Modal Empiricism and Knowledge of *De Re* Possibilities: A Critique of Roca-Royes' Account

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ABSTRACT: Accounting for our knowledge of *de re* modalities is probably the main reason why the proponents of modal empiricism think that their view should be preferred to modal rationalism. In this paper, I address Sonia Roca-Royes' account, which is taken to be a representative modal empiricist view, in order to show that modal empiricism faces serious problems even in explaining our knowledge of possibility *de re*, something which seems to be the easiest thing to explain on this view. I argue that Roca-Royes' account does not prove what she claims it does, that it can hardly be articulated in a non-redundant way, and that her account of our knowledge of possibility *de re* can hardly be reconciled with the essentiality of origin principle, to which modal empiricists sometimes appeal while criticizing the modal rationalist account.

KEYWORDS: *De re* modal knowledge – modal empiricism – modal epistemology – modal rationalism.

1. Modal rationalism and our knowledge of modality *de re*

Modal epistemology examines possibilities and boundaries of our modal knowledge. One of the most intriguing questions in this philosophical discipline is related to the knowledge of unrealized possibilities, that is, the knowledge that something is possible even if it is not realized in the actual world (or at least we do not know whether it is realized or not; see Van In-

wagen 1998, 74). Modal rationalism and modal empiricism are two principal competing views on this issue. The former is the view that there is an *a priori* access to metaphysical modality, while the latter is the view that at least some modal beliefs require *a posteriori* justification, primarily those beliefs that are related to modalities *de re*, that is, to modalities that are attached directly to objects. In what follows, it will be argued that modal empiricism meets serious problems in explaining our knowledge of possibility *de re*, something which seems to be the main reason why this view is worth considering. In §2, I present Sonia Roca-Royes' account of the knowledge of possibility *de re*, which is taken to be a representative modal empiricist view, and in §3 I will pose several objections to this account that I find hard to answer.

But first, let us sketch briefly modal rationalist approach, proposed by David Chalmers, in order to understand better why some philosophers are willing to search for alternative approaches. Namely, Chalmers has articulated the relevant senses of conceivability and possibility, and introduced the epistemic version of two-dimensional semantics in order to handle ordinary Kripkean cases of necessary *a posteriori* statements (see Chalmers 2010, for more details). By this maneouvre, he has tried to support the link between conceivability and possibility that was questioned by Kripke's examples (see Kripke 1972). According to Chalmers, the relevant notion of conceivability is what he calls 'ideal positive primary conceivability', which consists in conceiving of a counter-actual scenario (or a counter-actual situation) that verifies the statement one is conceiving of and which is undefeatable by a better reasoning. Understood in this way, conceivability, according to Chalmers, entails primary (counter-actual) possibility, and, depending on the semantics of concepts that are involved in propositions, it might entail secondary (counterfactual) possibility, giving us interesting results in metaphysics.

Although Chalmers is sometimes credited for explaining successfully *de dicto* cases, some philosophers think that he remained silent on the cases of modality *de re*. For example, Sonia Roca-Royes thinks that there are two sorts of Kripkean examples rather than one, *de dicto* and *de re* reading respectively, and that Chalmers' modal rationalism is capable of explaining *de dicto* reading of necessary *a posteriori* statements, but not capable of explaining successfully *de re* reading (Roca-Royes 2011, endnote 28; see also Vaidya 2008, 206). For example, necessary *a posteriori* statement 'Water is

H₂O' can be read, according to Roca-Royes, either as 'Necessarily, water is H_2O' (*de dicto* reading), or as 'Water is necessarily H_2O' (*de re* reading). The similar holds for the principle of the essentiality of origin, which is one of the main essentialist principles. It seems that a relevant reading of this principle, like in the case of necessary *a posteriori* statement 'This table is necessarily wooden', is *de re* reading. According to Kripke, origin is an essential property of an object that enables us to individuate it in every possible (counterfactual) world. Namely, the principle of the essentiality of origin enables us to distinguish two qualitatively similar objects (for example, two tables) by their origin (the material they are carved from; see Kripke 1972, footnote 56). Given that *de re* modality is attached directly to *objects*, it is not clear at all how conceptual analysis based on conceivability can be of any use here. If so, then modal rationalism, according to the objection, cannot be the whole story about our knowledge of metaphysical modality.

