On the Problem of Deviant Realizations

Kok Yong Lee

National Chung Cheng University

Abstract

Recent literature has seen a surging interest in the modal principle involved in the Gettier-style thought experiments. According to the *necessitation thesis*, the modal principle underlying the Gettier-style thought experiments takes the form of a principle of necessitation. It is widely agreed that the necessitation thesis is seriously threatened by the *problem of deviant realizations*. Based on the Gricean pragmatic theory of communication, I defend the necessitation thesis against the problem of deviant realizations. The present account bears some significant similarities to Pierre Saint-Germier's account. After comparing and contrasting these two accounts, I argue that the differences between them actually speak in favor of the present account over Saint-Germier's one.

1. Introduction

Recent literature has seen a surging interest in the modal principle involved in the Gettier-style thought experiments.[1] According to what I will call the *necessitation thesis*, the subject in a Gettier-style thought experiment *necessarily* believes a certain proposition truly and justifiably without knowing it. Against the necessitation thesis, opponents have proposed the *problem of*

---

[1] While the current interest in this issue is initiated by Williamson (2007, chap. 6), the issue has also been discussed, in an early book, by Sorensen (1992, chap. 6). Recently, there has been a growing number of works reacting to Williamson's discussion, including Ichikawa and Jarvis (2009), Ichikawa (2009), Malmgren (2011), Grundmann and Horvath (2014), Gardiner (2015), Geddes (2018), Saint-Germier (2019), Häggqvist (2019), and Lee (2019; 2021).

deviant realizations, whose crux is that the subject in a Gettier-style scenario might still know the target proposition, or that she might not believe justifiably in the target proposition.

More and more commentators have come to the conclusion that the necessitation thesis is effectively rejected by the problem of deviant realizations. In this paper, I argue that the conclusion is misguided. Drawing on the Gricean pragmatic theory of standard interpretation, I argue that the necessitation thesis survives the problem of deviant realizations. In a recent paper, Pierre Saint-Germier (2019) has proposed a similar reply to the problem of deviant realizations. After comparing and contrasting the main characters of Saint-Germier's account and mine, I point out that there are two reasons to favor my account over his.

This paper will be structured as follows. Section 2 introduces the necessitation thesis and the modal principle involved in the Gettier-style thought experiments. Section 3 illustrates the problem of deviant realizations. Section 4 presents my solution to the problem of deviant realizations. Section 5 briefly describes Saint-Germier's solution to the problem of deviant realizations. Section 6 compares and contrasts Saint-Germier's and my solutions. I conclude by pointing two advantages that my account has over Saint-Germier's. Section 7 concludes the findings of this paper.

2. The Necessitation Thesis and the Gettier-Style Thought Experiments

Let us first reconstruct the argument underlying the Gettier-style thought experiments. My reconstruction is mainly based on Timothy Williamson's *The Philosophy of Philosophy*, which, to my knowledge, is the first to reconstruct the argument in the following way.

Let 'JTB(x, p)' stand for the relation *x believes truly and justifiably that p* and 'K(x, p)' for the relation *x knows that p*. Let us also call the view that knowledge is justified true belief 'the *t*raditional *t*heory of *k*nowledge', which can be symbolized as follows:

(TTK) $\Box \forall x \forall p \, (JTB(x, p) \leftrightarrow K(x, p))$

In his (1963), Edmund Gettier famously constructs two thought experiments serving as counterexamples to (TTK). Gettier's thought experiments are widely considered as successful, and many more similar thought experiments, with various tweaks and twists, have been proposed (cf. Shope 1983). Hence, the phrase 'the Gettier-style thought experiments'.

A Gettier-style thought experiment is typically about an imaginary *scenario type* (or *scenario template*), which I will call a *Gettier case*. A Gettier case should be distinguished from a *Gettier text*, which is the linguistic expressions (or descriptions) used to express a Gettier case. Put informally, a Gettier case is the Gettier-style story told by a Gettier text. In what follows, I take a Gettier case to be the *standard interpretation* of a Gettier text, i.e., a Gettier case is what ordinary people grasp when comprehending a Gettier text.

A Gettier case typically specifies the details of the subject's epistemic/doxastic status regarding the target proposition but also leaves many other details unspecified. A Gettier case is to be distinguished from its instantiations, i.e., individual *scenarios* that are unique and maximally specific. When a specific scenario is an instantiation of a Gettier case, I will say that the scenario *satisfies* the Gettier case.

It is widely accepted that envisaging the Gettier cases prompts intuitive judgments among their audiences that someone can justifiably believe a true proposition without knowing it. That is, readers of the Gettier text typically have the following *i*ntuitive *j*udgment:

(IJ) $\diamond \exists x \exists p \, (JTB(x, p) \, \& \sim K(x, p))$

Such an intuitive judgment should take the form of a principle of possibility rather than, say, a principle of actuality should not be controversial. For not only are the Gettier cases typically about imaginary subjects and scenarios, some Gettier cases are actually false (cf. McGinn 1984, 531). Surely, many Gettier cases can or do happen in the real world. But even the intuitive judgments prompted by the real-world Gettier cases entail (IJ).

(IJ) falsifies (TTK). But do Gettier-style thought experiments constitute counterexamples to (TTK)? Presumably, a Gettier-style thought experiment is a counterexample to (TTK), if we can rationally reconstruct a sound argument based on it, which has (IJ) as its conclusion. To this end, we need to articulate what we learn when envisaging the Gettier case.

Let 'GC(x, p)' stand for the relation *x is related to p in the way specified by a certain Gettier case*. When envisaging a Gettier case, it seems obvious that one recognizes:

(1) $\lozenge \exists x \exists p \; GC(x, p)$

Obviously, (1), by itself, gives little support to (IJ). In order for the Gettier-style thought experiments to serve as counterexamples to (TTK), a certain principle is called for to bridge the gap between (1) and (IJ). Call it 'the bridge principle'[2].

