Tattva – Journal of Philosophy
2026, Vol. 18, No. 1, *147-168*
ISSN 0975-332X/https://doi.org/10.12726/tjp.35.9

Virtue Epistemology, Causal Connection, and Gettier Cases: In Defence of Sosa

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Abstract

Fundamental to the virtue epistemological diagnosis of the Gettier problem is the assumption that there is symmetry between action and belief. Christian Piller disputes this assumption and challenges Ernest Sosa's diagnosis of the Gettier problem, which presumes action-belief symmetry. The purpose of this paper is twofold. One is to respond to Piller's criticisms. It argues that Piller's criticisms are fraught with difficulties, since the examples he uses to criticise Sosa's view are not structurally analogous to the example that Sosa provides. This argument is made with the help of the account of causality of Wesley Salmon. The second is to bring out clarity on some important notions which Christian Piller employs in his argument. This paper argues that there is a considerable lack of clarity in the expressions "severing the causal connection" ", loosening the causal connection", and "diminished credit", which play a pivotal role in Piller's arguments. This ambiguity adversely affects the argument of Piller. In conclusion, the paper argues that Piller's criticisms are not compelling enough to show that Sosa's diagnosis of the Gettier problem fails.

Keywords: Virtue Epistemology, Gettier problem, Sosa, Credit

Introduction

Virtue epistemology is one of the promising areas of contemporary epistemology. Ernest Sosa, who is one of the founders of the virtue theoretic approach to knowledge, proposes an important version of virtue epistemology. One of the central assumptions of his account is as follows.

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In his view, both action and belief are structurally similar, and they share the same normative features (since they both fall under the category called performances). Sosa holds that because of this symmetry between action and belief, issues in the cases of belief can be understood by examining the analogous cases of action. This is considered a fruitful approach, in the view of Sosa, since action is considered a more familiar kind than belief. This conviction leads Sosa to consider cases of action to provide a diagnosis to the famous Gettier problem, which epistemologists are grappling with for the last several decades.

However, there are criticisms of this approach. One prominent criticism comes from Christian Piller (2015). This paper attempts to respond to the criticism which Piller raises. The purpose of this paper is twofold. One is to respond to Piller's criticisms with the help of Wesley Salmon's account of causation. It argues that Piller's criticisms are fraught with difficulties, since the examples he uses to criticise Sosa's view are not structurally analogous to the example that Sosa provides. This argument is made with the help of Wesley Salmon's account of causality. The second is to bring out clarity on some important notions which Christian Piller employs in his argument. This paper notes that there is considerable lack of clarity in the expressions "severing the causal connection", "loosening the causal connection", and "diminished credit". The paper offers an appropriate interpretation of these expressions. In conclusion, the paper argues that Piller's criticisms are not compelling enough to show that Sosa's diagnosis of the Gettier problem fails.

Section 1 briefly presents the central intuitions of the Gettier problem. Section 2 provides the account of virtue epistemology of Ernest Sosa and its attempt to provide a diagnosis of the Gettier case in a nutshell. Section 3 presents Christian Piller's criticism of Sosa's attempt to diagnose the Gettier problem. Section 4 provides the account of causality which Wesley Salmon propounds. Section 5 examines the example of Sosa, which he employs to provide a diagnosis of the Gettier problem by applying the account of causality of Wesley C. Salmon. This section also examines the examples which Piller put forward to argue against Sosa's view. It shows that the examples Piller deploys to criticise Sosa's view are structurally different from Sosa's example. Thus, it argues, this structural incongruity renders Piller's arguments a failure. Section 6 points out the difficulties involved in the notions of "Severing the Causal Connection", "Loosening of the Causal Connection" and "Diminished Credit". It suggests that the difficulties with these concepts cause difficulties for Piller's arguments. The paper is closed with a few concluding remarks.

1. The Gettier Problem

Edmund Gettier (1963) challenges the epistemological orthodoxy that knowledge can be defined as justified, true, belief. One example which Gettier conjure up is the following.

