of the prospects of rationalist, concept-based epistemologies of modality as far as essentialist and *de re* modal claims are concerned. I grant certain explanatory power to such epistemologies but, primarily, I identify their limitations. I first explore them in view of the (possible) existence of *general* as well as of *singular* modally loaded concepts and find their explanatory scope severely limited. Inspired by the abstractionist's concept-and-entitlement based hybrid model, the paper then explores a similarly hybrid strategy. The outcome of this exploration is that, regardless of its explanatory scope, it would be a misnomer to describe such hybrid view as concept-based. The result generalizes.

1. Introduction

What role can concepts play in the epistemology of essence (and *de re* modality)? This paper is an exploration of this question. The question belongs to the epistemology of (metaphysical) modality in general but it belongs, more specifically, to the epistemology of *de re* modality.

For current purposes, modality *de dicto* speaks of the different modes—necessarily, contingently, or possibly—in which a *general* truth (or falsity) is true (or false). The general claims 'all vixens are female' and 'there are talking donkeys', for instance, can be prefixed with any of three modal operators referring to those three modes. When so prefixed, the resulting modal claims are *de dicto*; for instance 'Necessarily, all vixens are female' and 'Possibly, there are talking donkeys'.¹ Modality *de re*, by contrast, speaks of the modes—again: necessarily, contingently, or possibly—in which entities stand in relations (or hold properties). Socrates, for instance, holds the property of being human. The claims 'Socrates is necessarily human' says (truly or falsely), that he holds it as a matter of necessity whereas the claim 'Socrates is contingently human' says (again truly or falsely) that he holds it contingently (and therefore implies that he *could* exist being other than human). Similarly, for a given human zygote *z*, Socrates also stands in the relation of *originates from* with it. The *de re* modal claim 'Socrates

[†] University of Stirling, Scotland, United Kingdom; email: sonia.rocaroyes@stir.ac.uk

¹ This way of characterizing modality *de dicto* implies that claims like 'Necessarily, Socrates is human' (where the prefixed claim is not (purely) general) is not *de dicto*. As such, the characterization moves away from the characterization of modality *de dicto* as applying to *dictums* (regardless of their generality). This is intended. On my use here, 'Necessarily, Socrates is human' is a *de re* modal claim and equivalent to 'Socrates is necessarily human'.

necessarily originates from *z*' says (truly or falsely) that his standing in that relation with *z* is a matter of necessity.

Modality *de re* is in turn closely linked to essential truths. Essentialism studies the nature of things, and is concerned with questions such as 'what makes a thing the thing it is?' and 'what properties or relations are essential to which entities?'. In the words of Bob Hale, who holds a Finean view on the matter, the link between essence and modality *de re* gets expressed thus:²

metaphysical necessities have their source in the natures of things, and metaphysical possibilities are those left open by the natures of things. (Hale 2013, 253)

At an ontological level, therefore, the essential facts about a given entity imply the *de re* necessities involving it and those, in turn, determine the space of possibilities for it. It is very tempting to suggest on this basis what I will call 'a mirroring epistemology of modality'. There's room for more and less extreme variants of such epistemologies but, crudely, according to a mirroring epistemology of modality, the epistemic priority order mirrors the ontological one: knowledge of essence grounds knowledge of *de re* necessities, from which knowledge of *de re* possibilities (as those determined to be compatible with the *de re* necessities) is derived.³

Despite the (Finean) ontological distinction, essential facts and necessities *de re* are not different from an epistemological perspective: our epistemic access to them poses broadly the same puzzle. Because of this, and remaining neutral on both the ontological picture and the mirroring epistemology, I will not distinguish between them in this paper. The focus of the discussion is the extent to which the nature of our concepts might help us to explain our epistemic access to essential facts (and *de re* necessities and possibilities).

The main thesis to be defended is that concepts have a very limited role to play in the epistemology of *de re* modality. The dialectical relevance of this thesis stems from the fact that many modal epistemologists hold a *concept*-based epistemology of essence (on which to build the mirroring epistemology of *de re* modality). They believe that our epistemic access to essential truths is intimately tied to knowledge of conceptual truths. On this basis, *de re* modal knowledge—taken as derivative from essentialist knowledge—is believed to be (fundamentally) a priori *because* its ultimate (essentialist) premises would be somehow analytic or conceptual.^{4,5} I show however that, even if some explanatory power is to be granted

² For the most salient opponents to Fineans in this context the tie is even more intimate: something being essential to a given entity *just is* it being necessary of it. Without dialectical cost, I will assume in the paper that the link is at least as strong as the Fineans think it is.

³ See (Hale 2013, 253) for a characterization of a sample of the different variants.

⁴ 'fundamentally' is here intended to allow for the inclusion of knowledge of a posteriori necessities like, perhaps, that *Socrates is necessarily human*, which can be factored out into an essentialist principle—supposedly (purely) a priori—like *all humans are necessarily human*, and an a posteriori non-modal truth,

to the nature of concepts, these epistemologies are not delivering adequately vis-à-vis the agenda of the modal epistemologist. This agenda—which will be fully characterised in due course—includes the tasks of explaining our epistemic access to *de dicto* necessities, to essentialist principles, to particular essential truths, and to *de re* possibilities; and the nature of concepts contributes to fulfilling a very small portion of it.

The dialectical impact of this result is not insignificant. The label ‘concept-based epistemology of modality’ covers a family of views that can differ quite substantially among them. Bealer’s intuition-based epistemology (e.g., 2002, 2004), for instance, in taking the relevant modal intuitions as speaking of conceptual relations, is a representative of the family. So is Chalmers’s conceivability-based account (mostly in 2002), in virtue of taking the relevant notions of conceivability to be appropriately tied to the nature of concepts. Peacocke’s Principle-Based account (1999) is also a salient representative; and so is the epistemology of (conventional) modal truths as put forward by Sidelle (1989). A proper appreciation of the dimension of the challenge to be raised results from noting that such mainstream epistemologies are committed to a mirroring epistemology and, as such, the challenge as far as essentialist knowledge is concerned extends to *de re* modal knowledge in general.⁶

The argument in this paper thus puts pressure on any rationalist epistemology of modality that both (i) is committed to the existence of *de re* modal knowledge and (ii) rests its rationalism on the nature of concepts. The resulting diagnosis will be that *if we have de re modal knowledge, and if there is room for rationalism about it, the exact source of their apriority (other than concepts) still needs to be articulated.*

The structure of the argument. The argument starts by unfolding in detail the explanatory power of *modally loaded concepts*; the serious candidates to playing a significant role in a concept-based epistemologies of essence. Modally loaded concepts are concepts whose application conditions include modal conditions and, as such, they require a certain modal profile of the entities that fall under them. I distinguish between *general* modally loaded concepts and *singular* modally loaded concepts and, by means of examples, I scrutinize their cases separately—respectively, in §2 and §3. The results will be partly concessive but mostly

like *Socrates is human*. For more on how a posteriori necessities can be subsumed under a rationalist programme by claiming them to be *fundamentally* a priori, see (Peacocke 1999: 168-9).

⁵ A notable exception here is Jenkins’ (2008), which is concept-based yet empiricist. This paper’s scope is confined to rationalist concept-based epistemologies. Jenkins’ would require a different treatment; one that focuses on the genesis of concepts (as opposed to on how far we can get (in terms of modal knowledge acquisition) with a given set of concepts, however we might have acquired them).

⁶ Their commitment to a mirroring epistemology is not always explicit, but I have argued for this elsewhere (see (Roca-Royes 2011)).

negative. As for the concessive bit: the very existence of modally loaded concepts *generates* certain conceptual essential truths and our access to them *is*, on occasions, explainable in a concept-based manner.⁷ However, those explanations only cover an unsatisfactorily small portion of the agenda of the modal epistemologist.

In an attempt not to underestimate the explanatory power of modally loaded concepts, §4 focuses on hybrid strategies. The inspirational model is the abstractionism of Hale and Wright, whose crucial elements are the (modally loaded) singular concepts forged by abstraction. The view is hybrid in that it is both concept- *and* entitlement-based. The account looks promising for their subject matter but, regardless, I note its scope-limitations: it applies only to the *abstractionist's abstracta*. I thus set aside the assessment of the view and, instead, I submit for exploration a different hybrid strategy; one that is *seemingly* also concept- and entitlement-based but that, unlike the abstractionist's one, can be made as general as one deems appropriate, covering modal knowledge about both concrete and abstract entities, however theoretically construed. The outcome of this exploration (in §5) is two-fold: (i) entitlements do most of the explanatory work in there; and (ii) they can be abstracted away from the role they play but, as per §§2-3, concepts aren't fit to play that role. In other words: with a view to gaining enough explanatory power, any concept-based epistemology must metamorphose into a hybrid one to a point that renders 'concept-based' a misnomer. This result grants me the main thesis of the paper; that concepts have a very limited role to play in the epistemology of essence (and *de re* modality).