According to the *necessitation thesis*, a Gettier-style thought experiment indicates that standing in the relation specified by the Gettier case to a proposition p necessitates believing that

---

[2] A note on terminology: I have labeled the intuitive judgment prompted by the Gettier-style thought experiments '(IJ)' and the principle that leads us to (IJ) 'the bridge principle'. Other authors in this debate have taken (1) to be the intuitive judgment of Gettier cases and (IJ) a corollary of (1).

p truly and justifiably without knowing it. On this view, the bridge principle is the following necessity principle:

(2) $\Box \forall x \forall p \, (GC(x, p) \rightarrow (JTB(x, p) \, \& \, {\sim}K(x, p)))$

The necessitation thesis is initially plausible. For one thing, (2) explains nicely an initial intuition that many seem to have when facing a Gettier-style thought experiment, namely, when facing such a thought experiment, it seems that many are inclined to think that the subject in play *could not* have known that p even if she believes that p truly and justifiably. For another thing, it is widely agreed that the intuitive judgments prompted by a Gettier-style thought experiment are a priori justified (cf. Malmgren 2011). In addition, the necessitation thesis also gives the desired verdict that the Gettier-style thought experiments constitute counterexamples to (TTK), for (2), together with (1), entails (IJ).

3. The Problem of Deviant Realizations

Not only is Williamson the first to articulate the argument from (1) and (2) to (IJ), he is also the first to develop (by far) the most prominent objection against the necessitation thesis. To illustrate Williamson's objection, it is useful to look at a concrete example. Considering the following:

> *Ford*. Suppose that Smith believes that Jones, a co-worker of Smith, owns a Ford because Jones told Smith that he owns a Ford, and Smith knows that Jones is generally reliable and honest. From these, Smith infers that someone in his office owns a Ford. Suppose that Jones has lied to Smith (an act quite out of character) and that he has never owned a Ford. Suppose furthermore that Brown, who is also in the office, owns a Ford. But Smith has no idea that Brown owns a Ford.

Let 'O' stand for the proposition *Someone in the office owns a Ford*. Arguably, it is possible for a subject S_1 in a context C_1 to stand in the relation specified by *Ford* to O, while S_1 likes cabbage, and it is raining in C_1. Likewise, a subject S_2 in a context C_2 can also stand in the relation specified by *Ford* to O even if S_2 hates cabbage, and it is sunny in C_2. Let us call S_1 in C_1 and S_2 in C_2 different 'realizations' of *Ford* (note: a realization is just an instantiation of either a Gettier text or a Gettier case, which is a unique and maximally specific scenario).

According to Williamson, that a Gettier case admits different realizations poses a serious problem to the necessitation thesis. Consider *Ford*. On the necessitation thesis, the bridge principle of *Ford* is that:

$$(2)_{Ford} \quad \Box \forall x \, (\text{Ford-GC}(x, O) \rightarrow (\text{JTB}(x, O) \, \& \, \sim\!K(x, O))),$$

where 'Ford-GC(x, p)' stands for the relation *x is related to p in the way specified by the Gettier case of* Ford. Now, suppose that S_3 in a context C_3 and O satisfy the Gettier case expressed by *Ford* and that S_3's inference to the true belief that O from the false belief that Jones owns a Ford bizarrely happens to trigger awkward memories that undermine S_3's belief that Jones owns a Ford (cf. Williamson 2007, 185). Intuitively, S_3 does *not* believe that O truly and justifiably, for S_3 cannot be counted as *justified* in believing that O in the first place. However, since S_3 does stand in the relation specified by *Ford* to O, S_3 in C_3 is a realization of *Ford* that falsifies $(2)_{Ford}$. Likewise, suppose that S_4 in a context C_4 and O satisfy *Ford* and that S_4 also knows that Jones just received a Ford as a gift from a wealthy cousin. Intuitively, S_4 knows that O. However, since S_4 does stand in the relation specified by *Ford* to O, S_4 in C_4 is a realization of *Ford* that also falsifies $(2)_{Ford}$. A conspicuous feature of realizations such as C_3 and C_4 is that they are *deviant*: they are characteristically deviant from the standard or intended interpretation of the Gettier texts, or

equivalently for the present purposes, they are not what competent thought experimenters envisage when encountering the Gettier-style thought experiments.

We have seen how deviant realizations falsify the necessitationist bridge principle of *Ford*, i.e., (2)_{Ford}. But it is not hard to see how such *deviant realizations* might threaten the necessitationist bridge principle in general, i.e. (2). As Williamson puts it, all Gettier cases, as presented in the literature, can "almost never be described in complete detail" and thus an "extensive background must be taken for granted" (Williamson 2007, 185). Since violating what is not described but is taken for granted does not constitute a violation of the Gettier case, what is not explicitly described becomes a springboard for deviant realizations. Put another way, deviant realizations characteristically satisfy what is explicitly described but are deviant from what is taken for granted. If so, the fact that all Gettier cases must take an extensive background for granted indicates that there are always rooms for the construction of deviant realizations, in particular, deviant realizations that falsify (2). Call it the *problem of deviant realizations*.

The crux of the problem of deviant realizations is that:

(PDR) (2) is inevitably falsified by deviant realizations.

(PDR) poses a serious problem for the necessitation thesis. But the problem is not just that (2) is false. (2) does not have to be true in order for the necessitation thesis to hold—the modal principle underlying the Gettier-style thought experiments can still be (2) even if (2) is false. But if (2) is false, a new problem arises. If the necessitation thesis is correct—(2) characterizes the modal principle underlying the Gettier-style thought experiments—and if (2) is false, then the Gettier-style thought experiments fail to be counterexamples to (TTK). This is problematic not only because the Gettier-style thought experiments are widely regarded as successful, but also because they are widely regarded as the *paradigms* of philosophical thought experiments. "The background

working hypothesis is that," as Williamson points out, "[Gettier's] thought experiments are paradigmatic, in the sense that if any thought experiments can succeed in philosophy, his do" (2007, 179–80). Philosophical thought experiments could hardly be trustworthy at all, if even the Gettier-style thought experiments fail. Moreover, deviant realizations of the Gettier cases are not hard to come by. This is problematic since it indicates that the necessitation thesis implausibly implies that philosophers, for decades, had bizarrely and inexplicably failed to see what should be an obvious fact that the Gettier-style thought experiments are not genuine counterexamples to (TTK).

