

# On Mentioning Belief-Formation Methods in the Sensitivity Subjunctives

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**Abstract** According to the sensitivity account of knowledge,  $S$  knows that  $p$  only if  $S$ 's belief in  $p$  is sensitive in the sense that  $S$  would not believe that  $p$  if  $p$  were false. The sensitivity condition is usually relativized to belief-formation methods to avoid putative counterexamples. A remaining issue for the account is where methods should be mentioned in the sensitivity subjunctives. In this paper, I argue that if methods are mentioned in the antecedent, then the account is too strong to accommodate inductive knowledge; if methods are mentioned in the consequent, then the account is too weak to eliminate some luckily true beliefs from the realm of knowledge. Therefore, the strategy to relativize the sensitivity condition is undermined by inductive knowledge and some luckily true beliefs.

**Keywords** Belief-formation methods • Epistemic luck • Inductive knowledge • Knowledge • Sensitivity

## 1. Introduction

The sensitivity account of knowledge had great success in accounting for various cases including cases of knowledge and cases of luckily true belief such as the Gettier cases and the lottery case. Nonetheless, there are cases where the subject knows a proposition despite her falsely believing so on a different belief-formation method if the proposition were false. The

sensitivity theorists such as Robert Nozick (1981)<sup>1</sup> have thus relativized the sensitivity condition to belief-formation methods to avoid these putative counterexamples.

Here is a remaining question for the sensitivity theorists: Where should belief-formation methods be mentioned in the sensitivity subjunctives, i.e., if  $p$  were false,  $S$  would not believe that  $p$ ? Should methods be mentioned in the antecedent or the consequent of the sensitivity subjunctives? Because different ways of mentioning methods make us consider different possible worlds and thus would deliver different verdicts in some cases, the sensitivity theorists need to offer a fixed way of mentioning methods. Otherwise, the explanatory success of the sensitivity account would be ad hoc.

In this paper, I argue that there is not a fixed way of mentioning belief-formation methods that helps the sensitivity account accommodate all cases: if methods are mentioned in the antecedent of the sensitivity subjunctives, then the account would exclude inductive knowledge from the realm of knowledge. In contrast, if methods are mentioned in the consequent of the sensitivity subjunctives, then the account fails to eliminate some luckily true beliefs from the realm of knowledge. Therefore, the relativization to belief-formation methods, which was motivated to avoid putative counterexamples, remains unsatisfactory.

## **2. The Method-Relativity of the Sensitivity Condition**

The lesson we learned from the Gettier cases is that, if a belief is true as a matter of luck, then it falls short of knowledge. To eliminate luckily true beliefs from the realm of knowledge, an

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<sup>1</sup> Other sensitivity theorists include Adams et al. (2011), Adams & Clarke (2005), Becker (2006, 2007, 2008, 2009, 2012a, 2012b, 2016, 2018), Bjerring & Gundersen (2020), Black (2002, 2008, 2011, 2019), Black & Murphy (2007), Bolos & Collin (2018), Broncano-Berrocal (2018), Collin (2018), Collin & Bolos (2022), Cross (2007, 2010), DeRose (1995, 2004, 2010), Goldberg (2012), Gundersen (2003, 2010, 2012), Ichikawa (2011), Murphy & Black (2012), Pinillos (2021, 2022), Ramachandran (2015), Roush (2005, 2009, 2010, 2012, 2017), Topey (2022), Wallbridge (2017, 2018a, 2018b), and Zalabardo (2012, 2017).

anti-luck condition on knowledge is needed. A natural idea is that, if one's belief is true as a matter of luck, then one would still believe the same thing even if it turns out to be false. As Murphy and Black write,

“How, then, do we keep luckily acquired beliefs from counting as knowledge? We must demand more of  $S$  than that she respond appropriately to her environment by suitably forming the true belief that  $P$ . One idea is to demand that  $S$  respond appropriately in environments where it is *not* the case that  $P$ ” (Murphy & Black, 2012, p. 30).