A preliminary assumption. The explanatory potential of concept-based views is at its best if one makes an assumption on the metaphysics of concepts congenial to *conceptual role semantics*. So I shall make this assumption here. The assumption, roughly, is that (some) concepts are individuated partly by certain contents, and that the contents that serve to individuate a concept *C* also serve to individuate *C*'s possession conditions. In addition, when the concept at issue is not recognitional, the contents that serve to individuate it are knowable (fundamentally) a priori by *C*-possessors (with more or less effort). This view of concepts is not uncontroversial.⁸ However, it is arguably one of the few views that are well positioned to explain a priori knowledge in general (other than by claiming it innate or else an output of non-concept-based intuitions). If this assumption on concepts turns out to be incorrect, the prospects of modal rationalism will be correspondingly worsened. I wish to remain neutral on this assumption. The paper is confined to putting an upper bound to the best case scenario: if

⁷ This concession amounts to a qualification of my earlier arguments against concept-based epistemologies in (Roca-Royes 2011).

⁸ See for instance (Williamson 2003, 2007 and 2013).

this assumption on concepts turns out to be correct, the explanatory power of a concept-based account as far as essentialist and *de re* modal knowledge is concerned is still rather limited.

2. General modally loaded concepts as a source of a priori essentialist knowledge

Until I generalize—towards the end of this section—I will motivate the discussion here with an engineered running example. Consider these three *human*-concepts, differing in their modal application-conditions (I remain neutral as to whether our *<human>* concept is identical to any of them):⁹

<human>*: x is *human** iff it is a member of the genus *Homo*, especially *Homo sapiens*.

<human+>: x is *human+* iff it is *human** and x 's biological origins are essential to x .

<human->: x is *human-* iff it is *human** and x 's biological origins are not essential to x .

Let us assume that none of the concept components in *<human*>* are modally loaded. Most saliently, *<homo>* and *<homo sapiens>* should be understood as the corresponding *<homo*>* and *<homo sapiens*>* as opposed to their plus or minus versions. The distinction between *human+* and *human-* is exhaustive and exclusive with respect to *human**. Let a be an entity that satisfies the *non-modal* application conditions that these three concepts share. So a falls under *<human*>*, since satisfaction of those non-modal conditions is all it takes for something to fall under it. For a to fall, in addition, under *<human+>*, a 's origins must be essential to her. Instead, for a to fall, in addition, under *<human->*, her origins must not be essential to her. So *<human*>*, unlike *<human+>* and *<human->*, is neutral about the modal status of the origins of those entities that fall under it. In other terms, *<human*>* encodes no essentialist principle about origins. By contrast, *<human+>* encodes Essentiality of Origins for Humans+ and *<human->* encodes Non-Essentiality of Origins for Humans-. As such, possession of these concepts comes with *implicit* knowledge of those principles. In symbols, where 'H+' and 'H-' are read, respectively, as *human+* and *human-*, 'O' as *originates from*, and '□' as *essentially or necessarily*:¹⁰

$$(EO^+) \quad \forall x(H^+x \rightarrow \forall y(Oxy \rightarrow \square Oxy))$$

$$(\neg EO^-) \quad \forall x(H^-x \rightarrow \forall y(Oxy \rightarrow \neg \square Oxy))$$

A concept-based epistemology of the *explicit* knowability of essentialist principles of *this sort* should not be puzzling, and credit must be given here. This is the concessive bit anticipated in the introduction. To be in a position to establish a priori essentialist principles of this sort, we need—under the preliminary assumption on the nature of concepts in §1—to possess modally

⁹ All through this paper, I will use '⟦C⟧' to mention concepts and '⟦P⟧' to mention properties.

¹⁰ As per the introduction, it will not harm not to distinguish, in *de re* contexts, between *essentially* and *necessarily*.

loaded concepts and to reflect appropriately on them. That is, we need to possess concepts—like $\langle human^+ \rangle$ and $\langle human^- \rangle$ —whose application conditions require a certain modal profile of the entities that fall under them.

Not all concepts are modally loaded, though. $\langle human^* \rangle$ is not, and no conceptual network that contained it would *per se* encode any of the following:¹¹

$$(EO^*) \quad \forall x(H^*x \rightarrow \forall y(Oxy \rightarrow \Box Oxy))$$

$$(\neg EO^*) \quad \forall y(H^*x \rightarrow \forall y(Oxy \rightarrow \neg \Box Oxy))$$

Knowledge that a is $human^*$ is thus neutral as to whether a has her origins essentially or not.

The four principles above are all essentialist principles: they are principles consequents of instances of which either say or deny, of a given entity, x , that a given origin-property is essential to it. But while (EO^+) and $(\neg EO^-)$ are *conceptual* essentialist principles, (EO^*) and $(\neg EO^*)$ are (whether true or false) *non-conceptual* essentialist principles: they cannot be known to be true by mere possession of concepts. Whether true or false, they are so in virtue of facts that go beyond what is encoded in the application conditions of the concepts involved; most saliently $\langle human^* \rangle$. The truth-values of (EO^*) and $(\neg EO^*)$ certainly relate to the extensions of $\langle human^+ \rangle$ and $\langle human^- \rangle$ in this way:

If $(\neg EO^*)$ is true, then, $\langle human^+ \rangle$ is empty (and $\langle human^- \rangle$ and $\langle human^* \rangle$ are coextensive).

If (EO^*) is true, then, $\langle human^- \rangle$ is empty (and $\langle human^+ \rangle$ and $\langle human^* \rangle$ are coextensive).

This in turn affects whether the conceptual principles (EO^+) and $(\neg EO^-)$ are vacuously or non-vacuously true: depending on the nature of the $humans^*$ that populate this world, one of the two conceptual principles might be (actually) vacuously true. But were this to be so, it would be so in the same innocuous manner in which $\langle all\ vixens\ are\ female \rangle$ would be (actually) vacuously true if $\langle vixens \rangle$ was empty; both are still conceptual truths.

I consider the preceding paragraphs sufficient to illustrate the distinction between conceptual and non-conceptual essentialist principles. A further difference to be drawn (and used shortly) is that between *essentialist principles* and *particular essential truths* (or *essential truths about particular individuals*). The claim ‘ x is essentially F ’ is a non-general essentialist claim. Particular essential truths (about a given individual) are expressible with non-general essentialist claims like that.

So far, I have granted the (a priori) *concept*-based knowability of *conceptual* essentialist principles like (EO^+) and $(\neg EO^-)$. And despite being conceptual, these principles involve *de re*

¹¹ ‘*per se*’ because it could, if $\langle origin \rangle$, for instance, *was* suitably modally loaded. I am stipulating for the sake of argument that it is not. (If our concept $\langle origin \rangle$ *is* modally loaded, essentially the same argument I am developing for $\langle human^+ \rangle$ and $\langle human^- \rangle$ should be run for it.)

modality. To repeat: the consequents of their instances are particular essentialist claims. It is important not to mistake these principles for certain *de dicto* necessities in their vicinity:

$$\begin{aligned} \Box(EO^+) & \quad \Box \forall x(H^+x \rightarrow \forall y(Oxy \rightarrow \Box Oxy)) \\ \Box(\neg EO^-) & \quad \Box \forall x(H^-x \rightarrow \forall y(Oxy \rightarrow \neg \Box Oxy)) \end{aligned}$$

The explanatory power granted so far concerns these *de dicto* necessities only derivatively (as we shall shortly see); it primarily concerns (EO^+) and $(\neg EO^-)$. What I granted is that the a priori *explicit* knowability of *essentialist* principles like (EO^+) and $(\neg EO^-)$ can be elucidated in a concept-based fashion. Some explanatory power as far as *essentialist* claims are concerned must therefore be credited to concept-based epistemologies. This is a more substantial claim than merely stating the already widely accepted claim that *de dicto* necessities can be so elucidated.

But I want next to determine how far this explanatory power reaches. To do so, I shall assess how helpful it is to the modal epistemologist that we can elucidate, in a concept-based fashion, the knowability conditions of conceptual essentialist principles like (EO^+) and $(\neg EO^-)$. With the current stock, we can distinguish four other major remaining tasks in the agenda of the modal epistemologist: elucidating the knowability conditions of *de dicto* modal truths, of *non-conceptual* essentialist principles, of (non-conceptual) particular essential truths, and of (non-conceptual) *de re* possibilities. Accordingly, in order to assess the significance of the credited explanatory power, one must explore how (whether) it could assist us in relation to each of those remaining tasks.

