

## NOTES PHILOSOPHIQUES

# ON THE POSSIBILITY OF GETTIER CASES FOR MODAL KNOWLEDGE<sup>1</sup>

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**Abstract.** Gettier cases are used to show that having a justified true belief is not sufficient for knowledge. They are cases in which an epistemic agent has a belief that is both justified and true, but intuitively cannot be taken to count as knowledge. Modal epistemology is the field of philosophy that tackles questions regarding the sources of our knowledge of modalities (possibility and necessity) and what offers justification for beliefs about what is possible or necessary. Part of the tradition in modal epistemology is to consider conceivability as a guide to metaphysical possibility. As such, if an agent can conceive that P, then the agent is justified to believe that P is metaphysically possible. In this paper I will discuss the possibility of constructing Gettier cases for a tripartite, conceivability-based, definition of modal knowledge.

**Keywords:** modal knowledge; modal epistemology; conceivability; Gettier; Zagzebski.

## 1. INTRODUCTION

Gettier cases are used to challenge the classic tripartite definition of knowledge (knowledge as justified true belief)<sup>2</sup>. They are cases in which an epistemic agent has a belief that is both justified and true, but intuitively cannot be taken to count as knowledge. Modal epistemology is the field of philosophy that tackles questions regarding the sources of our knowledge of modalities (possibility and necessity) and what offers justification for our beliefs about what is possible or necessary<sup>3</sup>. Part of the tradition in modal epistemology is to consider conceivability as a guide to metaphysical possibility. As such, if an agent can conceive that P, then the agent is justified to be-

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<sup>2</sup> Edmund Gettier, “Is Justified True Belief Knowledge?”, *Analysis*, vol. 23, nr. 6, 1963, pp. 121–123.

<sup>3</sup> In this paper I will be interested only in metaphysical (as opposed to logical, physical, deontic etc.) modalities (possibility and necessity). Thus, wherever not specified, I will refer to metaphysical modalities (metaphysical possibility and metaphysical necessity). I would like to thank one of the anonymous reviewers for pressing to clarify this issue.

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lieve that P is metaphysically possible. In this paper I will discuss the prospect of constructing Gettier cases for a tripartite, conceivability-based definition of modal knowledge, i.e., knowledge of metaphysical modalities.

The structure of the paper is as follows: in section 2, I will present and discuss a slight variation on one of Gettier's original cases<sup>4</sup>. My focus will be on pointing to the necessary traits of Gettier cases, and for this purpose I will extensively use Linda Zagzebski's work on the subject<sup>5</sup>. Section 3 will be devoted to presenting a widely accepted connection between conceivability and possibility in the literature on modal epistemology, with a focus on pointing that conceivability offers justification for modal beliefs (beliefs about the modal status of propositions) and explains modal knowledge. In the fourth section I will: (a) defuse a general objection to the possibility of Gettier cases for modal knowledge, (b) propose a scaffolding for Gettier cases for modal knowledge and show why it fails, and (c) present what I believe to be a prima facie successful Gettier case for modal knowledge. Let us proceed.

## 2. WHAT MAKES A GETTIER CASE A GETTIER CASE?

In the following, I will present a variation on one of Gettier's original cases<sup>6</sup> and, after offering a formal representation of it, I will highlight the main characteristics of the case.

(Ten coins) Smith believes that Jones will be promoted and that Jones has ten coins in his pocket. Smith is well justified in believing this: he overheard the president of the company telling the human resources director that Jones will be promoted, and saw Jones receiving ten coins as change after buying a newspaper. His belief entails the existentially quantified statement that the person who will get the promotion has ten coins in his pocket. Smith believes this statement as well. However, his first belief is false, as it is not Jones who will be promoted, but Smith himself, who also has ten coins in his pocket. So, Smith has a true belief, that someone having ten coins in his pocket will be promoted, that is also justified.

To help with the analysis of this Gettier scenario, let us consider a more formal representation of (Ten coins). I will use the following symbolizations of the main propositions involved in the case:

P = "Someone who has ten coins in his pocket will be promoted",  
 Q = "Jones will be promoted and Jones has ten coins in his pocket", and  
 R = "Smith will be promoted and Smith has ten coins in his pocket"

<sup>4</sup> E. Gettier, "Is Justified True Belief Knowledge?", p. 122.

<sup>5</sup> Linda Zagzebski, "The Inescapability of Gettier Problems", *The Philosophical Quarterly* (1950-), vol. 44, no. 174, 1994, pp. 65–73, and Linda Zagzebski, *Virtues of the Mind*, Cambridge, Cambridge University Press, 1996, pp. 283–299.