However, modal rationalists can bite the bullet and argue that their view is quite in accordance with the existence of modality *de re*. Namely, it seems that the existence of modality *de re* is not by itself an obstacle to modal rationalist approach, because at least some trivial *de re* properties are obviously knowable *a priori*, like the property *being self-identical* (cf. Hossack 2007, 440). If so, then the conceivability method seems reasonable to apply to the cases of non-trivial *de re* possibilities as well, given that conceivability can be defined through *a priori* knowledge ('*p* is conceivable' is usually defined as 'non-*p* is not *a priori*', while '*p* is *a priori*' can be defined as 'non-*p* is not conceivable'). Probably more should be said in favor of this account,[1] yet, setting this aside, it is interesting to check whether modal empiricists themselves are capable of explaining successfully our knowledge of modality *de re*, because if not, modal rationalism would have a greater initial plausibility concerning the explanatory power even before elaborating their own account. In this paper, the emphasis will be on assessing one popular modal empiricist account of our knowledge of modality *de re*, proposed by Sonia Roca-Royes, and showing why it does not work.

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[1]   One such account can be found in Chalmers (2010, footnote 3).

2. Roca-Royes' account

Now, let us turn to modal empiricist approach to metaphysical modality. Here, Roca-Royes' account of our knowledge of possibility *de re* will be addressed mainly because her account offers a solution to Benacerraf's dilemma (see Benacerraf 1973), which is usually considered to be more pressing challenge to modal empiricists than to modal rationalists. This is mainly because Benacerraf's dilemma is based on the idea that the causal theory of knowledge, which plausibly holds for *a posteriori* knowledge, is not in accordance with the principle that abstract entities, including modality, are not causally related. This means that in the case of our knowledge that something is possible it is hard to see how one can empirically know in the actual world that something holds in a possible world, if there is no causal connection between these two worlds.

Here is Roca-Royes' purported example that illustrates her account of our knowledge of possibility *de re*. One might believe, that it is possible for a table, let us call it 'Messy', to be broken, although this had never happened in the actual world. Roca-Royes (2007, §4; 2014) thinks that we are justified in believing that this possibility is a real one once we have found out somehow that some other table in the actual world, let us call it 'twin-Messy', which is similar enough to Messy, was broken. Here, twin-Messy is Messy's counterpart in the actual world. Roca-Royes introduces counterpart relation, which, in contrast to standard Lewisian counterpart relation (see Lewis 1979, 113) that holds only for individuals in different worlds, relates two individuals in *the same* (actual) world. Namely, both Messy and its counterpart twin-Messy inhabit the same (actual) world. Yet, the counterpart relation that Roca-Royes uses has the same relevant features that Lewis' counterpart relation has, like non-identity, non-symmetry and non-transitivity. As for twin-Messy, which is actually broken, when it is said that it is possible to it to be broken, it does mean that twin-Messy *itself* inhabits a possible world in which it is broken.[2] Now, given that actuality entails possibility,[3] it is possible for twin-Messy to be broken. If so, then, ac-

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[2]   By this maneouvre, Roca-Royes avoids the problem of non-transitivity of counterpart relation that might be posed if her example includes twin-Messy's counterpart (thanks to an anonymous referee for drawing my attention to this problem).

[3]   Roca-Royes (2014) thinks that this is a conceptual truth.

cording to Roca-Royes, the same is possible for Messy itself, because twin-Messy is Messy's counterpart. Thus, it seems that there is a sense in which an empirical evidence might justify our modal beliefs concerning possibility *de re*, which is exactly what modal empiricists claim. On the other hand, Roca-Royes thinks that in the absence of empirical evidence that a counterpart of an object has such-and-such properties we should restrain our judgment on what is possible for that object, because these are cases in which possibilities are not anchored in our experience.