4. A Solution to the Problem of Deviant Realizations

Many commentators, including Williamson himself, have taken the necessitation thesis to be rejected by (PDR), and a number of alternative accounts have then been proposed (cf. Williamson 2007; Malmgren 2011; Gardiner 2015; Häggqvist 2019). Likewise, many defenders of the necessitation thesis have agreed to modify the necessitationist bridge principle (cf. Ichikawa 2009; Ichikawa and Jarvis 2009; Grundmann and Horvath 2014).

So, does (PDR) hold? There is a tempting line of argument against (PDR) whose crux is that a Gettier case (or the standard interpretation of a Gettier text) is incompatible with deviant realizations. The idea is quite straightforward: it is widely observed that deviant realizations are not the intended interpretation of the Gettier text; nor are they the standard ones. "[The deviant] interpretations of the [Gettier text]," as Malmgren correctly points out, "are clearly *unintended*— the description was not meant to be read in some such way—and we rightly ignore these interpretations when running the thought experiment" (Malmgren 2001, 276-77). Williamson also admits that deviant realizations "do not normally occur to us when we assess Gettier examples"

(Williamson 2007, 185). But if deviant realizations are the unintended, non-standard interpretation of the Gettier text, while the Gettier cases the intended, standard one, it is dubious that deviant realizations are in a position to satisfy the Gettier cases. But if deviant realizations do not satisfy the Gettier cases, (PDR) does not hold.

Ichikawa and Jarvis's (2009; also cf. Ichikawa 2009) objection to the problem of deviant realizations bears some significant similarities to the aforementioned argument. They distinguish between 'the literal claims of the Gettier text' and 'the story told by the Gettier text'. On their view, the stories told by the Gettier texts (they sometimes call them *fictions*) "appear to be what we need to rule out [deviant realizations]" (Ichikawa and Jarvis 2009, 227).[3] The idea is that "we have particular conventions, grounded in our practices with fictions, that govern how to move from a weaker description to a stronger scenario in the intended way" (Ichikawa 2009, 442). Moreover, the interpretative conventions command us to interpret the Gettier text in a standard (non-deviant) way. Hence, although deviant realizations are consistent with the literal claims of the Gettier texts, they are incompatible with the stories told by the Gettier texts. In other words, Gettier cases are immune to deviant realizations by default.

---

[3] Their official account is more complex. Roughly, Ichikawa and Jarvis take what a competent reader recognizes, when reading the text of a story, to be an infinite set of fictional truths (or propositions true in the fiction). There is a problem that an individual cannot entertain the members of this set individually. To overcome this problem, Ichikawa and Jarvis suggest that what a competent reader encounters, when reading the text of a story, is the proposition *Every member of the set of fictional truths is true* (Ichikawa and Jarvis 2009, 229). I will not address this part of their account, as it has no direct bearing on the points I want to make.

This line of argument captures a common reaction to deviant realizations: when first encountering deviant realizations, we typically feel that they are not what the Gettier texts express, that the stories told by the Gettier texts are incompatible with such deviant realizations, or that it is deeply misguided to interpret the Gettier texts along the lines of deviant realizations. But as it stands, this argument simply assumes, without further argument, that the intended, standard interpretation of the Gettier text is incompatible with deviant realizations. This is unsatisfactory on two scores. For one thing, an argument against (PDR), even if intuitively plausible, is not very persuasive if it simply assumes that deviant realizations do not satisfy the Gettier cases. Rather, a substantive, non-question-begging argument for this assumption is called for. For another, notice that a competent reader does not grasp a Gettier case in all its details in the first place. Some such details may be underspecified, while others may be due to the reader's ignorance of certain relevant objective facts. In general, the Gettier cases grasped by a competent reader can still be further specified in infinitely many ways. Now, the critics might claim that the reason why we initially find the Gettier cases incompatible with deviant realizations is that we are not aware of the latter. But once the problem of deviant realizations was on the table, the critics continue, we might admit that the Gettier cases could be further specified in ways compatible with deviant realizations.

In order for it to work, the aforementioned argument will need to be complemented by a substantive, non-circular account of why Gettier cases are immune to deviant realizations, or why they cannot be further specified as cases of deviant realizations. In the remainder of this section, I will develop such an account, according to which a peculiar feature of deviant realizations prevents them from satisfying the Gettier cases. Specifically, I argue that Gricean (pragmatic) principles reveal a general constraint on contriving Gettier cases, which is incompatible with the deviant

(non-standard) condition(s) of deviant realizations.[4] In a recent paper, Saint-Germier (2019) proposes a solution to the problem of deviant realizations that is similar to the present one in at least two aspects. First, Saint-Germier also takes the standard interpretation of a Gettier case (he calls it 'default interpretation') to be incompatible with deviant realizations. Second, like the present solution, Saint-Germier's solution depends on a general Gricean pragmatic theory. The remainder of this section will be dedicated to my solution, and I will come back to measure my solution against Saint-Germier's in the next two sections.

To begin with, recall that a Gettier case is what an ordinary reader envisages when encountering a Gettier text. For the present purposes, we will assume successful communication such that both the reader and the writer are competent and cooperative linguistic users and that what the reader envisages when reading the Gettier text is just what the writer intends to deliver *via* the Gettier text. That way, we can also take Gettier cases to be cases that a competent and cooperative writer intends to convey *via* the Gettier text.

Arguably, a *cooperative* writer will conform to the Gricean *Cooperative Principle*:

Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged. (Grice 1975, 45)

In particular, she will conform to the Gricean maxims of *Quantity*:

(QT1) Make your contribution as informative as is required (for the current purposes of the exchange).

---

[4] In Lee (2021), I take this to play a crucial role in resolving a dilemma of the Gettier-style thought experiments advanced in Lee (2019).