2.1. Measuring the scope of the explanatory power

I begin with the case of *de dicto* necessities. Knowledge of principles like (EO^+) and $(\neg EO^-)$ is knowledge of conceptual truths. Conceptual truths *per se* (unless they are conceptual *essential* truths like in the current case) are not, primarily, the kind of things knowledge of which a modal epistemologist is trying to elucidate. *De dicto* necessities, by contrast, are. When explaining *de dicto* necessities is the target, the modal epistemologist will arguably be derivatively interested in the knowability conditions of conceptual truths. This is so due to the facts, first, that these necessities result from modalizing a conceptual truth with a necessity operator; and, second, that our judgement that a given thought is a conceptual truth arguably grounds our assenting to the result of modalizing it with a necessity operator. To this extent, the fact that we can elucidate our epistemic access to *conceptual* essentialist principles like (EO^+) and $(\neg EO^-)$ in a concept-based fashion contributes to our elucidation of the knowability conditions of the *de dicto* necessities in their vicinity: $\Box(EO^+)$ and $\Box(\neg EO^-)$. The explanatory power extends, derivatively, at least this (little) far.

I shall next argue that it doesn't extend beyond this. First, knowledge of (EO+) and of (¬EO-) will not, even when explicit, help us *acquire* particular essentialist knowledge (like as to whether a given individuals' origins are essential to her). As a result, the task of elucidating the knowability conditions of the latter will not be eased by our having available *at all* an elucidation (let alone concept-based) of the knowability conditions of the former. This negative result will easily extend to the case of non-conceptual essentialist principles.

Suppose there is an organism in front of me. Let's call it 'a'. Assume—for easiness of reasoning—that I know it is a (female) human*. Suppose also that I (reasonably) want to acquire (first-hand) knowledge as to whether a's origins are essential to her.¹² Neither explicit knowledge of (EO+) nor of (¬EO-) will be of help in answering this essentialist question about a's origins. These two conceptual principles are universal quantifications. It is a truism that knowledge of $\forall x(Px \rightarrow Qx)$ is not by itself sufficient to put us in a position to know that Qa for any given a that is in fact Q . In order to acquire knowledge that Qa via a deductive route that exploits the universal quantification, additional knowledge that Pa would be needed. But this doesn't always suffice for the possibility of *acquiring* knowledge of Qa via this deductive route. As I will next motivate, a further requirement is that the universal quantification at hand not be what I shall call 'an immediate conceptual truth'; like, precisely, (EO+) and (¬EO-). An immediate conceptual truth is a conceptual truth of the form $\forall x(Px \rightarrow Qx)$ where the concept $\langle Q \rangle$ figures in the possession conditions of $\langle P \rangle$ contributing to specifying $\langle P \rangle$'s application conditions. In the particular case at hand, in virtue of involving immediate conceptual truths as major premises, none of the two deductions below—despite being valid—constitute effective ways of acquiring knowledge of their conclusions:

(1)
$\begin{aligned} \text{(EO+)} \quad & \forall x(H^+x \rightarrow \forall y(Oxy \rightarrow \Box Oxy)) \\ & H^+a \rightarrow \forall y(Oay \rightarrow \Box Oay) \\ & H^+a \\ \therefore & \forall y(Oay \rightarrow \Box Oay) \end{aligned}$

(2)
$\begin{aligned} \text{(¬EO-)} \quad & \forall x(H^-x \rightarrow \forall y(Oxy \rightarrow \neg\Box Oxy)) \\ & H^-a \rightarrow \forall y(Oay \rightarrow \neg\Box Oay) \\ & H^-a \\ \therefore & \forall y(Oay \rightarrow \neg\Box Oay) \end{aligned}$

The conclusion in (1) says that, whatever a's origins, those are essential to her; and the conclusion in (2) says that they are *not* essential to her. The following unfolds why none of these two deductions are ways of acquiring knowledge of them. The piece of knowledge I am—under the assumptions above—trying to acquire is whether *human** a has her origins essentially. Once I know—as per the assumption—that $\langle \text{human}^* \rangle$ applies to a , the acquisition of knowledge as to whether a's origins are essential to her is *identical to* the acquisition of knowledge as to whether

¹² The parenthetical 'reasonably' is to rule out that I already am in possession of such knowledge.

it is $\langle human^+ \rangle$ or $\langle human^- \rangle$ that (in addition) applies to her.¹³ Consequently, to say that we can acquire (first-hand) knowledge of whether a 's origins are essential to her by means of one of the deductive routes above is to say the futility that we can acquire (first hand) knowledge of whether a 's origins are essential to her by *having acquired* (first hand) knowledge of whether a 's origins are essential to her.¹⁴

Ultimately, the reason is that, in the current cases, the universal generalization involved—(EO+) or (¬EO)—is an *immediate conceptual* essentialist principle. For this has the following consequence. The relevant minor premise— H^+a or H^-a —semantically implies the consequent of the relevant major premise— $\forall y(Oay \rightarrow \Box Oay)$ or $\forall y(Oay \rightarrow \neg \Box Oay)$ —in an epistemically distinctive way: failure to recognise the implication indicates (*ceteris paribus*) failure of concept-possession; of $\langle H^+ \rangle$ or $\langle H^- \rangle$. For this reason, knowledge *that a is a human⁺* involves knowledge *that a's origins are essential to her*. I cannot therefore *acquire* knowledge of the latter via a deduction that exploits antecedent knowledge of the former. If I know the former, it is too late for me to acquire knowledge of the latter: I already know it.^{15, 16}

The point generalizes to other valid deductions whose universal generalisations are immediate conceptual truths. Suppose that our concept $\langle vixen \rangle$ encodes the (immediate conceptual) principle that all vixens are female animals. For reasons parallel to those above, explicit knowledge of that principle would play no role in my acquiring knowledge, of a given vixen, that it is a female animal. The ultimate reason: given the application conditions of the concept $\langle vixen \rangle$, if I am to acquire first-hand knowledge that the animal in front of me is a vixen

¹³ This is so in virtue of what remains of $\langle human^+ \rangle$'s and of $\langle human^- \rangle$'s application conditions once those of $\langle human^* \rangle$ have been subtracted: namely, their essentialist portions.

¹⁴ A referee for this journal suggested that the deductive route might still be a good way of articulating (i.e., making explicit) implicit essentialist knowledge. I don't need to disagree with this. And I also think that, even if it were true, it wouldn't lessen the current problem. The explanation this would engender is that (even in the absence of *explicit* knowledge of, for instance, (EO+)) one can explicitly know that $\forall y(Oay \rightarrow \Box Oay)$ by knowing it implicitly in virtue of knowing (explicitly) that H^+a . This explanation would make it urgent to elucidate the implicit *knowability* of $\forall y(Oay \rightarrow \Box Oay)$. By the nature of $\langle human^+ \rangle$, this amounts to an explanation of how one can *know* (at all) that this *modally loaded* concept applies to a . This explanation would now be where most of the epistemological action would take place and our knowledge of (EO+) wouldn't be explanatory here. (I have dealt with a similar issue in (Roca-Royes 2018).)

¹⁵ Thanks to Ralf Busse for pressing me to clarify this.

¹⁶ Another referee for this journal pressed me—for good reasons having to do with strength needed—to restrict the scope of the argument to what I am calling 'immediate conceptual truths', leaving therefore out of its scope truths such as, borrowing their example, *if x is a fox, x is not a mountain*; that is, truths that have a saying to being conceptual truths but that, if conceptual at all, they are not immediately so. I agree with the referee that the so-restricted argument is enough for my purposes here and I am grateful for their suggestion how to avoid superfluous (potentially controversial) commitment to a stronger premise.

I must not remain neutral on its sex. Once I knowledgably determine it is a vixen, it's too late to acquire knowledge that it is a female animal. I already know it.

The point does *not* generalize to valid deductions whose universal generalisations are not conceptual truths.¹⁷ If I know that (all) squirrels (happen to) have twenty-two teeth, and if a squirrel that I've been able to recognize as such on the basis of conceptual competence crosses my way, I'm *thereby* in a position to acquire knowledge that it has twenty-two teeth. So the point is not—and should not be mistaken for—a general point against the possibility of acquiring knowledge by means of deductive reasoning. The point is rather that, when $\forall x(Px \rightarrow Qx)$ is an immediate conceptual truth, one cannot acquire knowledge of Qa by means of deductive reasoning that exploits knowledge of that generalization and of Pa . In such cases, knowledge of the universal generalization does nothing to improve our epistemic situation in relation to the project of acquiring knowledge as to whether Qa (for a given a). Knowledge of Qa should be acquired independently of our knowledge of $\forall x(Px \rightarrow Qx)$ and, arguably, as a *pre-condition* to knowing whether a is P ; given that *being* Q is a condition for the correct applicability of $\langle P \rangle$ that enters its possession conditions.