<sup>6</sup> Edmund Gettier, "Is Justified True Belief Knowledge?", p. 122.

Also, throughout the paper I will call P the *target proposition*, as it is the proposition that intuitively fails to count as knowledge, although it is true, the agent believes it and is justified to believe it. Now, as promised, the formal representation of (Ten coins) is:

- (1) S has a justified belief that Q.
- (2) If Q, then P.
- (3) S knows (2).
- (4) S has a justified belief that P. (From 1 - 3).
- (5) However,  $\sim$ Q. (Bad luck strikes)
- (6) Nevertheless, R is true. (Good luck strikes)
- (7) If R, then P.
- (8) P (From 6, 7)
- (9) S has a justified true belief that P. (From 4, 8)

The intuition of many philosophers, and laymen as well, is that although (9) is true, S does not know that P. This intuition can be explained by noting that (9) is true only as a result of luck, and this conflicts with the equally intuitive tenet that knowledge excludes luck<sup>7</sup>. The observation that knowledge excludes luck and the fact that in a Gettier case the epistemic subject only luckily arrives at a justified true belief motivated Zagzebski's recipe for creating Gettier cases.<sup>8</sup> According to Zagzebski, an essential trait of Gettier cases is that they contain two components of luck. The first component, that of bad luck (see line 5), falsifies a proposition, Q, that plays a central role in the agent's forming a justified belief that P. In Zagzebski's view<sup>9</sup>, should S have found that Q is false, S would not have formed (or would have rejected) the belief that P is true. The second component, that of good luck (see line 6) is responsible for the truth of the justified belief about the target proposition P (line 8). The interplay of these two components of luck explains the intuition that the epistemic agent does not know the target proposition.

The two components of luck are used to cut off the connection between the justification the agent has for believing that P and the truth of P. This cutting off is possible only if the condition of justification (what makes the belief that P justified) and the

<sup>7</sup> Richard Feldman, *Epistemology*, New Jersey, Pearson Education Inc., 2003, p. 28, Duncan Pritchard, *Epistemic Luck*, Oxford, Oxford University Press, 2005, pp. 1, 186, Duncan Pritchard, "Anti-Luck Epistemology", in *Synthese*, vol. 158, no. 3, 2007, p. 277, John Turri, "In Gettier's Wake", in Stephen Hetherington (ed.), *Epistemology: The Key Thinkers*, New York, Continuum International Publishing Group, 2012, p. 216. Using Pritchard's distinction between reflective epistemic luck and veritic epistemic luck, the kind of luck that is incompatible with knowledge is the latter (see D. Pritchard, *Epistemic Luck*, p. 146, D. Pritchard, "Anti-Luck Epistemology", p. 286). Although I agree with one of the anonymous reviewers that this distinction would be fruitful in analyzing the possibility of Gettier cases for modal knowledge, using the distinction goes beyond the scope of this paper. Of course, I am thankful for one anonymous reviewer's suggestion and will use it in future work on the subject.

<sup>8</sup> L. Zagzebski, "The Inescapability of Gettier Problems", pp. 65–66.

<sup>9</sup> *Ibidem*, p. 70.

condition of truth (what makes P true) are distinct<sup>10</sup>. To illustrate the distinction, consider that what makes true the proposition “The price of one bitcoin is \$60,000” is the fact that one bitcoin can be bought for \$60,000, whereas what makes the corresponding belief justified may be reading this piece of information in a newspaper or an e-finance blog, listening to a financial advisor’s testimony etc. In the case of (Ten coins), what offers Smith evidence for the belief that someone has ten coins in his pocket is his belief that Jones has ten coins in his pocket, whereas what makes it true that someone has ten coins in his pocket is the state of affairs in which at least one person has ten coins in his pocket.

Putting things together, what is typical of Gettier scenarios is that they start with an epistemic agent having a justified false belief (see lines 1 and 5). From that false belief, the agent correctly infers a second belief that turns out to be true (see lines 4 and 8). Consequently, the agent has a justified true belief (line 9)<sup>11</sup>.

By all the above, we have that there are three necessary conditions for Gettier cases to be possible. First, what justifies the belief that P needs to be distinct of what makes P true. Second, a strike of bad luck needs to cut off the connection between what justifies S to believe that P and the truth of P. And third, a strike of good luck is necessary to make true the justified belief about the target proposition, P.