(QT2) Do not make your contribution more informative than is required. (Grice 1975, 45)

A cooperative writer, thus, will write in such a way that her text will deliver as much information as required for the current purposes of the exchange and no more. That is, she will intend to provide all and only relevant information.

Now, in order to conform to the Cooperative Principle (and the maxims of Quantity in particular), what information should a cooperative writer provide when constructing a Gettier text suitable for the Gettier-style thought experiment? In the typical context of proposing a Gettier text, the current purposes of the exchange are to construct a counterexample to (TTK) (or some other epistemic theories), namely, to construct a Gettier case showing that having a justified true belief (or some modified version of it) is not sufficient for having knowledge. Hence, in order to conform to the Cooperative Principle (and the maxims of Quantity in particular), a cooperative writer will intend to write in such a way that all significant properties regarding the epistemic/doxastic status of the subject in a Gettier case are provided to the readers. Otherwise, she would have failed to provide her readers with all information relevant to the current purposes of the exchange. More precisely, a cooperative writer will intend to conform to the following:

(3)   For any significant epistemic/doxastic property Φ, if S's epistemic/doxastic status regarding p in the Gettier case has Φ, then the information that S has Φ is accessible to the readers.[5]

A cooperative writer wants to render relevant information accessible to her readers, but he may fail to do so due to ignorance or performance error. Let us call a writer *competent* if she possesses enough knowledge relevant to constructing the Gettier case in play and has made no

[5] Hereafter, 'S' and 'Φ' are used as variables for ordinary individuals and properties respectively.

performance error when writing the Gettier text—this way of characterizing competent writers presupposes that it is possible to possess enough knowledge relevant to the construction of a Gettier case and that it is possible to successfully construct a Gettier case on the basis of such knowledge. I take it that both presuppositions are uncontroversial.

So, a competent writer has successfully rendered important information about the epistemic/doxastic status of S accessible to her readers. How can a piece of information be rendered accessible to the readers? In general, a piece of information provided by a certain text is accessible to the readers just in case this information is explicitly stated in the text or can be easily inferred from the text together with the *common ground*[6] in play. It follows that a (cooperative and) competent writer will write in such a way that her text will provide all and only information relevant to the current purposes of the exchange and that such information either is explicitly stated in the text or can be easily inferred from the text together with the common ground in play.

It follows that when constructing a Gettier text, a cooperative and competent writer will have to write in such a way that all significant properties of the subject S's epistemic/doxastic status regarding p in a Gettier case either are described in the Gettier text or can be easily inferred from the Gettier text together with the common ground in play. In other words, a cooperative and competent writer will conform to the following:

(4)   For any significant epistemic/doxastic property Φ, if S's epistemic/doxastic status regarding p in the Gettier case has Φ, then either S having Φ is described in the

---

[6] Here, 'common ground' denotes the presupposition shared by both the writer and the reader(s) (Stalnaker 2002).

Gettier text, or S having Φ can be easily inferred from the Gettier text together with the common ground in play.

On a closer look, (4) is overwhelmingly plausible. The main purpose of writing a Gettier text, as noted, is to convey a Gettier case, which in turn is aimed at showing that justified true belief (or some modified versions of it) is not enough for knowledge. When constructing such a case, a *cooperative* writer will have no intention to miss out any significant property relevant to the subject's epistemic/doxastic status regarding the target proposition, for she knows that doing so will mislead her readers or at any rate undermines the purposes of the current exchange. Moreover, a *competent* writer will not fail to provide any significant properties relevant to the subject's epistemic/doxastic status when constructing a Gettier case; otherwise, the case would have been ill-constructed, and she should not be counted as a competent writer in the first place.

Let us turn to the properties of S's epistemic/doxastic status regarding p in deviant realizations. Now, in order for a deviant realization D to falsify (2), D must satisfy the antecedent of (2) but not the consequent of (2). That is, deviant realizations fall into two categories (cf. Grundmann and Horvath 2014):

(DR1) Scenarios satisfying the Gettier-case relation in which the subject does not believe justifiably in the target proposition.

(DR2) Scenarios satisfying the Gettier-case relation in which the subject knows the target proposition.

In other words, S's epistemic/doxastic status regarding p in a deviant realizations D must be such that either S knows that p or S does not believe that p justifiably and truly. Let 'DP' stand for the *d*eviant *p*roperty of S's epistemic/doxastic status in D, which is responsible for either S knows that p in D or S does not believe that p truly and justifiably in D (note: 'DP' is just a placeholder,

denoting properties involved in either (DR1) or (DR2); I will not attempt to give a substantive account of DP here).

Given that DP leads to either S's possession of knowledge or S's lack of justified true belief, I take it to be uncontroversial that:

(5)   DP is a significant property of S's epistemic/doxastic status regarding p.

For instance, a deviant realization of *Ford* might be that Smith knows that Jenny, also a co-worker of his, owns a Ford. In this case, Smith appears to know that O (i.e., someone in the office owns a Ford). Here, the DP in play is Smith's knowledge of Jenny owning a Ford, which is a significant property of Smith's epistemic/doxastic status regarding O.

From (4) and (5), we get:

(6)   If S's epistemic/doxastic status regarding p in the Gettier case has the property DP, then either S having DP is described in the Gettier text, or S having DP can be easily inferred from the Gettier text together with the common ground in play.

Now, the following is intuitively plausible:

(7)   That S's epistemic/doxastic status regarding p has the property DP is not described in the Gettier text.

It should be obvious that a well-constructed Gettier text will not describe S's epistemic/doxastic status regarding p as having the property DP—a Gettier text that explicitly describes S's epistemic/doxastic status as having DP will fail to accomplish its goal, *viz*. to falsify (TTK), and so can be regarded as ill-constructed. For instance, suppose that *Ford* is supplemented with the description, say, "Smith also knows that Jenny, who is also in the office, owns a Ford". But then *Ford* would turn out to be ill-constructed.

Finally, consider:

(8)   That S's epistemic/doxastic status regarding p has the property DP cannot be easily

inferred from the Gettier text together with the common ground in play.