Now, in general, if knowledge of X (in the example, of (EO^+) and $(\neg EO^-)$) does not improve our epistemic situation with respect to acquiring knowledge as to whether Y (in the example, whether a 's origins are essential to her), the task of elucidating the knowability conditions of Y will not be eased by there being an elucidation of the knowability conditions of X at our disposal. The current case is no exception to the general claim. As a result, an elucidation of how we (can) know whether $\langle human^+ \rangle$ or $\langle human^- \rangle$ applies to a certain known-to-be-human*-individual cannot profit from our explicit access to (EO^+) or $(\neg EO^-)$. Consequently, when it comes to elucidating (non-conceptual) particular essentialist knowledge, the modal

¹⁷ In relation to the previous footnote: a further generalizability question now is whether the argument generalizes to deductions whose universal generalizations are conceptual essentialist principles which are nonetheless not immediately so. I lean towards the answer 'yes, even if not straightforwardly'. It might have been behind the referee's comments that a negative answer might open the door back to concept-based rationalism by means of such non-immediate-yet-conceptual generalizations. I cannot unfold at length my reasons for the positive answer, but I can offer the following two-fold suspicion: (i) wherever, in a given conceptual network, the essentialist load of a (non-immediate) conceptual essentialist principle, CP, comes from, it can be tracked down to an immediate conceptual principle, ICP; (ii) epistemic exploitation of ICP would both be necessary to deductively acquire knowledge of a particular essentialist claim using CP and render that deduction useless (as per the argument in the main text). A working example of a non-immediate CP that builds on the examples in the main text would be as follows: $\forall xy(Oxy \rightarrow H^+x \rightarrow \Box Oxy)$; that is: origins are such that, if they are of humans⁺, they are necessary of them. To get to a particular essentialist claim exploiting this generalization—e.g., *that* $\Box Oab$ —one would need the minor premise *that* H^+a which, in conjunction with Oab , and as per the argument above, already involves knowledge that $\Box Oab$. Admittedly, the task remains of scrutinizing potentially harder cases.

epistemologist will not benefit from the explanatory power that concept-based accounts have been granted to have; the power does not reach this far.

Only a small step is now needed to argue that knowledge of (EO⁺) and of (¬EO⁻) will not help us either in establishing any of the *non-conceptual* (EO*) or (¬EO*); to recall:

$$(EO^*) \quad \forall x(H^*x \rightarrow \forall y(Oxy \rightarrow \Box Oxy))$$

$$(\neg EO^*) \quad \forall x(H^*x \rightarrow \forall y(Oxy \rightarrow \neg \Box Oxy))$$

The small step starts by noting that the choice of *a* above was arbitrary among the known-to-be-human* individuals. Given that *a* was known to be human*, the paragraphs above show also that knowledge of the conceptual (EO⁺) and (¬EO⁻) does not improve our epistemic situation with respect to the project of acquiring knowledge as to whether the following claims—instances of (EO*) and (¬EO*) respectively—are true:

$$H^*a \rightarrow \forall y(Oay \rightarrow \Box Oay)]$$

$$H^*a \rightarrow \forall y(Oay \rightarrow \neg \Box Oay)]$$

And given that *a* was arbitrary among the known-to-be-human* individuals, it follows from here that knowledge of (EO⁺) and (¬EO⁻) does not improve either our epistemic situation with respect to acquiring knowledge as to whether (EO*) or (¬EO*) is true. As before, given that our epistemic situation with respect to those projects is not improved by our knowledge of (EO⁺) and (¬EO⁻), an elucidation of how we (can) know the non-conceptual (EO*) and (¬EO*) cannot profit from the fact that we have available an elucidation of the knowability conditions of the conceptual principles. This concludes the third case: the explanatory power does not reach non-conceptual essentialist principles either.

Our remaining case is that of *de re* possibilities. The most obvious way in which (explicit) general essentialist knowledge could assist us in acquiring knowledge of *de re* possibilities would be by means of what I called in §1 ‘a mirroring epistemology of modality’, also referred to in the literature as a deductive essence-first model.¹⁸ Yet, any given instance of such a model will need to involve, as premises, *particular essentialist* claims involving the individual at issue, and (general) conceptual essentialist knowledge has just been seen not to be of assistance here. By extension, it won’t be of assistance either when it comes to acquisition of knowledge of *de re* possibilities.

To sum up so far: the explanatory power granted above is very limited in scope.

¹⁸ That is, deducing *de re* possibility knowledge from essentialist knowledge on the basis of *de re* possibilities being characterized as *allowed by* essentialist truths. See (Hale 2013, 253) and (Vaidya 2015, §2.4) for more on this model.

Let me now generalize beyond our running-example. Even if we had a huge stock of *general* modally loaded concepts—something I remain neutral on—explicit knowledge of the (associated) conceptual essentialist principles we could arrive at by reflection on them would not help us much vis-à-vis the agenda of the modal epistemologist. As a result, a comprehensive epistemology of modality will make limited use of the fact that such conceptual essentialist principles can be elucidated in a concept-based fashion.

The scope of this limitation can be stressed by noting that elucidating our epistemic access (if we enjoy it) to non-conceptual essentialist principles, to (non-conceptual) particular essential truths, and to (non-conceptual) *de re* possibilities are among the hardest tasks in modal epistemology. And also by noting that, *if* we possessed modally loaded concepts like *<human+>*, the hardest tasks would also include that of elucidating *how can we know* to which entities, if to any, such concepts apply. Recognizing that an entity falls under *<human*>* would still fall pressingly short of that knowledge.

Despite the fact that some might have dreamt of the tandem, one cannot have *both* of the following: (i) Essentiality of Origins for Humans is a priori knowable due to the nature of *<human>*; and (ii) *a is human* is a non-modal fact. Thus, to the extent that general modally loaded concepts could demystify *our* knowledge of essentialist principles—something which would happen if we did possess some such concepts—our epistemic access to the truth-values of thoughts like *a is human* would *thereby* become mysterious; for those are thoughts only the surface form of which would be non-modal.

3. Singular modally loaded concepts as a source of a priori modal knowledge

The generalization above is in itself a substantial result. More often than not, rationalist epistemologies of modality defend the (fundamental) apriority of modal knowledge by endorsing the apriority of general essentialist principles.¹⁹ The exact source of this apriority, however, is not sufficiently articulated. But we can say that either these (alleged) a priori principles are so *because* they are—or are derivable from—immediate conceptual truths, or not. If not, the burden is on such rationalist epistemologies: they should explain on exactly what grounds these principles are claimed to be a priori knowable. (Innateness? A special sort of intuition? A priori abductions?²⁰) If they are conceptual truths, the generalization shows that a concept-based explanation of our knowledge of them will do very little for us. If knowledge of *non-conceptual* essentialist principles, of (non-conceptual) particular essentialist truths, or of *de re* possibilities is at all obtainable, an explanation of its obtainability would still be completely owed.

¹⁹ For a sample, see Peacocke (1999, 168-169), Chalmers (2002, 194), and Soames (2006, 293).

²⁰ See for instance (Hale 2013, 271)

In this section, I scrutinize the idea that *singular* modally loaded concepts are another potential source of concept-based modal knowledge. Above I distinguished conceptual from non-conceptual essentialist principles. The (hypothetical) existence of *singular* modally loaded concepts makes me now distinguish *conceptual* essential truths about particular individuals from *non-conceptual* such truths. However, the case of singular concepts must be handled with more care. In particular, the step from there being conceptual essential *truths* (about a particular individual) to the possibility of conceptual essentialist *knowledge* (about them) is more fragile in the case of singular concepts. Under the assumption on concepts we're working with since §1, general conceptual essential truths can be explicitly known a priori by means of concept possession and appropriate articulation, even if—to be now stressed—it is not known of those truths whether they are (actually) vacuous or non-vacuous. A general, conceptual, essential truth, e.g. (EO+), will be vacuous if the corresponding general modally loaded concept, e.g., <human+>, has no instances. But ignorance as to whether <human+> is instantiated or not does not preclude the *concept-based* knowability of (EO+)—only of its being vacuously or non-vacuously true. The phenomenon that, in the case of singular concepts, corresponds to that of lack of instantiation (in the case of general concepts), is *emptiness*. And here, ignorance as to whether a singular modally loaded concept is empty or not might preclude the *concept-based* knowability of whether an essentialist singular thought involving it is true or not.²¹

For this reason, in what follows I shall first merely identify two sets of sufficient conditions for *conceptual* essentialist *knowledge* about *particular* individuals (§3.1). None of those two sets of conditions will be deemed satisfiable, for analogous reasons (§3.2). The fact that the reasons are analogous suggests that they are generalizable, and the suggested general conclusion will be that conceptual essentialist knowledge about particular individuals is not possible.