Roca-Royes' account seems to be an elegant way of explaining our knowledge of possibility *de re*, as well as a way how to avoid Benacerraf's dilemma. Her solution consists in avoiding a *direct* empirical access to *de re* possibilities by means of introducing a counterpart relation that is empirically established in the actual world, and by using *a priori* inference that is based on the premise that actuality entails possibility.

Although the abovementioned account, proposed by Roca-Royes, is restricted to the cases of our knowledge of *possibility de re*, and does not hold either to the cases of our knowledge of *de re* necessities, or to the essentialist principles, Roca-Royes claims in her other papers that any good theory of the epistemology of modality should account for our knowledge of essentialist truths as well, if there is such a knowledge (Roca-Royes 2011, 23). Given that she argues that various forms of modal rationalism are not capable of explaining our knowledge of essentialist principles, it seems that she herself is committed to the claim that such a knowledge exists, and obliged to provide an explanation of it. In the next section, it will be argued that Roca-Royes' account cannot achieve this.

3. Some problems for Roca-Royes' account

In what follows, I will pose three objections to modal empiricist account, presented in the previous section, which I find hard to answer. My first objection to this account is that it is not clear at all that Roca-Royes' example with Messy and its real world counterpart, twin-Messy, shows that one is justified in believing that it is possible *de re* for Messy to be broken. In other words, it is not clear that the possibility for twin-Messy to be broken tells us anything about the possibility for Messy to be broken. After all, we should remind ourselves that the initial aim of modal empiricists was to

explain our knowledge of possibility *de re*, in our case, the possibility for *Messy* being broken, not the possibility for twin-Messy being broken. Given that counterpart relation is not identity, information about what is for Messy's counterpart possible does not entail by itself that Messy might be broken. Thus, contrary to modal empiricists account, the possibility for twin-Messy to instantiate a property does not entail the possibility for Messy to instantiate the same property, and therefore such an account does not succeed.

Related to this, it is possible to construct counterexamples to modal empiricist account of our knowledge of possibility *de re*, and show that such an account does not ensure reliable method of getting the knowledge that something is *de re* possible. Let us suppose, for example, that a person *x* has a real world counterpart that is almost exactly the same as *x* in all physical respects, except that she differs from *x* with respect to just one particular DNA molecule. As it is well-known,[4] this might cause huge differences in abilities between these two beings, which would serve as a good evidence that what is possible for one of them might not be possible for the other. Moreover, given that abilities (or disabilities) need not manifest themselves, the differences in (dis)abilities between these two persons need not be empirically revealed as well. If so, then what holds for a real world counterpart of a person needs not hold for the person herself, which would contradict Roca-Royes' proposed account.

As a response to this objection, Roca-Royes might restrict her account to artifacts, without applying it to biological kinds. Maybe this is the reason why artifacts (the table called 'Messy' and its counterpart) are mentioned in her example. This would be in accordance with the intuition, shared by some philosophers, that artifacts, in contrast to biological kinds, allow of small changes without changing their nature. For example, there is an intuition that an artifact can origin from a slightly different piece of material, without ceasing to be the same object (see, for example, Vaidya 2008, 202-203). Perhaps this is mainly because the nature of artifacts is determined by their functions rather than by the life-cycle that is characteristic for organisms (see Hale 2013, 278-279, for more details).

However, this fallback seems to be still liable to another sort of counterexamples. Given that dispositions seem to be a good guide to possibility,

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4   For example, in the case of Dawn syndrome, etc.