On the face of it, (8) is plausible. But, on closer inspection, what does easy inference mean here? I confess that I do not have a complete account of whether or not a piece of information that is easily inferred from the Gettier text together with the common ground. In general, the complex nature of easy inference (based on a certain text and the common ground) makes it very hard to give precise specifications of its necessary and/or sufficient conditions.

But fortunately, a complete account is not needed here. For it seems obvious that on any plausible conception of easy inference, deviant realizations are not the products of easy inference based on the Gettier text and the common ground in play. As noted, deviant realizations are neither the intended nor the expected interpretations of the Gettier text. A cooperative and competent writer intending to construct a Gettier-style scenario will not intend his text to be interpreted as a deviant realization; nor will such a reader typically be aware of any deviant realizations when interpreting the Gettier text. But if so, it should be uncontroversial that deviant realizations are not the products of easy inference on the basis of the Gettier text together with the common ground in play, regardless of how easy inference is specified.

From (6), (7), and (8), we get:

(9)   S's epistemic/doxastic status regarding p in the Gettier case does not have the

property DP.

But since DP is one of the defining features of deviant realizations, it follows from (9) that no deviant realization can satisfy the Gettier case. But if so, deviant realizations cannot falsify (2), and so (PDR) does not hold.

Let us close this section with three remarks. First, according to the present account, the main reason why a Gettier case is immune to deviant realizations is that any kind of deviant property DP, which is essential to deviant realizations, is incompatible with the current purposes of exchange, i.e., to construct a counterexample to (TTK) (or some other epistemic theories). I have shown that, given such a purpose of exchange, conforming to the maxims of Quantity will have the effect of ruling out DP. But this does not mean that one cannot get a similar result from other Gricean maxims. For instance, conforming to the maxim of Relation, i.e., "be relevant" (Grice 1975, 46), will also push toward the directions of avoiding explicitly stating DP in the Gettier text, i.e., (7), and preventing DP from being easily inferred from the Gettier text together with the common ground in play, i.e., (8).

Second, I have taken a Gettier case to be the standard interpretation of a Gettier text and suggested that the standard interpretation is generated in part by Gricean pragmatic maxims. This is not a problem since Gricean maxims do not just apply to strictly pragmatic interpretation (cf. Bach 2006).

Third, to be clear, it is not my goal here to defend the necessitation thesis. Nor is my goal to argue against the anti-necessitation thesis. Rather, the goal is to defend the necessitation thesis against the problem of deviant realizations. Strictly, the necessitation thesis might still be false, even if it does not suffer from the problem of deviant realizations.

5. A Similar Solution

Saint-Germier (2019) has recently proposed a solution to the problem of deviant realizations that bears important similarities to the aforementioned solution. In this section, I will briefly introduce

Saint-Germier's solution, and I will offer some reasons to favor my solution over Saint-Germier's in the next section.[7]

Saint-Germier draws on two theoretical resources to construct his solution to the deviant realizations. The first is a strategy for rendering a Gettier text "deviance-proof" that is first proposed by Thomas Grundmann and Joachim Horvath (2014). Grundmann and Horvath's paper has focused on (a variant of) *Ford*, and they suggest that to rule out (DR1) and (DR2), we have to amend *Ford* as follows:

> *Ford**. Smith justifiedly believes that Jones owns a Ford, on the basis of seeing Jones drive a Ford to work and remembering that Jones always drove a Ford in the past. From this belief alone (plus the justified background belief that Jones is in his office), Smith logically infers, at time t, to the *justified belief* that someone in his office owns a Ford, which provides his only justification for that belief at t. In fact, someone in Smith's office does own a Ford, so that Smith's latter belief is true—but it is not Jones, it is Brown, and so Smith's initial belief was false. (Jones sold his car and now drives a rented Ford.) Also, *if Smith knows at t that someone in his office owns a Ford, then he knows this at t only in virtue of the fact described*. (Grundmann and Horvath 2014, 530; my italics)

Simply put, Grundmann and Horvath's strategy of ruling out (DR1) is to explicitly state that Smith *believes justifiably* that someone in his office owns a Ford ("Smith logically infers, at time t, to the justified belief that someone in his office owns a Ford"). To exclude (DR2), Grundmann and

---

[7] Saint-Germier's original discussion is fruitful, complex, and subtle. In what follows, I will only focus on points that I deem most relevant to my solution. I strongly encourage the readers to read Saint-Germier's original work.

Horvath suggest two amendments to *Ford*. Firstly, we need to explicitly state that Smith's *sole* justification for *Someone in the office owns a Ford* is derived from a deductive inference based on the premise that Smith believes that Jones owns a Ford and the background belief that Jones is in Smith's office. Secondly, we need to explicitly state that Smith knows that someone in his office owns a Ford only if he knows this in virtue of "the fact described".

Grundmann and Horvath suggest that the Gettier text of *Ford** is (more or less) the Gettier case grasped by professional epistemologists when reading the Gettier text of *Ford* (Grundmann and Horvath 2014, 532). Saint-Germier has generalized Grundmann and Horvath's proposal to ordinary linguistic users. That is, Saint-Germier takes Grundmann and Horvath's way of amending Gettier cases to be the *default interpretations* of the Gettier texts, where default interpretations "enrich the literal content of what is said and can be cancelled if further explicit content is added" (Saint-Germier 2019, 10[8]).

For illustration, consider *Ford* and *Ford**. Saint-Germier's idea is that when facing the Gettier text of *Ford*, what we normally grasp, based on the default interpretation of the Gettier text of *Ford*, might more clearly be displayed by the Gettier text of *Ford** ('*Ford** is the default interpretation of *Ford*' for short). Since *Ford** is immune to deviant realizations (DR1) and (DR2), the default interpretation of *Ford* is thus "deviance-proof". Saint-Germier provides a Gricean pragmatic explanation of why *Ford** is the default interpretation of *Ford*.