> **Ten Coins**: "Smith and Jones appeared for a job interview. Smith has strong reasons to believe that Jones is the man who will get the job. The president of the company told Smith that Jones is the man who will get the job. Smith had counted the coins in Jones's pocket a few minutes ago, and he believes that Jones has ten coins in his pocket. On the basis of these, Smith reasonably infers that 'the man who will get the job has ten coins in his pocket'. However, the information which Smith received from the president of the company is false. It is Smith who will get the job and not Jones, as the president of the company told Smith. Unknown to Smith, Smith himself has ten coins in his pocket. Thus, Smith's belief that 'the man who will get the job has ten coins in his pocket' is true" (Gettier, 1963, p. 122).

Gettier's central conclusion is that, in the case he presents, Smith lacks knowledge despite possessing a belief that is both true and justified. Thus, Gettier challenges the dominant account that knowledge is justified true belief, which is at least as old as Plato's *Theaetetus*. Through the above given example as well as a few other examples, Gettier argues that justification, truth and belief are not jointly sufficient for knowledge. However, he does not show that they are not necessary for knowledge. Later, several such cases are formulated where an agent ends up having a true belief where the effect of an unlucky instance is cancelled by another counteracting lucky scenario. All such cases that have such a structure are referred to as Gettier cases or Gettier-like cases. Attempts to resolve Gettier problem have met with little success.

2. Ernest Sosa and the Gettier Problem

Virtue epistemology departs from the traditional epistemology in important ways. It attempts to characterise knowledge primarily in terms of the intellectual virtues of the agent. The two major strands of it are: (i) virtue reliabilism and (ii) virtue responsibilism. The former considers perception, memory, inference, and introspection as important virtues for knowledge acquisition. The latter considers open-mindedness, intellectual humility, conscientiousness, etc., as the important intellectual virtues. Despite these internal differences, both hold that knowledge is a success from intellectual virtue.

Sosa holds that both belief and action are analogous since they are cases of performances. Therefore, they both are subject to analogous normative evaluation. The evaluation of a performance can be done on the following three levels: *accuracy, adroitness, and aptness* (AAA). A performance is *accurate* if it succeeds. It is *adroit* if it is performed skilfully. It is *apt* if the accuracy (success) of the performance is *because of* the adroitness of the performance. In Sosa's view, knowledge is an apt performance: it is *apt belief*. In such cases, the agent is *credited* for the success.

Sosa introduces the example of an archer, which is intended to bring out the central intuitions regarding knowledge.

> **The Archer**: "An archer skilfully shoots at the target. The arrow travels towards the target to hit it. An unexpected gust of wind takes the arrow away from its path towards the target. After a while, another gust of wind takes the arrow back to its original path. The arrow hits the bullseye" (Sosa, 2007, pp. 22–23, 79; 2010, p. 466; 2011, p. 4; 2015a, p. 13; 2015b, p. 315; 2015c, p. 157; Sreejith, 2018, p. 340)

In Sosa's archery example, the archer's shot is both *accurate* and *adroit*; however, it fails to qualify as *apt*, since the success of the shot is not properly attributable to the archer's skill, but rather to extraneous or coincidental factors. Sosa argues that this case mirrors the structure of Gettier-style counterexamples to the traditional analysis of knowledge. In the Gettier case discussed earlier, the belief held by Smith is both *adroit* and *accurate*. However, it fails to be *apt* since the accuracy (truth) of the belief is not *because of* the competence/intellectual virtues of the agent. Thus, it cannot be counted as knowledge.

3. A Challenge to Sosa's Account: The Interdependence of Attribution and Epistemic Credit

As already stated, the example of the archer offered by Sosa plays a pivotal role in his diagnosis of the Gettier problem. Christian Piller (2015) maintains that the examples which Sosa provides to diagnose Gettier cases are not structurally analogous to those of genuine Gettier cases. Thus, Piller holds that Sosa's resolution fails.

Piller is of the view that Sosa attempts to come up with Gettier-like cases in the realm of action by weakening the causal connection between the basic action and the final success of a performance. However, he holds that whenever the agent is not credited for the success due to the weakened causal connection, the success cannot be attributed to the agent either. Thus, attribution of the success and credit for the success always go together. As

a result, Piller holds, Sosa fails to provide a Gettier structure in the realm of action.

Piller maintains that the "loosening of the causal chain" exemplified in the archer case is rendered more clear in the following example, which Duncan Pritchard provides.