3.1. Conditions for conceptual essentialist knowledge about particular individuals

I will focus here on two (hypothetical) conceptual networks, CN1 and CN2, which, under certain—modal and existential—assumptions, would have enough expressive power to generate *conceptual* essential *truths* about *particular* individuals. Those truths are therefore candidates to being, in Boghossian's terms (1996), epistemically analytic (where something is

²¹ Only 'might' in order not to beg the question against Fine's views on *transcendent truths* like, arguably, *Socrates is human*. According to Fine, one such truth is true even in worlds where Socrates does not exist and where, therefore, the singular concept <Socrates> is empty. If this is so, ignorance as to whether <Socrates> is empty or not is nonetheless compatible with knowledge *that Socrates is human*. For knowledge that <Socrates> *could*—metaphysical 'could'—be non-empty might suffice to this effect. The main text is also careful not to beg the question against someone like Fine and this contributes to the scrupulousness of the discussion.

so when grasp of its meaning can suffice for justified belief in its truth), and the target is to identify the respective two sets of sufficient conditions for them being so.

The case of CN1. Let CN1 be a conceptual network that includes the following modally loaded singular concept SC1 (and that is otherwise as similar as possible to our conceptual network):

$SC1 = \langle \text{the person individuated by } \langle \text{originating from the human zygote } z \rangle \rangle^{22}$

SC1 is modally loaded due to the modal load of the notion of *individuation* (and cognates): a property *P* is individuating of individual *x* if and only if instantiation of *P* is both essential to *x* and sufficient for *x*'s existence. Unlike $\langle \text{the happy person} \rangle$, which, if non-defective as a singular concept, is only *contingently* non-defective (for there could be more than one happy person), SC1 is guaranteed to be non-defective as a singular concept.²³ Yet, its (guaranteed) non-defectiveness is no guarantee of its non-emptiness: it could be that there is nothing individuated by the property that SC1 makes reference to. Even if there were a person, *a*, that satisfied $\langle \text{originating from the human zygote } z \rangle$, that would not yet suffice (epistemic 'suffice') for the non-emptiness of SC1. For it might be possible for *a* to originate somehow else, or (non-exclusive 'or') it might be possible that some entity other than *a* instantiates $\langle \text{originating from the human zygote } z \rangle$. If the former, this property is not essential to *a* and, if the latter, its instantiation is not sufficient for *a*'s existence. In neither case would the property $\langle \text{originating from the human zygote } z \rangle$ be an individuating one.

The potential emptiness of modally loaded (non-defective) singular concepts is, as I shall motivate, the reason why certain *immediate conceptual truths* (about particular individuals) are nonetheless not *conceptually* knowable. In Boghossian's terms (1996, 2003), they are *not* epistemically analytic (despite conceptual truths!). Let me start unfolding the case.

Take any property, ψ , such that the following is an immediate conceptual truth:

- (a) $\langle \forall x(x = \text{the person individuated by } \langle \text{originating from the human zygote } z \rangle \rightarrow x \text{ is essentially } \psi) \rangle$

Thinkers possessing SC1 (in virtue of possessing CN1) are arguably in a position to know any true instance of (a). For example, as potential candidates (on whose plausibility I do not need to take a view):

²² By 'singular concept' one should understand the conceptual correlate of the linguistic 'term', whose semantic values are objects (whenever non-empty).

²³ This is due to the fact that it is part of the concept of $\langle \text{individuate} \rangle$ that this relation is a function and, therefore, the uniqueness of SC1 (or better: its uniqueness-if-instantiated) is (a priori) guaranteed.

- (a1) $\langle \forall x(x = \text{the person individuated by } \langle \langle \text{originating from the human zygote } z \rangle \rangle \rightarrow x \text{ is essentially a living being}) \rangle$
- (a2) $\langle \forall x(x = \text{the person individuated by } \langle \langle \text{originating from the human zygote } z \rangle \rangle \rightarrow x \text{ is essentially a human being}) \rangle$
- (a3) $\langle \forall x(x = \text{the person individuated by } \langle \langle \text{originating from the human zygote } z \rangle \rangle \rightarrow \text{originating from zygote } z \text{ is essential to } x) \rangle$

So (a1)-(a3) are—let us assume—conceptually true and knowable on this basis. Yet, most will grant that the truth of these universal claims is no guarantee that any corresponding instance of (b) is true:

- (b) $\langle \text{The person individuated by } \langle \langle \text{originating from the human zygote } z \rangle \rangle \text{ is essentially } \psi \rangle$

For instance:

- (b1) $\langle \text{The person individuated by } \langle \langle \text{originating from the human zygote } z \rangle \rangle \text{ is essentially a living being} \rangle$
- (b2) $\langle \text{The person individuated by } \langle \langle \text{originating from the human zygote } z \rangle \rangle \text{ is essentially a human being} \rangle$
- (b3) $\langle \text{The person individuated by } \langle \langle \text{originating from the human zygote } z \rangle \rangle \text{ essentially originates from } z \rangle$

What else is required for the truth of the (b)-thoughts? There is a natural possible answer congenial to, for instance, classical logic and there is a less (obviously-)natural answer congenial to free logic. As for the former: some—Hale and Wright (2009) among them—require in addition that the singular concept (in the subject position) in the (b)-thoughts be non-empty. As for the latter: others—Fine (2005) among them—think that it is only required that the singular concept be *possibly* non-empty. If *SC1* is empty yet possibly non-empty, the (b)-thoughts are transcendent truths, but truths all the same.²⁴ Despite their disagreement on truth conditions, the two answers converge in that knowledge of the (a)-thoughts does not suffice to put us in a position to know—let alone conceptually—any of the (b)-thoughts. I contend that, for *conceptual* knowledge of the (b)-thoughts above, the *conceptual* knowability of the *non-emptiness* (Hale and Wright) or of the *possible non-emptiness* (Fine) of *SC1* would be needed too.²⁵

²⁴ For the sake of the example, I am assuming that Fine would agree that predicates like ‘being the person individuated by $\langle \langle \text{originating from the human zygote } z \rangle \rangle$ ’ are unwordly predicates. Nothing essential depends on him agreeing on this particular example.

²⁵ Externalists might be tempted by the suggestion that knowledge of the (a)-thoughts above plus *the mere existence* of the person individuated by $\langle \langle \text{originating from the human zygote } z \rangle \rangle$ suffices for a (competent) belief in any of the corresponding (b)-thoughts to constitute knowledge. I am myself

Consider then the following two thoughts:

(c1) $\langle \exists x(x = \text{the person individuated by } \langle\langle \text{originating from the human zygote } z \rangle\rangle) \rangle$

(c2) $\langle \diamond \exists x(x = \text{the person individuated by } \langle\langle \text{originating from the human zygote } z \rangle\rangle) \rangle$

With this stock, I can identify the first set of sufficient conditions for conceptual essentialist knowledge about particular individuals. The disagreement as to what else is required for the truth of the (b)-thoughts will give us two variants of this first set: the *Hale&Wright-variant*, and the *Fine-variant*, which I shall nonetheless introduce simultaneously. If, in addition to the conceptually true (and arguably epistemically analytic) (a)-propositions, (c1) [or else (c2)] were also *conceptually* true (and knowable on this basis), then, access to (c1) [or else to (c2)] could be employed in reasoning to obtain *conceptual* knowledge of the (b)-propositions; that is, to obtain *conceptual* knowledge about the person [whether actual or merely possible] individuated by the property *«originating from the human zygote z»*. Now, one might want to insist that such knowledge, due to its inferential nature, would not be purely conceptual knowledge. Yet, it would be close enough to it to still deserve the label ‘conceptual’. For it would be a priori knowledge arrived at by means of a *deductive* reasoning which would only have exploited conceptually true (and conceptually known) premises.²⁶

As anticipated above, I don’t think these conditions are satisfiable but I shall postpone the case for it until I have identified the second set of sufficient conditions.

Before that, it is important to draw the following distinctions to prevent confusion about what exactly my claims will be. There are three notions the difference among which I want to stress: (i) *conceptual essential truth* about a particular individual; (ii) *conceptual essentialist knowledge* about a particular individual; (iii) *knowledge* (whether conceptual or not) *of a conceptual essential truth* about a particular individual. Continuing with our example above,

tempted by this (see my (Roca-Royes 2018)). We are used (since (Boghossian 1996 and 2003)) to the idea that conceptual truths might partially owe their truth to facts that go beyond meaning. The (b)-thoughts are particular conceptual truths and, in their case, their *truth* depends (partly) on an existential fact (or its possibility): the existence of the person individuated by *«originating from the human zygote z»*. But it is to be stressed that, under the current (externalist) suggestion, such existential fact *also* makes an indispensable *epistemic* contribution: it contributes to the knowability of the (particular) conceptual truth. What I am contending in the main text is that—regardless of the correctness of this externalist suggestion on knowability conditions for the (b)-thoughts—the envisioned *epistemic* contribution of the existential fact prevents the resulting (b)-knowledge from being *conceptual* knowledge; in the strict sense of epistemically analytic.