This leads us to the second theoretical resource of Saint-Germier's account, i.e., Stephen Levinson's (2000) theory of default interpretation, which in turn is based on Grice's pragmatic theory of communication—it is this part of Saint-Germier's solution that bears significant

---

[8] Hereafter, page number refers to the online version of Saint-Germier's paper.

similarities to mine. Roughly, Levinson takes default interpretations to be generalized conversational implicatures generated by interpretative heuristics (Saint-Germier 2019, 10). Especially relevant to Saint-Germier's project are what Levinson calls the *Q-heuristic* and *I-heuristic*, which Levinson derives from Grice's Maxims of Quantity (QT1) and (QT2) respectively (cf. Levinson 2000, 75, 114).

> According to Levinson, the I-heuristic prompts the hearer to:
>
> (Ia)   Assume the richest temporal, causal and referential connections between described situations or events, consistent with what is taken for granted.
>
> (Ib)   Assume the stereotypical relations obtain between referents or events, unless this is inconsistent with (Ia).
>
> (Ic)   Avoid interpretations that multiply entities referred to (assume referential parsimony)… (Levinson 2000, 114-5; Saint-Germier 2019, 11)

(Ia), (Ib), and (Ic) can be seen as drives towards *coherence*, *stereotypicality*, and *parsimony* respectively (Saint-Germier 2019, 11).

> By contrast, the Q-heuristic prompts the speaker (writer) to conform to the following maxim:
>
> (Q)   Do not provide a statement that is informationally weaker than your knowledge of the world allows, unless providing an informationally stronger statement would contravene the I-principle [i.e., (Ia)-(Ic)]. (Levinson 2000, 76; Saint-Germier 2019, 12)

Now, as noted, deviant realizations fall into two categories, i.e., (DR1) and (DR2). It follows that the alleged deviant realizations of the Gettier case of *Ford* also have two kinds:

(DR1$_{Ford}$)   Scenarios satisfying the Gettier case of *Ford* in which Smith does not believe justifiably that someone in his office owns a Ford.

(DR2$_{Ford}$)   Scenarios satisfying the Gettier case of *Ford* in which Smith knows that someone in his office owns a Ford.

The crux of Saint-Germier's solution to the problem of deviant realizations is this: when facing the Gettier text of *Ford*, the I-heuristic and Q-heuristic will generate a default interpretation that is incompatible with (DR1$_{Ford}$) and (DR2$_{Ford}$) (and is in accordance with Grundmann and Horvath's strategy for amending Gettier texts).

As regards (DR1$_{Ford}$), Saint-Germier discusses the following deviant realization originally mentioned by Williamson (cf. Williamson 2007, 185): Smith's inference to the true belief that someone in the office owns a Ford from the false belief that Jones owns a Ford bizarrely happens to trigger awkward memories that undermine Smith's belief that Jones owns a Ford. Saint-Germier argues that considerations of stereotypicality (i.e., (Ib)) and parsimony (i.e., (Ic)) prohibit us from interpreting the Gettier text of *Ford* along the line of this deviant realization:

> However, it is clear that the belief-forming process described by Williamson is highly unusual and highly abnormal, given the background knowledge, contrary to the drive towards *stereotypicality*. In addition, Williamson's … deviant realization of the original scenario introduces entities and relations not explicitly mentioned ("awkward memories") contrary to the drive towards *parsimony*. So we can be confident that the I-heuristic forces an interpretation of the scenario which makes Smith's belief that someone in his office owns a Ford both true and justified and thus rules out all … deviant realizers [of type (DR1$_{Ford}$)]. (Saint-Germier 2019, 14)

As regards (DR2$_{Ford}$), Saint-Germier argues that the Q-heuristic is sufficient to rule out the deviant realizations that Smith has an alternative source of knowing that someone in his office owns a Ford:

> An alternative description of a case where Smith is explicitly said to have in addition some independent source of knowledge for the proposition that someone in his office owns a Ford would be informationally stronger than [*Ford]*. If the author of the description intended to convey such a case, uttering [*Ford*] would violate the speaker's maxim of the Q-heuristic. (Saint-Germier 2019, 15)

On Saint-Germier's account, considerations of coherence, stereotypicality, and parsimony are crucial to the derivation of default interpretations. This is true not only for the I-heuristic but also for the Q-heuristic, for as shown by Q-principle, the Q-heuristic is partly governed by the I-heuristic.

In brief, Saint-Germier's solution to the problem of deviant realizations consists of an ingenious combination of Levinson's Gricean pragmatic theory of default interpretation and Grundmann and Horvath's strategy for amending Gettier texts; on this view, the default interpretation of a Gettier text, generated by considerations of coherence, stereotypicality, and parsimony, is displayed by the amended Gettier text proposed by Grundmann and Horvath. As Saint-Germier writes:

> The conclusion we reach, then, is that the content of the modified scenario [*Ford**] designed by Grundmann and Horvath to exclude all possible deviant realizations, can be derived as the content of the default interpretation of the original scenario [*Ford*], on the basis of independent pragmatic principles. (Saint-Germier 2019, 15)

6. Compare and Contrast

Admittedly, the last section is by no means a comprehensive presentation of Levinson's and Saint-Germier's views; both are too complicated and nuanced to be fully discussed in this paper. Nevertheless, the aforementioned discussion will suffice for comparing and contrasting my account to Saint-Germier's.

These two accounts are similar in several ways. First, while I am concerned with the standard interpretation of the Gettier text (i.e., the Gettier-style story that ordinary readers grasp when comprehending the Gettier text), Saint-Germier has focused on the default interpretation of the Gettier text. But I take it that we are talking about roughly the same thing, for according to Saint-Germier, default interpretations occur at the level of "utterance-type" and "go through *normally*, unless a specific feature of the context cancels them" (Saint-Germier 2019, 10). Second, as noted, both accounts have relied on the Gricean pragmatic theory. My account has relied on the maxims of Quantity, i.e., (QT1) and (QT2), while Saint-Germier's has relied on Levinson's counterparts of the maxims of Quantity (i.e., the I-heuristic and Q-heuristic). Third, according to both accounts, conforming to the maxims of Quantity (or Levinson's counterparts) will prevent one from interpreting the Gettier text along the line of deviant realizations, i.e., (DR1) and (DR2).