### 3. ON THE CONNECTION BETWEEN CONCEIVABILITY AND POSSIBILITY

This paper could have had a different word count, and we could have bought our computers from different stores. We all know these, as we also know many other propositions about what is possible. But what explains our knowledge about what is possible? As part of the tradition in modal epistemology, what offers evidence or justification for our modal beliefs is conceivability or imaginability<sup>12</sup>. This tenet stems from one of David Hume’s considerations in “A Treatise of Human Nature”: “‘Tis an establish’d maxim in metaphysics, *That whatever the mind clearly conceives includes the idea of possible existence*, or in other words, *that nothing we imagine is absolutely impossible*.”<sup>13</sup> The idea that conceivability or imaginability<sup>14</sup> is evidential for possibil-

<sup>10</sup> L. Zagzebski, “The Inescapability of Gettier Problems”, p. 72.

<sup>11</sup> This explanation of Gettier cases is due to R. Feldman, *Epistemology*, New Jersey, Pearson Education Inc., 2003, p. 28, and J. Turri, “In Gettier’s Wake”, in Stephen Hetherington (ed.), *Epistemology: The Key Thinkers*, New York, Continuum International Publishing Group, 2012, p. 216.

<sup>12</sup> As one anonymous reviewer noted, this is merely one of the available stances on what explains modal knowledge and justification. This paper is concerned with the possibility of Gettier cases for conceivability-based accounts of modal knowledge. For a cartography of the various stances on what justifies beliefs about possibility, see Anand J. Vaidya, Michael Wallner, “The epistemology of modality and the problem of modal epistemic friction”, *Synthese*, vol. 198, no. 8, 2021, p. S1910.

<sup>13</sup> David Hume, *A Treatise of Human Nature*, edited by L.A. Selby-Bigge, Oxford, Clarendon Press, 1960, p. 32. Throughout the paper I will refer to this idea by “Hume’s Principle”.

<sup>14</sup> Given the aim of this paper, I will not distinguish between conceivability and imaginability, and use them interchangeably.

ity has gained many supporters in contemporary modal epistemology<sup>15</sup> (as well as a number of skeptics<sup>16</sup>).

Recall that Gettier cases serve as an objection against the classic tripartite definition of knowledge, i.e., knowledge as justified true belief. For the purpose of offering a tripartite analysis of modal knowledge, I will use the following epistemic variant of Hume's Principle:

(Modal Justification) If S finds P conceivable, then S is justified to believe that P is possible.

Now, the tripartite definition of modal knowledge for which I will analyze the possibility of constructing Gettier cases is:

(Modal Knowledge) S knows that P is metaphysically possible iff S could conceive that P, and P is a metaphysical possibility.

With the above definition in mind let us proceed to discussing the possibility of Gettier scenarios for modal knowledge.

#### 4. ON THE POSSIBILITY OF GETTIER CASES FOR MODAL KNOWLEDGE

The aim of this section is threefold. In subsection 4.1., based on Zagzebski's observation that Gettier cases are possible only if the conditions of justification are distinct from the conditions of truth<sup>17</sup>, I will raise an intuitive objection to the possibility of Gettier cases for modal knowledge. As will be seen, this objection can be defused. In

<sup>15</sup> See, *inter alia*, David Chalmers, "Does conceivability entail possibility?", in T. S. Gendler, J. Hawthorne (eds.), *Conceivability and Possibility*, New York, Oxford University Press, 2002, pp. 145–200, Heimir Geirsson, "Conceivability and Defeasible Modal Justification", *Philosophical Studies*, vol. 122, nr. 3, 2005, pp. 279–304, Heimir Geirsson, "Conceivability and Coherence: A Skeptical View of Zombies", *Erkenntnis*, vol. 79, nr. 1, 2014, pp. 211–225, Dominic Gregory, "Imagining Possibilities", *Philosophy and Phenomenological Research*, vol. 69, nr. 2, 2004, pp. 327–348, Dominic Gregory, "Conceivability and Apparent Possibility", in Bob Hale, Aviv Hoffman, (eds.), *Modality: Metaphysics, Logic, and Epistemology*, Oxford, Oxford University Press, 2010, pp. 319–341, Christopher S. Hill, "Imaginability, Conceivability, Possibility and the Mind-Body Problem", *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, vol. 87, nr. 1, 1997, pp. 61–85, Peter Kung, "Imagining as a Guide to Possibility", *Philosophy and Phenomenological Research*, vol. 81, nr. 3, 2010, pp. 620–663, Peter Kung, "You Really Do Imagine It: Against Error Theories of Imagination", *Noûs*, vol. 50, nr. 1, 2016, pp. 90–120, Peter Menzies, "Possibility and Conceivability: A Response-Dependent Account of Their Connections", *European Review of Philosophy, Volume 3: Response-Dependence*, vol. 3, 1998, pp. 255–277, Stephen Yablo, "Is Conceivability a Guide to Possibility?", *Philosophy and Phenomenological Research*, vol. 53, nr. 1, 1993, pp. 1–42.