This idea motivates the sensitivity account of knowledge.<sup>2</sup> According to this account,  $S$  knows that  $p$  only if  $S$ 's belief in  $p$  is sensitive, that is,  $S$  would not believe that  $p$  if  $p$  were false, or formally  $\sim p \Rightarrow \sim Bp$  (“ $\Rightarrow$ ” denotes the subjunctive conditional connective) (Nozick, 1981, p. 177). The sensitivity condition is rendered as follows under the Lewis-Stalnaker analysis of subjunctive conditionals (Lewis, 1973a, b; Stalnaker, 1968),

**Sensitivity:**  $S$ 's belief in  $p$  is sensitive just in case, in the closest possible world where  $p$  is false,  $S$  does not believe that  $p$ .

This makes us consider whether  $S$  holds a false belief in  $p$  in the closest possible world where  $p$  is false. If  $S$  believes that  $p$  in the possible world, then  $S$ 's belief in  $p$  is insensitive. Thus, the belief is luckily true and  $S$  does not know that  $p$ . If  $S$  does not believe that  $p$  in the possible world, then  $S$ 's belief in  $p$  is sensitive. Thus, the belief is non-luckily true and  $S$  knows that  $p$  unless it exhibits some non-modal shortcomings that would deprive it of the status of knowledge.

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<sup>2</sup> For discussions of the sensitivity condition as the anti-luck condition on knowledge, see Adams & Clarke (2005), Becker (2007, 2008, 2012b), Black (2011, 2019), Bolos & Collin (2018), Collin (2018), Murphy & Black (2012), Neil (2021), Roush (2005), and Topey (2022).

However, the sensitivity account runs into counterexamples quickly. For instance,

**GRANDMOTHER:** “A grandmother sees her grandson is well when he comes to visit; but if he were sick or dead, others would tell her he was well to spare her upset” (Nozick, 1981, p. 179).<sup>3</sup>

Intuitively, the grandmother knows that *her grandson is well* despite her falsely believing so in the closest possible world where her grandson is sick. This seems to be a counterexample to the sensitivity account at first glance. Once it is noted that forming a belief on the basis of vision is a different belief-formation method from forming a belief on the basis of testimony, we might want to relativize the sensitivity condition to belief-formation methods, e.g., perception, memory, testimony, deduction, and induction, to get rid of the counterexample.<sup>4, 5</sup>

Here is a remaining question for the sensitivity theorists: Where should belief-formation methods be mentioned in the sensitivity subjunctives, i.e., if  $p$  were false,  $S$  would not believe that  $p$ ? Should methods be mentioned in the antecedent or the consequent of the sensitivity subjunctives? The selling point of the sensitivity account is that it accommodates various cases including cases of knowledge and cases of luckily true beliefs such as the Gettier cases and the lottery case where one forms a true belief that one’s ticket is a loser based on its odds

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<sup>3</sup> Similar counterexamples include Alfano’s (2009) REDWOOD, Goldman’s (1976) JUDY & TRUDY, and Goldman’s (1976, 1983, 2009) DACHSHUND.

<sup>4</sup> In addition to discharging putative counterexamples such as GRANDMOTHER, there are other motivations for relativizing the sensitivity condition to belief-formation methods. For instance, there is criticism of the sensitivity account that it cannot account for higher-order knowledge, see DeRose (1995), Huemer (2001), Kripke (2011), Melchior (2015, 2017), Sosa (1996, 1999, 2002), Vogel (1987, 2000, 2007, 2012), Williamson (2000), and Zalabardo (2012). Nonetheless, Bjerring & Gundersen (2020) and Wallbridge (2017, 2018a) argue that the criticism fails to take the method-relativity of the sensitivity condition into account. It has also been argued that the sensitivity account is incompatible with epistemic closure, see Kripke (2011), Luper (2012), Pritchard (2002, 2005, 2008), Sosa (1999, 2004), Williamson (2000). Nonetheless, Adams & Clarke (2005), Baumann (2012), and Black (2002) argue that the sensitivity account is compatible with epistemic closure once we pay enough attention to the method-relativity of the sensitivity condition.