Still, there are two important differences between my account and Saint-Germier's. First, while both accounts predict that Grice's maxims of Quantity (or the Levinson's counterparts) give rise to a "deviance-proof" standard (default) interpretation of the Gettier text, they posit different mechanisms of how this is done. According to my account, a Gettier case is "deviance-proof" because interpreting a Gettier text along the line of deviant realizations will imply that the writer has provided less information than is required for *the current purposes of exchange*, i.e., the purposes of providing counterexamples to (TTK). By contrast, according to Saint-Germier, a

Gettier case is "deviance-proof" because interpreting a Gettier text along the line of deviant realizations goes against the pragmatic drives towards coherence, stereotypicality, and parsimony.

Second, I do not, but Saint-Germier does, commit to the general correctness of Grundmann and Horvath's proposal. As noted, Grundmann and Horvath suggest that amending *Ford* along the line of *Ford** suffices to render the former "deviance-proof", and Saint-Germier further argues that *Ford** is the default interpretation of *Ford*. While I do not argue against the idea that *Ford** is the standard interpretation of *Ford*, I do not commit to it either. I have argued that the standard interpretation of the Gettier text is incompatible with deviant realizations, but my account is compatible with the standard interpretation being significantly different from Grundmann and Horvath's amendment.

Now, I want to argue that a case can be made that the differences between these two accounts speak in favor of my account over Saint-Germier's. Consider, firstly, how the Gricean maxims give rise to "deviant-proof" standard (default) interpretation. Admittedly, deviant realizations typically involve incoherent, abnormal conditions and/or redundant entities, and so, in many cases, Saint-Germier's proposal will get the correct verdicts. As Saint-Germier correctly points out, the deviant situation in which Smith's derivation of the belief that someone in his office owns a Ford happens to trigger awkward memories that in turn undermines his belief that Jones owns a Ford is abnormal and arguably involves *ad hoc* entities (awkward memories). But I doubt that Saint-Germier's account will always give us the correct verdicts. Instead, it seems possible to construct deviant realizations that are more or less coherent, stereotypical, and parsimonious. For instance, suppose that it is not uncommon for people to trigger awkward memories in the way stated above and that it is not common for people to trigger such memories either. Even so, it seems that *Ford* still constitutes a counterexample to (TTK). But in this case, considerations of

coherence, stereotypicality (normality), and/or parsimony would not give us the desired result—presumably, deviant realizations that involve triggering such awkward memories might not be incoherent, abnormal, and/or anti-parsimonious (note: this does not mean that they are perfectly coherent, normal, and/or parsimonious either). But if so, on Saint-Germier's account, the default interpretation of the Gettier text *Ford* might not be incompatible with such deviant realizations. This is a problem of Saint-Germier's account that presumably has no effect on my account.

According to the present account, the current purposes of exchange, i.e., constructing counterexamples to (TTK) or other epistemic theories, drive us to envisage a Gettier case that is incompatible with deviant realizations. This account, thus, is not affected by the supposition that a certain deviant condition is not uncommon. For the purposes of constructing counterexamples to (TTK), the cooperative and competent writer has to render all significant epistemic/doxastic properties of the subject of a Gettier case accessible to the readers, and she will not omit a piece of relevant information just because the situation described by it is not uncommon. That is, regardless of whether a certain deviant realization commonly arises or not, the facts that deviant conditions are not explicitly described in the Gettier text and that they are not easily inferable from the Gettier text together with the common background in play still indicate that such deviant conditions are not part of the Gettier case. In brief, deviant realizations are not what a cooperative and competent writer conveys *via* the Gettier text, even if the deviant conditions in play are not uncommon. To be clear, I am not saying that coherence, stereotypicality, and parsimony do not drive us towards a "deviance-proof" interpretation of the Gettier text. But if what has been said is correct, a more fundamental drive toward such interpretations is the current purposes of exchange (i.e., providing counterexamples to epistemic theories).

Let us now turn to Grundmann and Horvath's amendment. Although the proposal is sophisticated and well designed, it still faces two serious problems. First, Grundmann and Horvath's discussion has focused on a particular Gettier text, i.e., *Ford*. While Grundmann and Horvath (and Saint-Germier too) seem to think that their proposal can apply to all Gettier texts, they offer no guidance on how to do so. This is unsatisfactory as some of their amendments are about features peculiar to *Ford* (and for that matter *Ford**). For instance, in both *Ford* and *Ford**, the subject's justified belief in the target proposition is described as being based on a (simple) *deductive* inference. But not all Gettier cases are cases of deductive inferences. Some Gettier texts describe that the subject comes to believe the target proposition *via* an inductive inference.

There are some prima facie difficulties for applying Grundmann and Horvath's proposal to Gettier texts that describe inductive inference. Inductive inferences such as argument by analogy, inference to the best explanation, etc. almost always involve unspecified background beliefs, and in many cases, it is futile to enumerate all the background beliefs in play. This causes problems for Grundmann and Horvath's proposal, as what is unspecified can be a springboard for deviant realizations (Williamson 2007, 185). Without general guidance on how to prevent conditions giving rise to deviant realizations from slipping into the background beliefs, it is not clear how to amend such Gettier texts along the lines suggested by Grundmann and Horvath.

Second, putting the problem of generality aside, Grundmann and Horvath's guidance on amending the Gettier text of *Ford* can be called into question. Recall that Grundmann and Horvath's proposal, in a nutshell, is to amend the Gettier text so that it explicitly states that (a) the subject believes justifiably in the target proposition and that (b) if the subject knows the target proposition, then she knows it only in virtue of the fact described. I think (a) is safe. In order to

falsify the left-to-right direction of (TTK), Gettier cases will have to be cases of justified true belief. So, amending the Gettier texts along the lines of (a) seems harmless (if not mandatory).