²⁶ This set of sufficient conditions (and also the one below) exploits conceptual *knowledge* of the (c)-thoughts. This is inessential but it makes the current set a very vivid example of its class. If the (c)-based deductive route is not the only route to *conceptual* knowledge of (b)-thoughts (something I can remain silent about), the alternative route(s) would open the door to (non-circular) *conceptual* knowledge of the (c)-thoughts. In either case, the conceptual-knowability requirement above seems the appropriate one.

there is a non-artificial sense in which (b)-propositions are *conceptual essential (particular) truths* if true, so I'm endorsing the non-emptiness of notion (i). What I shall be arguing in §3.2 is that we cannot obtain concept(-based) knowledge of them (they are *not* epistemically analytic); so, necessarily, knowledge of them would fall under (iii) and not under (ii).²⁷ I now turn to the second case.²⁸

The case of CN2. Let CN2 be a conceptual network that includes a (non-defective) singular concept, $\langle C \rangle$, such that it is a *conceptual truth* (if true) that the property by means of which it would pick out, if non-empty, the only object it would pick out is a uniqueness essential property. Let φ be such property. (One might want to think of $\langle C \rangle$ as $\langle \text{the } \varphi \rangle$.) In CN2, therefore, there are further concepts, beyond $\langle C \rangle$, that collectively encode (a_{CN2}) :

$(a_{CN2}) \langle \varphi \text{ is a uniqueness essential property} \rangle$

understood as conceptually implying:

(a') $\forall x(\varphi x \rightarrow (E\varphi x \wedge \neg \exists y(\varphi y \wedge y \neq x)))$

(For all x , if x is φ , x is essentially φ and there is no entity other than x that is φ .²⁹)

As before, the existence of $\langle C \rangle$ does not guarantee its non-emptiness. Here, there are two (salient) potential sources of emptiness: (i) the (uniqueness) essential property might lack an

²⁷ One might worry that the idea of a *conceptual particular truth* (let alone essential) is a non-starter. For how—the worry would go—could something be a *conceptual truth* when its truth depends partly on the (possible) existential fact about the individual at issue? I answer by invoking Boghossian's distinction between *metaphysical* and *epistemic* analyticity (1996, 2003). I sympathise both with the distinction and with the thesis that *metaphysical* analyticity—the notion of something owing its truth entirely to its meaning, without any contribution from the facts—is, if coherent at all, an empty notion. The *particular (essential) conceptual truths* (if true) that are the focus of this section—i.e., the (b)-thoughts—simply constitute further examples of conceptual truths whose truth is not solely down to meaning; they depend also on existential facts (or possible existential facts) about the entities they are about. This dependence should not undermine the fact that there is a non-artificial sense of 'conceptual truth' in which such truths are conceptual truths if true. It is the sense that captures the difference between the particular thought $\langle \text{The one that is essentially } \varphi \text{ is essentially } \varphi \rangle$ and the also particular thought $\langle \text{The one that is essentially } \varphi \text{ is having a vodka} \rangle$.

²⁸ Another thesis from Boghossian is that *epistemic analyticity* is not empty. I wish to remain neutral on this for now (though see footnote 35). The main text only says that if the notion of 'epistemic analyticity' is not empty, instances of it will not be found among the truths expressed by (b)-thoughts.

²⁹ This does not amount to φ being an *individual essence*, as I'm not requiring that there *could not be* an entity other than x that instantiates the uniqueness φ . The case of *it being a conceptual truth that } \varphi \text{ is an individual essence}* could be used to construct a third example, by means of another conceptual network CN3. Yet, the case of CN3 would not be different from that of CN2 as far as crucial features are concerned, and it is subsumed under the generalization below in the main text.

instance; and (ii) there might be no (uniqueness) essential property to feed a value for $\langle C \rangle$.³⁰ The discussion below—as I shall make clear—subsumes both potential sources of emptiness.

Abstractionism provides an illuminating CN2-example. Think of $\langle C \rangle$ as the concept \langle *the number of <being Zero>* \rangle , as forged by means of Hume's Principle; and think of its corresponding property, φ , as \langle *being the number of <being Zero>* \rangle . Finally, think of \langle *number* \rangle and \langle *abstraction principle* \rangle , as possessed by the abstractionists,³¹ as good candidates to being among the further concepts in CN2. On this example, the (a)-type thought is (a4):

(a4) \langle *«being the number of <being Zero>» is a uniqueness essential property* \rangle

Now consider:

(b4) \langle *the number of <being Zero> is essentially the number of <being Zero>* \rangle ³²

(b5) \langle *the number of <being Zero> is essentially a number* \rangle ³³

As in the case of CN1, some think that in order for (b4) and (b5) to be true, $\langle C \rangle$ must be non-empty and others think that it is only required that $\langle C \rangle$ be *possibly* non-empty.³⁴ But possession of $\langle C \rangle$ is not *per se* sufficient—not even in combination with conceptual knowledge of the conceptually true, if true, (a4)—to put us in a position to *conceptually* know any of (b4) or (b5). Instead, the *conceptual knowability* of the non-emptiness (Hale and Wright) or of the possible non-emptiness (Fine) would be needed too. Consider then the following two claims:

(c3) \langle $\exists x(x = \text{the number of } \langle \text{being Zero} \rangle)$ \rangle

(c4) \langle $\diamond \exists x(x = \text{the number of } \langle \text{being Zero} \rangle)$ \rangle

We now have enough stock to identify the second set of sufficient conditions for *conceptual essentialist knowledge* about particular individuals. As above, there is a *Hale&Wright-variant* and a *Fine-variant* which I introduce simultaneously. *If* we could have conceptual knowledge of

³⁰ The assumption that $\langle a_{CN2} \rangle$ is a *conceptual truth* if true implies that the (predicative) concept $\langle \varphi \rangle$ (as belonging to CN2) is such that it is to apply to a property, δ , *only if* δ has the (higher order) properties of being a uniqueness property and of being essential to its bearer. Even if there were an instantiatable δ , there might be no φ . There won't, if δ is not a uniqueness property or if it is not an essential property. (One might want to think of $\langle \varphi \rangle$ as \langle *being uniquely and essentially* δ \rangle , but this is not mandatory. And, in fact, when it comes to the example that I will give next in the main text, thinking of it in those terms would betray the spirit of the abstractionist (see (Hale&Wright 2009: 200 and footnote 34)).)

³¹ That is, think of \langle *number* \rangle as a pure sortal concept and of \langle *abstraction principle* \rangle as referring to abstraction principles that, if good, forge both pure sortal concepts and *abstract*, singular modally loaded concepts that involve those sortal concepts.

³² An instance of $\langle C$ *essentially* φ 's \rangle .

³³ An instance of $\langle C$ *essentially* ψ 's \rangle (for any ψ such that $\langle \forall x(\varphi x \rightarrow \psi x) \rangle$ is a conceptual truth).

³⁴ In this particular example, the two requirements (extensionally) coincide if, as is plausible, numbers are necessary if possible (as well as possible if real). But things would be different if the relevant $\langle C \rangle$ were a concept of a contingent being, and there is no (theoretical) impediment to one such example.

(a4), and *if* (c3) [or else (c4)] were also *conceptually* true and knowable on this basis, then, access to (c3) [or else to (c4)], plus possession of $\langle C \rangle$, could be employed in reasoning to obtain conceptual knowledge of (b4) and (b5); that is, to obtain conceptual essentialist knowledge about the unique entity (possibly) picked out by $\langle \textit{being the number of } \langle \textit{being Zero} \rangle \rangle$. Again, some might insist that such knowledge would not be purely conceptual (due to its inferential nature). Yet, for the reasons given earlier, it would still deserve the label ‘conceptual’.

(This, as anticipated, subsumes both potential sources of emptiness. For knowledge of (c3) or of (c4) requires not only the (possible) existence of a witness for the existential claim, but also that the predicative concept $\langle \varphi \rangle$ refers; in our example: $\langle \textit{being the number of } \langle \textit{being Zero} \rangle \rangle$. The requirement that predicative concepts refer was also in place in the *CN1*-example. I omitted it there because their not referring was not an equally salient potential source of emptiness of the singular concept at issue in the main *CN1*-example.³⁵)

3.2. Assessing the satisfiability of those conditions

As anticipated, these two sets of sufficient conditions for *conceptual* essentialist knowledge about particular individuals are not satisfiable. Yet, the two variants distinguished in each case require different treatments. The *Hale&Wright-variant* requires us to address whether it is ever conceptually knowable (thereby true) that a singular concept is non-empty, whereas the *Fine-variant* requires us to address the question whether it is ever conceptually knowable (thereby true) that a singular concept is *possibly* non-empty.

The *Hale&Wright-variant case*: Without further ado, existential knowledge is never conceptual knowledge (not even of the inferential sort).