<sup>5</sup> For discussions of the individuation of belief-formation methods, see Alfano (2009), Becker (2008, 2009, 2012b), Bernecker (2020), Black & Murphy (2007), Bogardus & Marxen (2014), Broncano-Berrocal (2014), Hirvelä (2019), Zhao (2022a, b), and Zhao (2020).

of winning. However, it is relatively easy to pick a way of mentioning methods that helps the sensitivity account deliver the correct verdict in a case because different ways of mentioning methods make us consider different possible worlds and thus would deliver different verdicts in some cases. The explanatory success achieved in this way would be nothing but ad hoc. What would be more promising is to provide a fixed way of mentioning methods that helps the sensitivity account to accommodate different cases.

If belief-formation methods are mentioned in the antecedent of the sensitivity subjunctives, then the sensitivity condition would be rendered as follows,

**Sensitivity**<sup>46</sup>:  $S$ 's belief in  $p$  which is formed on method  $M$  is sensitive just in case, in the closest possible world where  $p$  is false and  $S$  uses  $M$  to form a belief whether or not  $p$ ,  $S$  does not believe that  $p$  (Nozick, 1981; Topey, 2022).

If the condition is thus relativized, then a possible world should be taken into account when evaluating whether the target belief is sensitive or not only if it is a possible world where  $S$  uses the same method as that in the actual world; while possible worlds where  $S$  uses a different method are irrelevant. In GRANDMOTHER, the grandmother's actual method is individuated by reference to visual perception; while her counterfactual method is individuated by reference to testimony. Because her falsely believing that *her grandson is well* in the closest possible world where her grandson is sick is based on a different method from that in the actual world, it does not show that her belief is insensitive. To evaluate whether her belief is sensitive or not, we need to consider the closest possible world where her grandson is sick and she sees her grandson. Since she does not believe that *her grandson*

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<sup>6</sup> "A" is shorthand for "antecedent."

*is well* in that world, her belief is sensitive in the end. Thus, Sensitivity<sup>4</sup> delivers the correct verdict in GRANDMOTHER.

In contrast, if belief-formation methods are mentioned in the consequent of the sensitivity subjunctives, then the sensitivity condition would be rendered as follows,

**Sensitivity<sup>C7</sup>:** *S*'s belief in *p* which is formed on method *M* is sensitive just in case, in the closest possible world where *p* is false, *S* does not believe that *p* on *M* (Luper-Foy, 1984; Luper, 2012).

This version of the sensitivity condition is advocated by the sensitivity theorists such as Tim Black<sup>8</sup>. As he writes, “to determine whether *S*'s belief that *p* is sensitive, we consider the closest possible world where *p* is false—call this world *w*—and then determine not, as in the original proposal, whether *S* believes in *w* that *p*, but whether *S* believes *via M* that *p*. Her belief is sensitive if *either* (a) she does not believe in *w* that *p* *or* (b) in *w*, she believes that *p* via some method other than *M*” (Black, 2008, p. 12).

If the condition is thus relativized, then we just need to take into account the closest possible world where the target proposition is false. In GRANDMOTHER, to evaluate whether her belief is sensitive or not, we need to consider the closest possible world where her grandson is sick and examine whether she believes that *her grandson is well* on her actual method there. Since she believes that *her grandson is well* on a different method from that in the actual world, her belief in the actual world is sensitive in the end. Thus, Sensitivity<sup>C</sup> also delivers the correct verdict in GRANDMOTHER.

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<sup>7</sup> “C” is shorthand for “consequent.”

<sup>8</sup> Proponents of Sensitivity<sup>C</sup> include Becker (2008, 2009, 2012b, 2016), Black (2008), Bolos & Collin (2018), Broncano-Berrocal (2018), Collin (2018), Collin & Bolos (2020), and Goldberg (2012).

### 3. Where Should Methods Be Mentioned in the Sensitivity Subjunctives?

As mentioned above, both Sensitivity<sup>A</sup> and Sensitivity<sup>C</sup> handle GRANDMOTHER, which is a case of luckily true belief, nicely. Nonetheless, given that they make us consider different possible worlds, they could deliver different verdicts in some other cases. In this section, I will take into account some luckily true beliefs and inductive knowledge to see if there is a way of mentioning belief-formation methods in the sensitivity subjunctives that helps the sensitivity account to accommodate all cases.