> **Pritchard's Dog**: The archer shoots an arrow. The arrow moves towards the bullseye to hit it. In the middle of its flight, a dog catches the arrow. The dog runs towards the bullseye and hits the arrow on the bullseye (Piller, 2015, p. 80; Pritchard et.al., 2010, p. 28).

Piller points out that the archer is not sufficiently credited for the success here. This is due to the weakening of the causal chain caused by the intervention of the dog. The dog's intervention thwarts the credit for the success of the agent. The success cannot be attributed to the agent either. The arrow's hitting the target cannot be seen as an action done by the agent. Piller contends that the same is the case in *the archer* case of Sosa too, though an external agent is absent there, unlike in this example. Piller holds that in a similar fashion, one can maintain that in Sosa's example of the archer, the event of the arrow hitting the target cannot be attributed to the agent: it's not an action done by the agent.

Piller maintains that the following example vividly elucidates the underlying intuitions operative in Sosa's archer case.

Light and the Warden:

> "I want to turn on the light; I flick the switch. Bad luck, there is no wiring from the switch to the light. Good luck, flicking the switch makes a bell ring in the Warden's flat, which is a signal for him to turn on the light in my room" (Piller, 2015, p. 81).

Piller contends that the above given example is structurally analogous to Sosa's archer case. He argues that, as in the archer case, here also, if the agent is not sufficiently credited for the success, then the success cannot be ascribed to the agent either. If the agent is not credited, it is due to the causal disconnection between the pressing of the switch and the turning on of the light. But, Piller would contend, in that case, the success cannot be ascribed to the agent either. Thus, it is structurally dissimilar from Gettier cases. Piller makes this point as follows.

> "Sosa's example attempts to drive a wedge between attributability and credibility. Attributability requires the right causal connection. Undermining credibility via

> loosening the causal connection will, thus, always undermine attributability as well" (Piller, 2015, p. 81).

Thus, he argues that the *attributability claim* and the *credit claim* go hand in hand. Piller holds that the separation of credit and attribution is not possible. Therefore, it is not possible, Piller holds, to come up with a case where the agent has a success for which she/he is not credited

Piller provides the following examples to reiterate the intuitions present in the Light and Warden Case.

> **Light and the Heating Device**: The agent flicks the switch to turn on the light in her room. The flicking of the switch results in the heating up of a device, which subsequently turns another switch on. As a result of the flicking of the second switch by the heating device, the light in the room of the agent turns on. (Piller, 2015, p. 81)

In this modified version of the Light and Warden Case, the role of the warden is replaced by a heating device. Piller maintains that if the agent is not accorded credit for the light being on, the event cannot be regarded as an action performed by the agent either. Thus, Piller underscores the claim that it is not possible to come up with Gettier structures in the realm of action, as Sosa reckons.

4. Wesley Salmon's Process Theory of Causation

According to Wesley C. Salmon (1993), two fundamental features of causality are the following: (a) production, and (b) propagation. Consider the case where a horse pulls a cart. Here, the force applied by the horse *produces* the motion of the cart. Consider the case where a radio receives signals. The signals are produced by the radio station. It is received by the radio, which is situated in someone's home, which is far away from the broadcasting station. In this case, electromagnetic waves are *propagated* from the transmitter to the receiver. Salmon notes that both production and propagation of causal influences are familiar terms.

In the cases presented above, it is clear that "…what happens at one place and time can have significant influence upon what happens at other places and times. This is possible because causal influence can be propagated through time and space" (Salmon, 1993, p. 155). According to Salmon, to provide an understanding of causality, 'processes' are more basic than 'events'. That takes us to the question of what causal processes are. According to Salmon, an important feature of a causal process is that it can transmit *signals/marks*. This transmission of the *mark* is the criterion based on which one can distinguish genuine causal processes from pseudo

processes. Unlike genuine processes, Pseudo processes cannot transmit marks.

The following example, which Salmon provides, presents us with the crux of the account of causality he holds. Suppose there is a circular building. A spotlight is placed at the centre of this building. The spotlight is placed on a machine which rotates. As the machine rotates, the spotlight casts spots of light, which travel on the circular walls of the building. So, two things are happening here: (a) a white beam of light is travelling from the spotlight to the wall; and (b) light spots are travelling on the wall in a regular fashion. Suppose we put a red glass on the path of the white light, which travels from the spotlight to the wall. The white light will become red in colour from the point of its intervention by the red glass. The modification which happens to the beam of light remains, and red spots of light will appear on the wall. The modification occurring at a particular point is retained, and it gets transmitted/propagated. Had the light beam not interfered with the red glass, the white light would have remained white. This transmission of modification is called *mark transmission*. This mark of transmission, according to Salmon, differentiates causal processes from pseudo-processes.