<sup>16</sup> See, *inter alia*, George Bealer, "The Origin of Modal Error", *Dialectica*, vol. 58, nr. 1, 2004, pp. 11–42, Peter Hawke, "Van Inwagen's modal skepticism", *Philosophical Studies*, vol. 153, nr. 3, 2011, pp. 351–364, Oreste M. Fiocco, "Conceivability, Imagination and Modal Knowledge", *Philosophy and Phenomenological Research*, vol. 74, nr. 2, 2007, pp. 364–380, Paul Tidman "Conceivability as a Test for Possibility", *American Philosophical Quarterly*, vol. 31, nr. 4, 1994, pp. 297–309, Peter Van Inwagen, "Modal Epistemology", *Philosophical Studies*, vol. 92, nr. 1, 1998, pp. 67–84.

<sup>17</sup> L. Zagzebski, "The Inescapability of Gettier Problems", pp. 70, 72.

subsection 4.2. I will offer a tentative scaffolding for Gettier cases for modal knowledge. Although this scaffolding faithfully captures the essential traits of the original case presented in section 2, I will argue that it encounters two problems. In the last subsection I will present what I believe to be a *prima facie* successful Gettier case for modal knowledge.

#### 4.1. A GENERAL PROBLEM FOR THE POSSIBILITY OF GETTIER CASES FOR MODAL KNOWLEDGE

Let us see whether the above tripartite definition of modal knowledge is compatible with the idea that the conditions for modal truth are different from the conditions of justification for the belief that P is possible. The following problem might be raised: if conceivability is both what justifies our belief that P is possible, and what makes it the case that P is possible, then we cannot distinguish between modal justification and modal truth. Thus, the objection runs as follows: there can be no Gettier cases for modal knowledge because what justifies a belief that P is possible is identical to what makes it the case that P is possible, so the concepts of modal justification and modal truth are so closely connected that the components of luck cannot break them.

Now, to counter this argument, let us note that according to some very popular accounts of modality in terms of conceivability<sup>18</sup> there is an extensional difference between what is non-ideally or *prima facie* conceivable and what is metaphysically possible. In other words, it is not the case that, for every P, if P is *prima facie* or non-ideally conceivable, then P is possible.

Peter Menzies defines the possibility of P in terms of what an ideal reasoner could conceive: “it is possible that [P] if and only if an ideal conceiver could conceive that [P]”<sup>19</sup>. By Menzies’ account, the mental act of conceiving that P offers justification for the belief that P is possible. But this justification is only *prima facie*: as a result of our computational limitations, inattentiveness, lack of thoroughness or other relevant epistemic virtues<sup>20</sup>, we may err. It could be that P is contradictory and we fail to see the contradiction, or it could be that we erroneously see a contradiction where there is none.<sup>21</sup> On the other hand, ideal perceivers have no computational and cognitive limi-

<sup>18</sup> See P. Menzies, “Possibility and Conceivability: A Response-Dependent Account of Their Connections”, pp. 255–277, D. Chalmers, “Does conceivability entail possibility?” in T. S. Gendler, J. Hawthorne (eds.), *Conceivability and Possibility*, New York, Oxford University Press, 2002, pp. 145–200, H. Geirsson, “Conceivability and Defeasible Modal Justification”, pp. 279–304.

<sup>19</sup> P. Menzies, “Possibility and Conceivability: A Response-Dependent Account of Their Connections”, p. 269.

<sup>20</sup> For a discussion of the relevant epistemic virtues required for modal justification and knowledge, see Alexandru Dragomir, “Intellectual Virtues and The Epistemology of Modality: Tracking the Relevance of Intellectual Character Traits in Modal Epistemology”, *Annals of the University of Bucharest: Philosophy Series*, forthcoming.