#### 3.1 Some Luckily True Beliefs

If, as Sensitivity<sup>C</sup> claims, belief-formation methods are mentioned in the consequent of the sensitivity subjunctives, then there are two ways a true belief in  $p$  could be sensitive. First, in the closest possible world where  $p$  is false, one still uses the same belief-formation method as that in the actual world and that very method does not lead one to form a false belief in  $p$  which makes the target belief sensitive. In this sense, the method responds to whether it is the case that  $p$  in a reliable way: in the actual case where  $p$  is true, the method leads one to hold a true belief in  $p$ ; in the counterfactual case where  $p$  is false, the method prevents one from holding a false belief in  $p$ .

Second, in the closest possible world where  $p$  is false, one uses a different belief-formation method from that in the actual world which makes the target belief automatically sensitive. However, in that case, we don't know whether the method responds to whether it is the case that  $p$  in a reliable way as we don't know whether the method

prevents one from holding a false belief in  $p$  in the counterfactual case where  $p$  is false. Though a true belief formed in this way is automatically sensitive, it could still be true as a matter of luck. To illustrate, consider a modified version of Nozick's GRANDMOTHER,

**GRANDMOTHER\*:** A grandmother sees her grandson is well when he comes to visit.

However, her eyesight is so bad that she could mistake a sick person for a healthy person.

But if he were sick or dead, others would tell her he was well to spare her upset.

Intuitively, her belief that *her grandson is well* is true as a matter of luck and thus does not count as knowledge. After all, she could barely tell the difference between a healthy person and a sick person by her eyesight! However, the belief is sensitive on Sensitivity<sup>C</sup>. In the closest possible world where her grandson is sick, the very method does not lead her to form a false belief that *her grandson is well* because she uses a different method instead!

One might argue that this is not a problem for the sensitivity theorists because the sensitivity condition is only a necessary condition on knowledge. Thus, it should not be a surprise that a sensitive belief could fall short of knowledge because it could fail to satisfy other necessary conditions on knowledge.<sup>9</sup> Nonetheless, I don't think the strategy works.

First, the sensitivity condition is often motivated as the anti-luck condition on knowledge. Thus, it should turn a true belief into a non-luckily true belief. In GRANDMOTHER\*, it is intuitive to say that the grandmother's belief that *her grandson is well* is true as a matter of luck. However, the belief is sensitive on Sensitivity<sup>C</sup>. For the strategy to work, one needs to further concede that the sensitivity condition is not sufficient for the anti-luck condition on knowledge. If that is the case, then one of the main motivations

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<sup>9</sup> I thank an anonymous referee for pressing me on this point.



for the sensitivity account of knowledge, i.e., to eliminate luckily true beliefs from the realm of knowledge, is lost. Why should one be a sensitivity theorist at all?

Second, its failure in GRANDMOTHER\* gives us a good reason to doubt its success in other cases. To illustrate, consider the following case,

**GRANDMOTHER\*\*:** A grandmother sees her grandson is well when he comes to visit.

However, her eyesight is so bad that she could mistake a sick person for a healthy person.

She is not with others.

Similarly, the grandmother's belief, in this case, is true as a matter of luck and thus does not count as knowledge. Sensitivity<sup>C</sup> delivers the correct verdict here. In the closest possible world where her grandson is sick, the very method leads her to form a false belief that *her grandson is well*. Thus, her belief is insensitive on Sensitivity<sup>C</sup>.

Intuitively, in both GRANDMOTHER\* and GRANDMOTHER\*\*, the grandmother fails to know for the same reason. After all, her eyesight is very bad in both cases and such bad eyesight does not confer her with knowledge even if she luckily forms a true belief by using it! If Sensitivity<sup>C</sup> fails to account for why the grandmother's belief is true as a matter of luck and thus does not count as knowledge in GRANDMOTHER\*, then we should suspect that Sensitivity<sup>C</sup> does not capture what is going wrong with GRANDMOTHER\*\*. Accommodation of cases of luckily true beliefs such as GRANDMOTHER\*\* is often deemed a success for the sensitivity account. However, as I have shown, the success of Sensitivity<sup>C</sup> in cases other than GRANDMOTHER\*, e.g., GRANDMOTHER\*\*, is also illusory.