The *Fine-variant case*: The (c)-thoughts relevant to the current case are the $\diamond\exists x$ -thoughts:

(c2) $\langle \diamond\exists x(x = \textit{the person individuated by } \langle \textit{originating from human zygote z} \rangle) \rangle$

(c4) $\langle \diamond\exists x(x = \textit{the number of } \langle \textit{being Zero} \rangle) \rangle$

I contend that they cannot be known on conceptual grounds. *Perhaps*, for any coherent, *non*-modally loaded predicative concept $\langle \varphi \rangle$, we can know a priori that $\langle \diamond\exists x(\varphi x) \rangle$. For instance—as my best shot at finding a likely example—one could appeal to the apriority of a *principle of recombination* to get also the apriority of $\langle \textit{it is possible that there is a talking donkey} \rangle$. A priori

³⁵ In relation to footnote 28: this contains grounds for generalizing the reasons against the epistemic analyticity of (b)-thoughts to *any* thought. If—as seems plausible—predicative concepts must refer to enable truths, *no* truth that is a conceptual-truth-if-true would be *epistemically* analytic. For the sake of letting the discussion take off, I have been purposefully ignoring this threat in the main text. Doing so is dialectically convenient also for this reason: (b)-thoughts—in virtue of being singular thoughts—have an additional potential source of *lack of truth-value*: namely, *singular concepts*, and this is the one that is dialectically salient here. In footnote 39, when we will have enough stock, I resume this issue to hint at how one could still rescue *apriority* nonetheless.

perhaps, but hardly conceptual knowledge. Now, if the (c)-thoughts involved *non*-modally loaded predicative concepts (as components of the singular concepts), I would have said enough to settle the *Fine*-case.³⁶ But they do not: *<individuation>* is a modal notion, and the abstractionist's *<number>* is a sortal, essentially loaded concept. Generalizing: by the nature of the case, any other (c)-thought will involve modal notions. As a result, what I have said so far does not seem to cover the (c)-thoughts. However, the fact that they involve modally loaded predicative concepts can only make it more persuasive that epistemic grounds for *these* $\diamond\exists$ -thoughts cannot be conceptual. For even if they could be known a priori somehow, an a priori principle of recombination would not suffice. Something to the effect that certain *categorical* properties are essential to their bearers would be needed *in addition*. (For example: that properties of biological origins are essential to their bearers.) And the epistemic grounds for this extra needed thing can hardly be, as per §2.1, conceptual *either*.³⁷

I anticipated just before §3.1 that the reasons offered against the claim that *CN1* or *CN2* allow for *conceptual* essentialist knowledge about particular individuals will be generalizable. The reasons offered in this subsection are in fact general reasons, which I have illustrated by means of the examples stemming from *CN1* and *CN2*. The general conclusion is that, regardless of where (within a conceptual network) the modal load of a singular modally loaded concept *<C>* stems from, *conceptual* knowledge that a thought about *C* is true requires the *conceptual* knowability that *C* exists or could exist. But that is not conceptually knowable. As a result, there is no room for *conceptual essentialist knowledge* about particular individuals. And this is so even if there is room, as I am granting and indeed motivating, for *conceptual* essential *truths* about particular individuals; like—under appropriate assumptions—the ones expressed by (b)-thoughts.

4. A surrogate that would still allow us to vindicate concept-based rationalism?

Nonetheless, the views of Hale and Wright on abstractionism (e.g., 2001, 2006) provide a model for the claim that, in some cases, there might be a *hybrid* surrogate that would still render *a priori*—yet not wholly conceptual—essentialist knowledge about particular individuals. This model, however, does not extend beyond the abstractionist's abstracta. Yet, finding inspiration in it, a different model suggests itself: one that, while theory neutral, would be similarly hybrid.

³⁶ I restricted my claims above to *non*-modally loaded predicative concepts because *recombination principles* usually range over categorical properties.

³⁷ When the properties involved are categorical, the general concepts referring to them will *not* be modally loaded. As such, the corresponding essentialist principles will be non-conceptual. In §2.1 we saw that conceptual knowledge doesn't assist us in deciding the truth or falsity of non-conceptual essentialist principles, so knowledge of them won't be conceptually grounded.

Hale and Wright's surrogate concerns a restricted class of (c)-thoughts: those about the abstractionist's *abstracta*; that is, about abstract objects singular concepts for which have been forged by means of (good) abstraction principles. The story is dense, but a watered-down version of it suffices for current purposes. According to them, we are *entitled* to abstraction principles being good.³⁸ When an abstraction principle— $(\forall a)(\forall b)(\Sigma(a) = \Sigma(b) \leftrightarrow E(a, b))$ —is in fact good, this entitlement grounds knowledge of the truth of the identity statement $\lceil \Sigma(a) = \Sigma(b) \rceil$ for any a and b that are related by E . This knowledge is, therefore, *entitlement*-based. And such knowledge grounds in turn knowledge of those (c)-thoughts which, like (c3)-(c4), involve singular modally loaded concepts *forged by abstraction*. Restated here:

(c3) $\langle \exists x(x = \text{the number of } \langle \text{being Zero} \rangle) \rangle$

(c4) $\langle \diamond \exists x(x = \text{the number of } \langle \text{being Zero} \rangle) \rangle$

It grounds the $\exists x$ -thoughts because the truth of $\lceil \Sigma(a) = \Sigma(b) \rceil$ requires—according to Hale&Wright (e.g., 2009)—the *existence* of referents for the singular terms. It grounds the $\diamond \exists x$ -thoughts because they are implied by the so-grounded $\exists x$ -thoughts and arguably known on those bases.

A priori knowledge of existential claims about the abstractionists' abstracts, therefore, flows from certain entitlements. This knowledge, together with *conceptual* knowledge of the (a)-thoughts, could be exploited to arrive, a priori, at knowledge of the (b)-thoughts. For instance:

(b5) $\langle \text{the number of } \langle \text{being Zero} \rangle \text{ is essentially a number} \rangle$

In §3.1, I distinguished between immediate conceptual knowledge—like, presumably, of *vixens are female*—and inferential knowledge that still deserves the label 'conceptual' because it is knowledge arrived at deductively from only purely conceptual knowledge. On the current rationalist model, knowledge of (b5) falls under none of these categories, for this piece of knowledge is also, significantly, entitlement-based. The current knowability model is therefore hybrid in a (so far) novel way: it is an *entitlement-and-concept*-based account.³⁹

³⁸ This is exactly what they suggest here, in the context of discussing the *bad company* concern that afflicts implicit definitions in general (and abstraction principles in particular):

[...] such implicit definitions, like any explanations, may go wrong. In [Hale and Wright 2000], a variety of conditions are proposed—including forms of conservativeness, harmony, and generality—as necessary and (tentatively) sufficient for an implicit definition of this general character to be both meaning-conferring and knowledge-underwriting. Our position, however, is that, in any particular case, the satisfaction of these conditions is a matter of *entitlement*. (Hale and Wright 2009, 191-192)

³⁹ In relation to footnote 35: If there is no wholly conceptual knowledge, one can still rescue the apriority of *all vixens are female* by some equally hybrid strategy. One might claim, for instance, that one is *entitled* to an abundant conception of properties. (Inspiration for this example derives from the analogy in (Hale and Wright 2009, 207-208).) This would yield entitlement-and-concept based knowledge of *all vixens are female* (and of (a4) above). I intend this to support further the dialectical convenience of

How persuasive such an explanation is deserves proper exploration—more than I shall make here—but the hybrid nature of the model should not be worrying *per se*. If correct, the model can explain *a priori* knowledge of (b5) in a way that still appears *significantly* concept-based. The dialectic so far is worth stressing though. We saw in §2 that general modally loaded concepts won't get us very far. And we've seen from §3 that singular modally loaded concepts won't get us far either, unless something *in addition to* considerations on the nature of concepts—e.g., entitlements—kicks in. Despite the fact that hybridity is not worrying *per se*—I remain neutral about the abstractionist's epistemology⁴⁰—I find it important to identify and stress the *necessarily hybrid* nature of any potentially correct concept-based epistemology of essence.⁴¹ For that, I contend, has been overlooked.

As anticipated above, however, this model cannot be extended beyond the abstractionist's abstracta. For, as Hale and Wright stress,⁴² abstraction, even when using apparently concreteness-entailing properties, will forge *abstracta* concepts. In addition, those who are not inclined to abstractionism to begin with, will not do much with the epistemology of modality it engenders. For this reason, I want to submit for exploration a different model: one that is neutral on abstractionism, yet inspired by the abstractionist hybrid epistemology. Reflection on this proposal will allow me to conclude my case for the main thesis of the paper; namely, that concepts have a limited role to play in the epistemology of essence and *de re* modality.

To the best of my knowledge, the proposal has not been explored before, but it suggests itself on the basis of what the discussion has taught us so far; that any potentially correct concept-based epistemology of essence will *need* to be hybrid. It develops from the thought that perhaps entitlements, differently employed, might engender a more general (and theory-neutral) entitlement- and concept-based model; one that could explain essentialist knowledge about concrete entities, as well as abstract, regardless of how they are theoretically construed.