<sup>21</sup> According to Menzies, conceivability is defined in terms of two abilities: the ability to make suppositions and the ability to derive a contradiction from suppositions (see P. Menzies, “Possibility and Conceivability: A Response-Dependent Account of Their Connections”, p. 265).

tations, so they cannot make any such errors. All in all, in Menzies' view, conceivability offers prima facie justification for modal beliefs, and the domain of possibility is defined in terms of ideal conceivability. David Chalmers<sup>22</sup> takes a very similar stance<sup>23</sup>, agreeing that conceivability offers justification for modal beliefs, but it is only ideal conceivability, understood as "ideal rational reflection"<sup>24</sup>, that determines the set of all possibilities. In the same vein, Geirsson distinguishes between the possibility of a proposition P, understood as P's not entailing a contradiction, and what helps us acquire justification for believing that P is possible, i.e., conceiving that P:

What should guide us when we say that a certain proposition is (metaphysically) possible? It is sometimes assumed that a proposition is possible iff it is not, or does not entail, a logical contradiction. But that answer is not very helpful as the following examples show. It is not obviously contradictory that gold has the atomic number of 81. Still, given that gold has the atomic number 79, it is necessarily true that it has the atomic number 79.<sup>25</sup>

[...] even though conceivability is not a proof of possibility, I want to suggest that in the absence of evidence to the contrary, conceivability provides one with justification that what is conceived is possible.<sup>26</sup>

To conclude, the objection that the conditions for modal justification and modal truth are identical fails. The distinction between non-ideal and ideal conceivability offers the means to distinguish between what justifies a modal belief and what makes it true.

#### 4.2. A SCAFFOLDING FOR GETTIER CASES FOR MODAL KNOWLEDGE

In this subsection I will consider a scaffolding for building Gettier cases for modal knowledge. This scaffolding will follow the formal presentation of the original case in (1–9), and Zagzebski's recipe for Gettier cases. As I will argue, this scaffolding encounters two problems: the first regarding whether there are inconceivable possibilities, and the second regarding the proper connection between conceivability and possibility needed to obtain a case of justified true modal belief that fails to be a case of modal knowledge. Although the first one can be overcome, I will show that the second one is not.

The tentative scaffolding is the following:

- (1') S believes that P is conceivable.
- (2') S is justified to believe that P is possible (From 1')

<sup>22</sup> D. Chalmers, "Does conceivability entail possibility?", in T. S. Gendler, J. Hawthorne (eds.), *Conceivability and Possibility*, New York, Oxford University Press, 2002, pp. 145–200.

<sup>23</sup> One difference being that Menzies takes ideal conceivability to be what an ideal reasoner could find conceivable, while Chalmers talks of ideal conceivability as a property of statements.

<sup>24</sup> D. Chalmers, "Does conceivability entail possibility?", in Tamar S. Gendler, John Hawthorne (eds.), *Conceivability and Possibility*, New York, Oxford University Press, 2002, p. 147.

<sup>25</sup> H. Geirsson, "Conceivability and Defeasible Modal Justification", p. 289.

<sup>26</sup> *Ibidem*, p. 290.

- (3') P is not conceivable. (Bad luck strikes)
- (4') R is ideally conceivable. (Good luck strikes)
- (5') If R is ideally conceivable, then P is possible.
- (6') P is possible. (From 4', 5')
- (7') S has a justified true belief that P is possible. (From 2', 6')

In the following I will argue that the case presented in (1'-7') has the relevant traits of a Gettier case. I will begin with a line-by-line analysis of the (1'-7') case and argue that it is similar in all relevant ways to Gettier's original case in (1-9).

First, note that line (1') describes what serves as justification for the target belief that P is possible: as a result of a conceiving act in which, say, S supposes that P without being able to derive a contradiction, S forms the belief that P is conceivable.<sup>27</sup> Lines (3') and (4'), introduce the two components of luck specific of Gettier cases. At (3'), we have that P is not conceivable, so S erroneously finds P conceivable, and the belief that P is conceivable (line 1') is false. It may have been that after supposing that P, S committed an error in the process of verifying P for contradiction. To exemplify, imagine that P is a statement of Russell's Barber Paradox and S is not mathematically trained and attentive, so S fails at deriving the inherent contradiction in the concept of a barber who shaves all those and only those who do not shave themselves. Since P is not conceivable, what offers justification for believing the target proposition is false. Similarly, in the original case, at (5) we have that Jones does not have ten coins in his pocket, so the very belief that justifies the target belief of (1-9)<sup>28</sup> is false. Lines (5) and (3') are analogous in that they are responsible for falsifying the beliefs that offer justification for believing the target propositions of the two cases. At (4'), we find that R is ideally conceivable, and this is where good luck strikes. Why this corresponds to a strike of good luck can be seen by checking the next lines: the conjunction of (4') and (5') implies that P is possible on account of R's conceivability. As in the original case, the component of good luck makes the target proposition true.