Interestingly, Sensitivity<sup>A</sup> handles GRANDMOTHER\* nicely. Sensitivity<sup>A</sup> makes us

consider the closest possible world where her grandson is sick and she uses the same belief-formation method as that in the actual world, i.e., forming a belief whether her grandson is well or not on the basis of seeing him. In that possible world, the method leads her to form a false belief that *her grandson is well*. Therefore, Sensitivity<sup>A</sup> delivers the correct verdict in GRANDMOTHER\*. Another candidate for the closest possible world is a possible world where the method leads her to form a true belief that her grandson is sick. After all, her unreliable eyesight could lead her to form a true belief by sheer luck! However, the second possible world involves more dissimilarities from the actual world than the first possible world, i.e., in both the actual world and the first possible world, she believes that her grandson is sick; whereas, in the second possible world, she believes that her grandson is well. Therefore, the first possible world is closer to the actual world than the second possible world.

In a word, Sensitivity<sup>A</sup> but not Sensitivity<sup>C</sup> accommodates GRANDMOTHER\* which is a case of luckily true belief.

### 3.2 Inductive Knowledge

As argued above, Sensitivity<sup>A</sup> accommodates GRANDMOTHER\* which is a case of luckily true belief, the bad news is that it fails to accommodate the following case where one obtains knowledge via a good inductive basis,

**CHUTE:** “Ernie drops a bag of rubbish into the garbage chute next to his high-rise apartment, and a few moments later forms the true belief that the rubbish is now in the basement. The rubbish chute is in fact very reliable in this regard – indeed, it has never

failed to deliver rubbish to the basement, over a long history – and it is well maintained and serviced. Ernie knows about all of this. Moreover, there is nothing amiss with the rubbish chute on this occasion, nor any reason for Ernie to worry about the reliability of the rubbish chute in this specific instance” (Pritchard, 2012, pp. 175 - 176).<sup>10</sup>

Intuitively, Ernie knows that *the rubbish is now in the basement*. After all, his inductive basis for the belief is as good as it could be. If the belief does not count as knowledge, then inductive knowledge would be very difficult, if not impossible, to obtain.

Sensitivity<sup>4</sup> makes us consider the closest possible world where the rubbish is now not in the basement and Ernie uses the same belief-formation method as that in the actual world. The method should, at least, include Ernie’s seeing the rubbish being dropped into the chute as a part.<sup>11</sup> After all, if Ernie hadn’t seen the rubbish being dropped into the chute, then he wouldn’t have formed the belief that the rubbish is now in the basement. As a result, the relevant possible world should be a possible world where the bag snagged somehow in the chute. Nonetheless, the rubbish’s being snagged there should not affect Ernie’s predictive belief. Thus, Ernie believes that *the rubbish is now in the basement* in that possible world. Therefore, Sensitivity<sup>4</sup> delivers the incorrect verdict in CHUTE.<sup>12</sup>

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<sup>10</sup> This case was first introduced by Sosa (1999) as a counterexample to the sensitivity account of knowledge. For similar cases such as ICE CUBE, ROOKIE COP, and X-RAY and related discussions on why the account fails to account for inductive knowledge, see Vogel (1987, 2007, 2012). For the sake of simplicity, I shall not go through these cases though my discussions here apply to them.

<sup>11</sup> The belief-formation method also includes his inductive basis such as his knowledge that *the rubbish chute is very reliable and is well maintained and serviced*.

<sup>12</sup> One might thus suggest a condition on knowledge that is weaker than Sensitivity<sup>4</sup> to accommodate inductive knowledge such as Ernie’s knowledge that *the rubbish is now in the basement*. The condition proposed by Black and Murphy could be such a condition (a similar condition was advocated by Roush (2005, 2009, 2010, 2012, 2017) and Zalabardo (2012) though they characterize it in terms of probabilities rather than possible worlds). According to the condition,

**Weak Sensitivity<sup>4</sup>:** *S* knows that *p* on method *M* only if either *S* sensitively believes that *p* on *M*, or *p* is