Without myself endorsing it, the proposal is that we are entitled to the individuativeness (or essentiality, for a variant) of *every* property unless we have reasons to the contrary (that would

ignoring the threat identified in footnote 35. For, even with this entitlement in place, neither *general* nor *singular* modally loaded concepts would help the (entitlement-and-)concept-based modal epistemologist. Something in addition would be needed, and the current view under exploration is that, at least in the case of abstracts, *further* entitlements might do.

⁴⁰ Thanks to Crispin Wright for pressing me on this.

⁴¹ In case it is not sufficiently clear: 'necessarily hybrid' beyond the entitlements I fantasized with in footnote 39.

⁴² See their discussion (2001, 2009) on (Potter & Sullivan 2005 and Sullivan & Potter 1997).

thereby undermine the entitlement).^{43, 44} Let us assume that «originating from human zygote z» is indeed an individual essence. Recall now these two thoughts from §3.1:

(c1) $\langle \exists x(x = \text{the person individuated by } \langle \text{originating from the human zygote } z \rangle) \rangle$

(c2) $\langle \diamond \exists x(x = \text{the person individuated by } \langle \text{originating from the human zygote } z \rangle) \rangle$

Provided I know of the (possible) existence of z , knowledge of (c2) can flow quite straightforwardly from the entitlement to that property being an individual essence.⁴⁵ Provided I also know (presumably empirically) that something instantiates that property—assumed for simplicity to be categorical—knowledge of (c1) would also be grounded partly in such entitlement.⁴⁶

Like the abstractionist model, what the current proposal delivers is *entitlement*-based knowledge of the (c)-thoughts. On this basis, and in conjunction with the *concept*-based knowledge of the (a)-thoughts, we could arrive at knowledge of the corresponding (b)-thoughts that could be said to be *entitlement- and concept*-based. In the current example, (b1)-(b3) are among the corresponding (b)-thoughts. I shall unfold the reasoning for the case of (b1)/(c1):

<i>entitlement</i>	(1) $\langle \langle \text{originating from human zygote } z \rangle \text{ is and individual essence} \rangle$
<i>a posteriori</i>	(2) $\langle \exists x(x = \text{the person who originates from human zygote } z) \rangle$
(1), (2)	(c1) $\langle \exists x(x = \text{the person individuated by } \langle \text{originating from human zygote } z \rangle) \rangle$
<i>concept-based</i>	(a1) $\langle \forall x(x = \text{the person individuated by } \langle \text{originating from the human zygote } z \rangle \rightarrow x \text{ is essentially a living being}) \rangle$
(c1), (a1)	(b1) $\langle \text{The person individuated by } \langle \text{originating from human zygote } z \rangle \text{ is essentially a living being} \rangle$

The cases of (b2) and (b3) would unfold analogously. (b1)-(b3) are what we called in §3.1 *conceptual essential truths* about a particular individual and, on this proposal, they are partly grounded in *entitlements* plus, in some sense to be specified in §5, *conceptual truths*; namely,

⁴³ One might apply a restriction on the type of properties for which the entitlement holds; e.g., to *uniqueness* properties. The wider the restriction, however, the less explanatory power the account will have. (It will for instance be silent about how we know about the essentiality of non-uniqueness properties, like *being human*.)

⁴⁴ I am intending ‘entitlement’ in Wright’s *entitlement of cognitive project* sense (2004). An obvious first question is whether the suggested entitlements satisfy Wright’s conditions for it. A negative answer might amount to an objection to the proposal (provided that no other suitable type of knowledge-underwriting entitlement can be engineered to the rescue). I leave this worry aside for the sake of exploration.

⁴⁵ Due to the mention of z in our current « φ », these pieces of knowledge are *a posteriori* and only *fundamentally a priori*, but this is contingent to the example. Other examples might give us a larger dose of apriority. For instance, «being the first natural number».

⁴⁶ Such entitlement-based knowledge would be *a posteriori* yet *fundamentally a priori*.

the (a)-thoughts. One might worry that there is a battery of internal drawbacks that make one such view difficult to endorse,⁴⁷ but I don't need to get into those. For current purposes, there is a more urgent dialectical point to be made, about the exact role of concepts in this proposal.

5. Where are we left?

This paper is an exploration of the prospects of rationalist *concept*-based epistemologies of essence. I started the exploration by focusing on the explanatory potential of modally loaded concepts (general or singular), then focusing on the abstractionist's hybrid model, to end up in the current (more theory-neutral) proposal. With all this stock, I shall now argue that, to get enough explanatory power, a concept-based account has *had to* metamorphose to a degree such that 'concept-based' would be a misnomer. The reasoning is two-fold.

'Concept-based' would be a misnomer. As just recalled, (b1)-(b3) are conceptual particular truths. But, exploiting the different notions distinguished in §3.1, knowledge of them does not, in any significant sense, amount to *conceptual* knowledge of them. Claims (1) and (2) from above are, together with (a1), equally sufficient to ground essentialist knowledge about the individual they are about which is clearly *not* knowledge of a conceptual truth; despite the grounds being exactly the same. To witness it:

- | | | |
|----------------------|-------|---|
| <i>entitlement</i> | (1) | <« <i>originating from human zygote z</i> » is and individual essence> |
| <i>a posteriori</i> | (2) | < $\exists x(x = \text{the person who originates from human zygote } z)$ > |
| <i>concept-based</i> | (a1) | < $\forall x(x = \text{the person individuated by «originating from the human zygote } z$ » $\rightarrow x$ is essentially a living being)> |
| (1), (2), (a1) | (b1)* | < <i>The person who originates from the human zygote z is essentially a living being</i> > |

The difference between (b1) and (b1)* is one of mode of presentation of the individual they are about. Now, in the process of getting each of (b1) and (b1)* we used conceptual knowledge; namely an (a)-thought. There is therefore a sense in which any of them can be said to be concept based. It is a rather weak sense, however. For, what is doing the crucial work is the *already essentialist* entitlement that a certain property is an individual essence; which semantically implies both that it is an essential property and that it is a sufficiency property. Knowledge of

⁴⁷ There will certainly be *bad* cases, where a given property—e.g., *being the first human* conceived in 2011*—is not an individual essence despite there being an entitlement to it being so. In those cases, one's got to have a story about the sort of considerations one can offer to undermine the entitlement. More pressingly, the story should undermine it without *thereby* undermining the entitlement to the individuativeness of properties which *are* individual essences. Other internal drawbacks of the proposal include the idea that it stretches too far the epistemic power of *entitlement*: if entitlements (of this sort) are allowed, wouldn't entitlement-based views run the risk of being discredited on the suspicion that they are using a multi-purpose resource in all those areas where a better alternative is not found?

<Hume was born in Scotland and Mill was born in England>, when arrived at by combining our antecedent knowledge of <Hume was born in Scotland> and <Mill was born in England>, is *equally weakly* concept-based; the former is based on <individuation>, the latter on <and>.

The generalization that supports the 'has had to'. I said that the proposal has *had to* metamorphose to a degree such that 'concept-based' would be a misnomer. The modal force is needed to support the intended general conclusion that concepts have a very limited role to play in the epistemology of modality. Let me then justify the modal force: in §2, I explained why the explanatory power of general, modally loaded concepts leaves a lot unexplained. In §3, I showed why singular, modally loaded concepts cannot fill the explanatory gap. Purely conceptual grounds, therefore, do not get us far.⁴⁸ §4 started by considering a hybrid—entitlement- and concept based—approach that applies *at most* to the abstractionist's abstracts. We got inspiration from there to flirt with a different entitlement-based view that, not only is more theory neutral, but also can be made as general as one deems appropriate. *Modulo* the solving of the internal drawbacks, the current *entitlement*-based proposal might have a chance to close the identified explanatory gap. Entitlements, in this proposal, however, can be abstracted away from the role they play. One might want to close the gap somehow else: by rational insight; by somehow-else-grounded a priori knowledge of which properties are essential [or else individuable]; by empirically elucidated essentialist knowledge; etc. One might even go for a combination of those options, thereby embracing the increasingly popular idea that an epistemology of modality must be non-uniform. No matter how one chooses to close it, the size of the gap (so long as essentialist knowledge continues to be thought to be a phenomenon, thereby calling for an explanation) is not getting any smaller. And we know too, as per §§2-3, that concepts aren't fit to close it. To appreciate the dimension of the gap, recall the reasons in §3.2 as to why the sufficient conditions for conceptual essentialist knowledge about particular individuals are not satisfiable even in the less demanding *Fine-case*. There, I explained why not even knowledge—a priori or not—of a *principle of recombination* would suffice. What was needed is something that—as the entitlements would contribute to doing—guides us in telling apart the essential from the non-essential properties (or the individuable from the non-individuable ones) among the *categorical* ones. This is nearly the whole explanandum still awaiting an explanation.*

⁴⁸ Weaken 'purely' appropriately to take into account the issue discussed along footnotes 28, 35, 39 and 41.

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