Now I will draw attention to some problems regarding this frame.

First, let us take a look at lines (3') and (6'): putting things together, what we have is a possibly true proposition that is not conceivable. I gather that there are three ways to account for inconceivable possibilities, but only the third is consistent with the (1'-7') scaffolding:

(a) P is a proposition that we are absolutely certain that it is false. Here I refer to Peter Kung's claim that if a proposition is extremely unbelievable, then we cannot imagine it:

<sup>27</sup> This understanding of what a conceiving act consists in is due to P. Menzies, "Possibility and Conceivability: A Response-Dependent Account of Their Connections", p. 265, and D. Chalmers, "Does conceivability entail possibility?", in T. S. Gendler, J. Hawthorne (eds.), *Conceivability and Possibility*, New York, Oxford University Press, 2002, p. 147.

<sup>28</sup> Recall that the target belief of (1-9) is that someone who has ten coins in his pocket will be promoted.



[...] the principal way to account for our inability to imagine some propositions is in terms of *certainty*. We are unable to imagine proposition P if we are absolutely certain that P is false; conversely, so long as we find P *believable*, [...] we will be able to imagine P via stipulation or label.<sup>29</sup>

I am inclined to accept that, as an empirical fact, there are some things we are unable to imagine, even via assignment. It is difficult to imagine via assignment that  $1+1=79$ , for example.<sup>30</sup>

Following Kung's intuitions, obviously contradictory statements cannot be imagined. But if our model of an unbelievable proposition is an impossibly true one, then we encounter a problem: introducing the good luck component, by which the target proposition turns out true, will not be possible. Putting together the impossibility of P and what we have at line (6'), i.e., that P is possible, we arrive at a contradiction.

(b) P is a logical impossibility. By Kripke's error theory<sup>31</sup>, we can only conceive possibilities, so if P is impossible, then P cannot be conceived. However, this road to obtain a Gettier case for modal knowledge is blocked by the contradiction with line (6'). Simply put, there would be no way to add the element of good luck that makes P possible, after all.

(c) P is too complex for any human being to conceive it. Consider, for example, a contingently true proposition whose length (number of signs or characters used to write it) is a number so large that the Universe would end before finishing uttering it, and that contains an equally large number of variables. Entertaining or checking such a proposition for contradiction would be an impossible task. In the same vein, Geirsson<sup>32</sup> invites us to consider the case of an extraordinarily long and complex alien mathematical proof that uses axioms that we do not understand. Although the alien proof is sound, ordinary human subjects cannot know it, as they cannot understand it, survey its steps and verify its soundness. Putting things together, some propositions or sets of propositions may be so complex that ordinary human subjects cannot mentally entertain them and verify their consistency, therefore cannot conceive them. This is not to say that they are not consistent, as an ideal reasoner, free of any cognitive or computational limits, could parse them, understand them, and deduce that they do not entail a contradiction.

Conceding, by (c), that we can account for inconceivable possibilities, there is another problem lurking in (1'-7'): the idea that P is possible but what accounts for its possibility is the conceivability of a different proposition, R. The troublesome line is (5'), stating that if R is conceivable, then (the inconceivable) P is possible. If there is a

<sup>29</sup> P. Kung, "Imagining as a Guide to Possibility", p. 629.

<sup>30</sup> P. Kung, "You Really Do Imagine It: Against Error Theories of Imagination", p. 110.

<sup>31</sup> Saul Kripke, *Naming and Necessity*, Cambridge, Massachusetts, Harvard University Press, 1980. For the observation that Kripke supports an error theory of conceivability, see, for example, P. Kung, "You Really Do Imagine It: Against Error Theories of Imagination", p. 91.

<sup>32</sup> H. Geirsson, "Conceivability and Coherence: A Skeptical View of Zombies", p. 216.

relation between P and R, one stating that if R is conceivable, then P is conceivable, then we can derive P's possibility from R's conceivability as follows:

- (Premise 1) If P is ideally conceivable, then P is possible.
- (Premise 2) If R is ideally conceivable, then P is ideally conceivable.
- (Premise 3) R is ideally conceivable. (Line 4')
- (Intermediate Step) P is ideally conceivable. (From Premise 2 and Premise 3)
- (Conclusion) P is possible. (From Premise 1 and Intermediate Step).