one can, *mutatis mutandis*, appeal to the cases of *finking*, introduced by Charles Martin for some other purposes.[5] According to Martin, 'a disposition and a change of disposition need not manifest themselves' (Martin 1994, 1). For example, disposition can be changed due to changes in environment, like in the cases of temperature change, and so on. A usual counterfactual explanation of why a glass is fragile consists in asserting that it would be broken, were it to fall down. Yet, suppose that the very glass itself has a disposition of transforming into steel when struck. This would falsify the counterfactual analysis of dispositions, because in the purported example the glass would not break, were it to fall down. Now, let us apply this insight to Roca-Royes' account. Let us suppose that there is *a unique* glass in this world that belongs to the case of finking, that is, which would not be broken, were it to fall down. Its counterpart in the actual world would plausibly be a glass that is qualitatively the most similar to it, yet which is, in contrast to it, fragile. Suppose that this counterpart falls down at one point and breaks. Is this reliable evidence that the glass with the above-mentioned finking property is fragile as well? It is hard to believe so. Thus, it seems that Roca-Royes' account faces problems in the case of artifacts as well.

As a response to such an objection, the proponents of modal empiricism might claim that their account is based on inductive evidence, as well as on Humean regularity theory of natural laws, which is something that Roca-Royes would be inclined to accept (see Roca-Royes 2007; 2014). This probably would include *ceteris paribus* clause, which enables us to justify the claim that it is possible for Messy to be broken in the light of *a posteriori* discovered examples in which Messy's counterparts were broken, and such an account seems to be in accordance with common scientific practice.

However, this answer leads to similar problems that are involved in counterfactual analysis of dispositions stressed by Martin. Namely, Martin

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[5] Martin constructs his examples in order to show that counterfactual analysis of dispositions does not succeed. Also, his point was mainly that an object can have a disposition that needs not be manifested and analyzed by means of counterfactual conditionals. In my modified example, it is presupposed that an object does not have a disposition, and that this needs not be manifested itself. This is, in my opinion, in accordance with Martin's general idea that dispositions and a change of dispositions need not manifest themselves.

notices that adding *ceteris paribus* clause to the counterfactual analysis of dispositions would trivialize the whole analysis (cf. Martin 1994, 6). Similarly, if one adds *ceteris paribus* clause to Roca-Royes' account, the whole account will become question-begging. For example, if modal empiricists claim that it is possible for Messy to be broken because we empirically know that twin-Messy is broken, and because we can expect, *ceteris paribus*, that Messy would break when struck, they have already presupposed that there is no finking.

Let us turn to my second objection to Roca-Royes' account, which is closely related to the previous one. Namely, one would expect that modal empiricists can pick out directly a pertinent possibility *de re*, through, let us say, perception. Yet Roca-Royes purported example with twin-Messy suggests that the possibility *de re* is picked out by means of a counterpart relation. This counterpart relation is arguably based on providing a pertinent description that justifies our belief that two objects stand in such a relation. To be more precise, we establish that the two objects stand in a counterpart relation once we have realized that they are *similar* to each other. And such a similarity can be grasped only by description. In Roca-Royes' example, one's belief that it is possible for Messy to be broken is based on one's knowledge that it is possible for *the table that is similar enough to Messy* to be broken. While the former possibility is the possibility *de re*, the latter, which enables us to find out the former, is the possibility *de dicto*. The upshot is that the knowledge of modality *de re* presupposes the corresponding knowledge of modality *de dicto*. This turns us back to modal rationalist justification of our knowledge of possibilities *de re*,[6] which makes modal empiricist explanation of *de re* modal knowledge *redundant*.

My third objection to modal empiricism is that Roca-Royes' explanation of our knowledge of possibility *de re* is not in accordance with some main essentialist principles, such as the essentiality of origin, and so on. Namely, we have seen in §1 that the essentiality of origin implies that a particular hunk of matter, from which a table is carved, is an essential property of the table. Modal empiricists typically try to provide an epistemic justification of this principle by saying that we find out *a posteriori* which particular piece of matter is the origin of a particular object. Roca-Royes

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[6]   In §1 it is mentioned that many critiques of modal rationalism agree that this view is capable of explaining *de dicto* cases.