By contrast, (b) is problematic. The key to (b) is that the subject's knowledge of the target proposition (if any) can only come from "the fact described". But what is the fact described? Or what is denoted by the phrase 'the fact described' in the amended Gettier text? Does the term 'the fact described' denote what is described in the Gettier text of *Ford** or the happenings in the Gettier case of *Ford**? If the former, (b) might still be compatible with deviant realizations, for as noted in Section 5, a Gettier text is compatible with deviant realizations. How about 'the fact described' denotes the happenings in the Gettier case of *Ford**? In this case, still, there is no guarantee that the Gettier case and deviant realizations are incompatible. To see this, it is useful to rehearse the dialectical structure. Grundmann and Horvath first propose to amend the Gettier text of *Ford* in terms of the Gettier text of *Ford** and then contend what is grasped by professional epistemologists, when reading the Gettier text of *Ford*, is more clearly displayed by the Gettier text of *Ford**. The suggestion is really that, for professional epistemologists at least, the Gettier case of *Ford* is the Gettier text of *Ford*. But if the phrase 'the fact described' (which is contained in the Gettier text of *Ford**) denotes the happenings in the Gettier case of *Ford**, then there is a problem. For we have yet to be told what the Gettier case of *Ford** is. Without a full-fledged account of what the Gettier case of *Ford** really is, there is no guarantee that the Gettier case of *Ford** is immune to deviant realizations. It will not do to just assume that the Gettier case of *Ford** is immune to deviant realizations, for doing so does not give us a non-circular objection to (PDR). Hence, no matter how we interpret 'the fact described' in *Ford**, there is no guarantee that (PDR) does not hold.

I have been arguing that the current purposes of exchange are a more fundamental consideration for generating the standard (default) interpretation of the Gettier text than considerations of coherence, stereotypicality, and parsimony. Moreover, I have argued that Grundmann and Horvath's strategy for amending the Gettier texts is questionable. If so, the present solution to the problem of deviant realizations is more promising than Saint-Germier's.

7. Conclusion

According to the necessitation thesis, the subject of a Gettier case necessarily believes the target proposition justifiably and truly without knowing it. Recently, more and more philosophers have concluded that the necessitation thesis is seriously threatened by the problem of deviant realizations, whose crux is that there are always some realizations of the Gettier cases in which the subject either knows the target proposition or does not believes justifiably and truly the target proposition.

I have argued that the problem of deviant realizations is fundamentally misguided. More precisely, I have argued that a cooperative and competent writer of a Gettier text will have to write in such a way that the Gettier case conveyed by the Gettier text is incompatible with deviant conditions. In a recent publication, Saint-Germier proposes a similar solution. After comparing and contrasting his solution to mine, I argue that there are two reasons to favor my account over Saint-Germier's.

To be clear, this paper is not concerned with whether the necessitation thesis is correct about the bridge principle involved in the Gettier-style thought experiments. Nothing I have said above directly supports the necessitation thesis. Nor have I offered any substantive argument

against the anti-necessitation thesis. For all I have argued, the necessitation thesis is false. But if the view is false, it is not because it suffers from the problem of deviant realizations.

Acknowledgements

References

Bach, Kent. 2006. "The Top 10 Misconceptions about Implicature." In *Drawing the Boundaries of Meaning: Neo-Gricean Studies in Pragmatics and Semantics in Honor of Laurence R. Horn*, edited by Betty J. Birner and Gregory Ward, 21–30. Amsterdam: John Benjamins Publishing Company.

Gardiner, Georgi. 2015. "Normalcy and the Contents of Philosophical Judgments." *Inquiry* 58 (7–8): 700–740.

Geddes, Alexander. 2018. "Judgements about Thought Experiments." *Mind* 127(505): 35-67.

Gettier, Edmund. 1963. "Is Justified True Belief Knowledge?" *Analysis* 23: 121–23.

Grice, Paul. 1975. "Logic and Conversation." In *Syntax and Semantics*, edited by Peter Cole and Jerry L. Morgan, 3:41–58. New York: Academic Press.

Grundmann, Thomas, and Joachim Horvath. 2014. "Thought Experiments and the Problem of
    Deviant Realizations." *Philosophical Studies* 170: 525–33.

Häggqvist, Sören. 2019. "Thought Experiments, Formalization, and Disagreement." *Topoi* 38:
    801-810.

Ichikawa, Jonathan. 2009. "Knowing the Intuition and Knowing the Counterfactual."
    Philosophical Studies 145: 435–43.

Ichikawa, Jonathan, and Benjamin Jarvis. 2009. "Thought-Experiment Intuitions and Truth in
    Fiction." *Philosophical Studies* 142: 221–46.

Lee, Kok Yong. 2019. "On a Dilemma of the Gettier-Style Thought Experiments." *EurAmerica*
    49(4): 485-521. (In Mandarin)

Lee, Kok Yong. 2021. "Resolving the Dilemma of the Gettier-Style Thought Experiments."
    NCCU Philosophical Journal 45: 163-193. (In Mandarin)

Levinson, Stephen C. 2000. *Presumptive Meanings: The Theory of Generalized Conversational
    Implicature*. Cambridge, Mass.: The MIT Press.

Malmgren, Anna-Sara. 2011. "Rationalism and the Content of Intuitive Judgments." *Mind* 120
    (478): 263–327.

McGinn, Colin. 1984. "The Concept of Knowledge." *Midwest Studies in Philosophy* 9: 529–54.

Saint-Germier, Pierre. 2019. "Gettier Gettier Straight: Thought Experiments, Deviant
    Realizations and Default Interpretations." *Synthese*. https://doi.org/10.1007/s11229-019-
    02166-0.

Shope, Robert K. 1983. *The Analysis of Knowing: A Decade of Research*. Princeton: Princeton
    University Press.

Sorensen, Roy A. 1992. *Thought Experiments*. New York: Oxford University Press.

Stalnaker, Robert. 2002. "Common Ground." *Linguistics and Philosophy* 25: 701–21.

Williamson, Timothy. 2007. *The Philosophy of Philosophy*. Oxford: Blackwell.