However, we can derive a contradiction from the (Intermediate Step) and line (3') (P is not conceivable). So, connecting R's conceivability to P's conceivability by a conditional like the above is not possible.

To conclude, the scaffolding, although faithful to the formal representation of Gettier's original case, cannot be used to construct a Gettier scenario, as it fails to successfully introduce the case of good luck. Now I will proceed to presenting a Gettier case for modal knowledge.

#### 4.3. A GETTIER SCENARIO FOR MODAL KNOWLEDGE

Let us consider the following case:

Suppose that S considers it conceivable that water is not composed of oxygen ( $W \ \& \ \sim O$ ). Now, if such a situation is conceivable, then a situation in which something qualitatively identical to water, but not having in its composition oxygen is conceivable ( $Q(W) \ \& \ \sim O$ ). S is aware of this and also agrees that conceivability offers modal justification. So, S forms the belief that it is possible for something qualitatively identical to water but not containing oxygen to exist, and has justification for the belief. However, it is impossible for there to be oxygen-less water, and such a substance is not conceivable. But it is conceivable that something qualitatively identical to water contains no oxygen. Since it is conceivable, it is also metaphysically possible. So, S has a justified true belief that it is metaphysically possible for something looking, tasting etc. like water to contain no oxygen.

In a bit more formal manner, the case can be represented as follows:

- (1'') S believes that it is conceivable that  $W \ \& \ \sim O$ .
- (2'') If  $W \ \& \ \sim O$  is conceivable, then  $Q(W) \ \& \ \sim O$  is conceivable.
- (3'') S has a justified belief that  $Q(W) \ \& \ \sim O$  is possible. (From 1'', 2'')
- (4'') It is not possible that  $W \ \& \ \sim O$ . (Bad luck strikes)
- (5'') It is not conceivable that  $W \ \& \ \sim O$ . (From 4'', by Kripke's error theory of conceivability)
- (6'') It is conceivable that  $Q(W) \ \& \ \sim O$ . (Good luck strikes)
- (7'') It is metaphysically possible that  $Q(W) \ \& \ \sim O$ . (From 6'')
- (8'') S has a justified true belief that  $Q(W) \ \& \ \sim O$  is possible. (From 3'', 7'')

Let us analyze the case presented in (1''-8'') and see that it follows the main lines of Gettier's original case:

Line (1'') offers what is needed for S's belief to count as justified at lines (3'') and (8''). To make the case more plausible, imagine that S is in the epistemic situation of the Greek philosopher Empedocles, who believed that water is not a decomposable substance<sup>33</sup>. In the same vein, Geirsson argues that members of an ancient civilization would have been justified to believe that Hesperus could be brighter than Phosphorus: "Based on the evidence available to the ancients we should certainly grant that they could justifiably, but falsely, believe that it is possible that Hesperus is brighter than Phosphorus."<sup>34</sup>

Line (2'') is intuitively true: whoever considers that they can imagine water that does not contain oxygen, would also consider that they can imagine something looking and tasting like water that does not contain oxygen. The bad luck component is present at line (4''): oxygen-less water is impossible, therefore, by the Kripkean error theory, not conceivable (line 5''). This bad luck strike is responsible for falsifying that which serves an essential role in S's forming the justified belief that the target proposition is true.

At line (6''), we have that  $Q(W) \ \& \ \sim O$  is conceivable<sup>35</sup>, therefore it is also possible (line 7''). Finally, at (8''), we have that S has a justified true belief that  $Q(W) \ \& \ \sim O$  is possibly true.

But should S's justified true modal belief count as modal knowledge? My intuition is that it should not, given the way S formed the belief about the target proposition. After all, it is a mere coincidence that S believes something that is possibly true. Should we conclude, then, that there are Gettier cases for modal knowledge? Admittedly, there are two assumptions at work in the (1''-8'') case: first, that oxygen-less water is metaphysically impossible, and, second, that only possibilities are conceivable. Unless we accept them, there would be no element of bad luck, so, of course, no Gettier case. Although I gather that these two theses have some support in the modal metaphysics and epistemology literature<sup>36</sup>, defending them is beyond the scope of this paper. Considering this objection regarding the controversial nature of the two assumptions, the right conclusion would be that Gettier cases for modal knowledge are at least *prima facie* possible.<sup>37</sup>

<sup>33</sup> See Trevor H. Levere, *Transforming Matter: A History of Chemistry from Alchemy to the Buckyball*, Baltimore, Maryland, The Johns Hopkins University Press, 2001, p. 4.