As argued above, the closest possible world where the rubbish is now not in the basement and Ernie uses the same belief-formation method as that in the actual world is a possible world where the bag snagged somehow in the chute. One might wonder if the relevant possible world could be a possible world where the bag does not snag somehow in the chute. For instance, Cross (2010), Neil (2021), Wallbridge (2018b) argue that the relevant possible world could be a possible world where Ernie attends to other tasks rather than dropping the bag, or a possible world where signs direct Ernie to hold off temporarily on trash disposal because the chute is full, or a possible world where the chute is closed for maintenance, etc (Cross, 2010, p. 48; Neil, 2021, p. 1148; Wallbridge, 2018b, p. 124). Unfortunately, this is mistaken because a possible world is relevant only if it is a possible world where Ernie forms a belief on whether the rubbish is now in the basement or not on the same belief-formation method as that in the actual world. Given that Ernie’s belief-formation method in the actual world includes his seeing the rubbish being dropped into the chute as a part, the possible worlds mentioned above could not be the relevant possible world because Ernie does not use his actual method in these possible worlds at all. Therefore, the relevant

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implied by  $q$ , and  $S$  knows that  $q$  (Black & Murphy, 2007; Murphy & Black, 2012).

(Actually, there is another clause in the second disjunct which is “ $\sim p$  fails to explain how  $S$  might come to hold the false belief that  $\sim q$  on  $M$ .” I shall set the clause aside here because that only makes it easier to satisfy Weak Sensitivity<sup>4</sup>.) The idea is that one could know something even if one does not sensitively believe it, as long as it is ultimately inferred from something one sensitively believes. For instance, I know that *my car has not been stolen*. Even though I don’t believe it sensitively, it is nonetheless inferred from something I sensitively believe, i.e., *my car is in the parking lot*.

However, the strategy does not work in cases of inductive knowledge such as CHUTE. In CHUTE, for all Ernie sensitively believes, e.g., *all the bags dropped in the chute before have successfully arrived in the basement, the rubbish chute is very reliable and is well maintained and serviced*, etc, they, by no means, imply the proposition that *the rubbish is now in the basement*. Thus, Weak Sensitivity<sup>4</sup>, like Sensitivity<sup>4</sup>, delivers the incorrect verdict in CHUTE. Therefore, even if we move from treating sensitivity as necessary for knowledge to treating it as a disjunct of a disjunctive necessary condition for knowledge, inductive knowledge remains a problem.

possible world should be a possible world where the bag snagged somehow in the chute. In a word, the argument fails to take into account the method-relativity of the sensitivity condition.

One might doubt whether we really have inductive knowledge in the ordinary sense at all. For instance, Becker (2007, 2018) and Roush (2005) argue that, in cases of inductive knowledge, what is known is *it is very likely that the target event happens* rather than *the target event happens*. In CHUTE, what Ernie knows is that *it is very likely that the rubbish is now in the basement* but not *the rubbish is now in the basement*. It seems that Sensitivity<sup>A</sup> accommodates inductive knowledge in this sense. However, this view of inductive knowledge is very implausible as we usually take us to know that *the target event happens*, e.g., *the sun will rise tomorrow*, rather than that *it is very likely that the target event happens*, e.g., *it is very likely that the sun will rise tomorrow*, in cases of inductive knowledge.<sup>13</sup>

Much has been said about Sensitivity<sup>A</sup>. The good news is that Sensitivity<sup>C</sup>, unlike Sensitivity<sup>A</sup>, accommodates CHUTE. Sensitivity<sup>C</sup> makes us consider the closest possible world where the rubbish is now not in the basement and examine whether Ernie believes that *the rubbish is now in the basement* on his actual method there. Given that the chute is very reliable in the actual world, a possible world where the bag snagged somewhere in the chute, i.e., a possible world where the chute is way less reliable than that in the actual world, is somewhat far away from the actual world. A bunch of possible worlds where the rubbish is

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<sup>13</sup> What's worse, this view on inductive knowledge is in tension with a popular view on assertion, according to which, the norm of assertion is knowledge, viz., one should assert that *p* only if one knows that *p*. In ordinary cases of induction, it is permissible for the subject to assert that *the target event happens*. This, together with the knowledge norm of assertion, independently suggest that this view on inductive knowledge is incorrect. Proponents of the knowledge norm of assertion include Adler (2002), Benton (2011, 2012, 2013, 2016, forthcoming), Blaauw (2012), Buckwalter and Turri (2014), DeRose (1996, 2002, 2009, 2016), Engel (2008), Goldberg (2015), Hawthorne (2004), Reynolds (2002), Schaffer (2008), Slote (1979), Sosa (2011), Stanley (2005), Turri (2010a, 2010b, 2011, 2015), Unger (1975), and Williamson (1996, 2000, 2009).