(2014) admits that her proposed account of our knowledge of possibility *de re* does not provide us with an epistemology of essence, that is, that her account remains silent on whether essentialist principles hold or not. Her view is that we cannot decide in a non-question-begging way whether the essentiality of origin (or the essentiality of kind) principle holds or not, mainly because we do not have *anchoring* in experience that entitles us to know such things. This, of course, does not mean that modal empiricists should not search for an explanation of our knowledge of essentialist principles, especially because, as it was mentioned in §1, Roca-Royes argues that rival modal rationalist approach is not capable of explaining such a knowledge.

Yet, by using Roca-Royes' account one might come to the conclusion that it is possible for the same object to origin from a slightly different piece of material, which, if true, would falsify the essentiality of origin principle. Namely, one can be justified in believing that it is possible for particular piece of material to be an origin of, let us say, the table called 'Messy', simply because one knows *a posteriori* that its counterpart (in Roca-Royes' sense), twin-Messy, is carved from a very similar, but slightly different piece of material. Given that the two pieces of material stand in the counterpart relation, what holds for the actual origin of twin-Messy also holds for the possible origin of Messy. Therefore, it is not necessary for Messy to be carved from the piece of material from which it actually is carved, and so the essentiality of origin principle fails. Thus, the same methodology that Roca-Royes adopts leads us to the conclusion that origin is not the essential property of an object. It seems that the same holds, *mutatis mutandis*, for other metaphysical principles, so, modal empiricists cannot justify them by means of Roca-Royes' proposal. Perhaps this objection is not sufficient by itself for rejecting Roca-Royes' account of our knowledge of possibility *de re* as such, but it poses an uncomfortable tension inside modal empiricist camp concerning the possibility of providing a unifying account of all *de re* modal knowledge.

4. Conclusion

Let us summarize. Modal empiricism faces serious problems even in explaining our knowledge of possibility *de re*, something which *prima facie*

seems to be the easiest to explain on this view. Roca-Royes' account of our knowledge of possibility *de re* is liable to several counterexamples, and it is also hard to formulate it in a non-redundant way. The whole account is also hard to accommodate with the essentiality of origin principle, to which modal empiricists sometimes appeal while criticizing the modal rationalist account. On the other hand, the cases of possibility *de re* are not by themselves an insurmountable obstacle to modal rationalist approach, for at least some trivial *de re* modal properties are *a priori* knowable. These considerations suggest that modal empiricism can hardly be a good substitute to modal rationalist account of *de re* cases of modal knowledge.[7]

References

BENACERRAF, P. (1973): Mathematical Truth. *The Journal of Philosophy* 70, 661-679.

CHALMERS, D. (2010): The Two-Dimensional Argument against Materialism. In: Chalmers, D. (ed.): *The Character of Consciousness*. Oxford: Clarendon Press, 141-205.

HALE, B. (2013): *Necessary Beings: An Essay on Modality, Ontology, and the Relations Between Them*. Oxford: Oxford University Press.

HOSSACK, K. (2007): Actuality and Modal Rationalism. *Proceedings of the Aristotelian Society* 107, 433-456.

KRIPKE, S. (1972): Naming and Necessity. In: Harman, G. – Davidson, D. (eds.): *Semantics of Natural Language*. Dordrecht: D. Reidel, 253-355.

LEWIS, D. (1979): Counterpart Theory and Quantified Modal Logic. In: Loux, M. (ed.): *The Possible and the Actual*. Ithaca – London: Cornell University Press, 110-128.

MARTIN, C. B. (1994): Dispositions and Conditionals. *The Philosophical Quarterly* 44, 1-8.

Roca-Royes, S. (2007): Mind Independence and Modal Empiricism. *Latin Meeting in Analytic Philosophy Genova*, 117-135.

Roca-Royes, S. (2011): Conceivability and *De Re* Modal Knowledge. *Noûs* 45, 22-49.

Roca-Royes, S. (2014): An Epistemology of *De Re* Modality (talk). Available at: http://media.rcub.bg.ac.rs/?p=3809.

Vaidya, A. (2008): Modal Rationalism and Modal Monism. *Erkenntnis*, 68, 191-212.

van Inwagen, P. (1998): Modal Epistemology. *Philosophical Studies* 92, 67-84.