<sup>34</sup> H. Geirsson, "Conceivability and Defeasible Modal Justification", p. 294.

<sup>35</sup> I gather that according to Kripke such a substance is conceivable: see S. Kripke, *Naming and Necessity*, Cambridge, Massachusetts, Harvard University Press, 1980, p. 114 (the discussion on whether we can imagine that a wooden table could have been made from a different material), pp. 124-125 (the discussion on "fool's gold", i.e., a substance that has all the qualitative properties of gold, but not having atomic number 79), p. 128 (the discussion on "fool's water", i.e., water that is not H<sub>2</sub>O).

<sup>36</sup> For example, taking a Kripkean stance regarding the first assumption, if water is actually H<sub>2</sub>O and natural kind terms are rigid designators, then water is necessarily H<sub>2</sub>O, so oxygen-less water is not possible. For a list of works supporting the idea that only possibilities are conceivable, see P. Kung, "Imagining as a Guide to Possibility", p. 626, footnote 11. It should be noted that Kung's paper is devoted to arguing against this thesis (also see P. Kung, "You Really Do Imagine It: Against Error Theories of Imagination", pp. 90-120).

<sup>37</sup> I would like to thank the anonymous reviewers for pointing to the objection and for pressing to qualify the conclusion of my paper.

## 5. CONCLUSIONS

The aim of this paper was to analyze the possibility of constructing Gettier cases for modal knowledge. As shown in section 2, according to Zagzebski there are three conditions that ought to be satisfied in order to construct a Gettier case for the tripartite definition of knowledge: (a) the conditions of justification ought to be distinct from the condition of truth, (b) a bad luck strike needs to cut off the connection between the initial justified belief and the truth of the target proposition, (c) a strike of good luck needs to make the target proposition true. In the fourth section I have defused a tentative objection to the possibility of Gettier cases for conceivability-based modal knowledge, i.e., that there cannot be such cases because what serves as justification for modal beliefs is identical to what accounts for modal truths. Further, I have: (a) discussed a tentative, problematic scaffolding for Gettier cases for modal knowledge, and (b) offered what seems to be a *prima facie* successful Gettier scenario for modal knowledge. Now, what would follow if a conceivability-based definition of modal knowledge can be Gettiered? As already noted, Gettier cases served as an objection to the classic tripartite definition of knowledge (knowledge as justified true belief). Some epistemologists attempted at figuring what extra conditions are needed in order to obtain a definition that is not refuted by a Gettier case (e.g., no false lemmas, safety and sensitivity).<sup>38</sup> For other epistemologists, Gettier cases served as a motivation to propose and investigate virtue-theoretic approaches to the concept of knowledge.<sup>39</sup> As an example, Linda Zagzebski defined knowledge in terms of true beliefs that result from successful acts of intellectual virtue.<sup>40</sup> Since the success of such acts is incompatible with luck, her approach entails that an epistemic agent in a Gettier scenario does not know the target proposition. Consequently, the approach is immune from Gettier cases.<sup>41</sup> However, the task of proposing and investigating a virtue-theoretic definition of modal knowledge is beyond the purpose of this paper and will be left for future work.<sup>42</sup>

<sup>38</sup> See Jonathan Jenkins Ichikawa, Matthias Steup, “The Analysis of Knowledge”, in Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, <https://plato.stanford.edu/entries/knowledge-analysis/>, accessed 9 July 2022.

<sup>39</sup> For an overview of all the replies to the Gettier challenge, see Jonathan Jenkins Ichikawa, Matthias Steup, “The Analysis of Knowledge”, in Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*, <https://plato.stanford.edu/entries/knowledge-analysis/>, accessed 9 July 2022.

<sup>40</sup> L. Zagzebski, *Virtues of the Mind*, pp. 270-271.

<sup>41</sup> *Ibidem*, p. 298.

<sup>42</sup> The author is not aware of any attempt to propose a virtue modal epistemology. This should not be confused with modal virtue epistemology, which aims at studying the modal character of knowledge, defined in terms of skillful performance (see Bob Beddor, Carlotta Pavese, “Modal Virtue Epistemology”, *Philosophy and Phenomenological Research*, vol. 101, nr. 1, 2020, pp. 61–79).