now not in the basement are closer to the actual world than the possible world where the bag snagged somewhere in the chute. e.g., a possible world where Ernie attends to other tasks rather than dropping the bag, a possible world where signs direct Ernie to hold off temporarily on trash disposal because the chute is full, a possible world where the chute is closed for maintenance, etc (Cross, 2010, p. 48; Neil, 2021, p. 1148; Wallbridge, 2018b, p. 124). The closest possible world where the rubbish is now not in the basement should be among these possible worlds. Since Ernie does not believe that *the rubbish is now in the basement* on his actual method in these possible worlds, his belief is sensitive in the end. Therefore, Sensitivity<sup>C</sup> delivers the correct verdict in CHUTE. In a word, Sensitivity<sup>C</sup> but not Sensitivity<sup>A</sup> accommodates CHUTE which is a case of inductive knowledge.<sup>14</sup>

One might argue that the chute is reliable does not entail that there are no nearby possible worlds where the bag is snagged somewhere in the chute. If there are nearby possible worlds where the bag is snagged somewhere in the chute, then we could construct a case where the closest possible world where the rubbish is now not in the basement is such a possible world. Since Ernie believes that *the rubbish is now in the basement* in that possible world, his belief is insensitive on Sensitivity<sup>C</sup>. Therefore, Sensitivity<sup>C</sup> delivers in some cases of inductive knowledge the correct verdict but in some other cases the incorrect verdict.<sup>15</sup>

However, the claim that the chute is reliable does not entail that there are no nearby possible worlds where the bag is snagged somewhere in the chute is in tension with our intuition in the lottery case. It is widely accepted that one could not know that one's ticket is a

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<sup>14</sup> Melchior (2019) argues that Sensitivity<sup>A</sup> accommodates some cases of inductive knowledge, given Nozick's account of inferential knowledge. However, I believe that Nozick's account of inferential knowledge is problematic. Without this account, it is unclear if Sensitivity<sup>A</sup> could accommodate some cases of inductive knowledge. Due to the lack of space here, I shall not go through that point in more detail.

<sup>15</sup> I thank an anonymous referee for pressing me on this point.

loser based on its odds of winning in the lottery case because the lottery could easily have been the winner. Similarly, if the bag could easily have been snugged somewhere in the chute, then we would be hesitant to attribute knowledge to Ernie in the first place. In contrast, if the chute is reliable enough such that there are no nearby possible worlds where the bag is snugged somewhere in the chute, then we have a very strong intuition that Ernie knows that *the bag is now in the basement*. In addition, even if we concede the point that the chute's being reliable is compatible with there being nearby possible worlds where the bag is snugged somewhere in the chute and thus Sensitivity<sup>C</sup> delivers in some cases of inductive knowledge the correct verdict but in some other cases the incorrect verdict, it is still true that there is not a fixed way of mentioning methods that helps the sensitivity accounts to accommodate all cases.

#### **4. Conclusion**

The sensitivity theorists need to relativize the sensitivity condition to belief-formation methods to avoid putative counterexamples such as GRANDMOTHER. They also need to provide a fixed way of mentioning belief-formation methods in the sensitivity subjunctives. Otherwise, the explanatory success of the sensitivity account would be ad hoc. In this paper, it is argued that there is not a fixed way of mentioning methods that helps the sensitivity accounts to accommodate all cases. If methods are mentioned in the antecedent of the sensitivity subjunctives, then the account would be too strong such that it eliminates inductive knowledge such as CHUTE from the realm of knowledge; if methods are mentioned in the consequent of the sensitivity subjunctives, then the account would be too weak such that it

does not eliminate some luckily true beliefs such as GRANDMOTHER\* from the realm of knowledge.<sup>16</sup>

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<sup>16</sup> An earlier version of this paper was presented at the Annual Meeting of the New Mexico Texas Philosophical Society in 2022. I am grateful to my commentator, Peter Hutcheson, and audiences on that occasion for many helpful comments and discussions. Thanks to two anonymous referees for *Ergo* for helpful comments.



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