Suppose that a red glass is placed on one particular spot on the wall. The white light will turn red on that particular spot. But this modification, namely the change in colour of the light spot, will not be transmitted to the next spot. In this case, the modification occurs but does not get propagated. Therefore, the spot next to the red coloured spot is not caused by the red spot of light. This is so since modification at the first spot is not transmitted to the next spot. Thus, according to Salmon, the regularity exhibited among the white spots of light on the wall does not constitute a causal process: it is a pseudo-causal process.

Salmon states the difference between causal processes and pseudo processes to be as follows:

> "The difference between a causal process and a pseudo-process, I am suggesting, is that the causal process transmits its own structure, while the pseudo-process does not. The distinction between processes which do and those which do not transmit their own structures is revealed by the mark criterion. If a process – a causal process – is transmitting its own structure, then it will be capable of transmitting modifications in that structure" (Salmon, 1993, p. 157).

Salmon seems to hold that causation should be understood in empirical terms. Thus, he holds that if a process is causal, it has to involve transfer of

energy, momentum, electrical charge, etc. Salmon thus seems to understand causation as a physical process.

5. Interpreting the Examples Through the Lens of Salmon's Process Theory of Causation

This section attempts to examine the structure of the example provided by Sosa and the examples provided by Piller with the help of the account of causality provided by Salmon.

5.1. *The Archer* and Salmon's Account of Causality

In the example of Sosa - *the archer* - the shot of the archer is a single causal chain. The causal chain begins from the archer and ends at the bullseye. Following the account of causality of Salmon presented above, we can understand the causal chain involved in the example of *the archer* as follows. The causal chain has undergone two modifications before it hits the bullseye. First, the arrow was moved away from its path to the bullseye by a gust of wind. The causal process, namely wind, interacted with the causal process, namely the travelling arrow. This interaction between the two causal processes resulted in a modification of the travelling arrow's causal process: it was diverted from its path to the bullseye. This modification remained in the causal process, and the arrow moved in a new direction. After a while, another gust of wind took the arrow back to its original path. What happens here is also an interaction between two causal processes, namely the travelling arrow and another gust of wind. The arrow is taken back to its original direction by the second gust of wind. The arrow moves towards the bullseye by retaining the second change in the direction of its flight. Finally, the arrow hits the bullseye. It can be seen that the causal process here transmits the *modifications* it undergoes in terms of its direction. That is, the second change in direction is retained until the arrow hits the bullseye. This transmission of *marks* enables it to be qualified as a single causal chain.

In the example, it would seem that the causal influence exerted by the archer is sufficient for the success (for the arrow to hit the bullseye). But the causal influence of the wind is not sufficient for the success. The success depends on the initial direction and force of the arrow. If the arrow was not released with the right direction and force, the arrow would not have hit the bullseye after the double interventions by the two gusts of wind. That shows why the success can be attributed to the archer (the agent) and not to the wind.

5.2. The *Pritchard's Dog* and Salmon's Account of Causality

If we understand causal processes along the lines of Salmon, *Pritchard's dog* is not analogous to the example of Sosa. Therefore, it is not a good example to capture Sosa's intuition as Piller claims it to be. In the example, the archer shoots an arrow. The arrow moves towards the bullseye to hit it. In the middle of its flight, a dog catches the arrow. The dog runs towards the bullseye and hits the arrow on the bullseye. Piller uses this example to make the following point. It is clear that the archer is not sufficiently credited for the success. However, Piller adds, it is also clear that it is not the archer who hit the target; the dog hit the target. Piller holds that this example is similar to Sosa's example (*the archer*) in its structure. Therefore, Piller holds, in the example of Sosa, we can also say that it is not the archer who hit the target. That is to say, according to Piller, that Sosa's example fails to provide a case where the agent performs an *adroit* and *accurate* action which does not amount to an *apt performance*. Sosa's example fails, according to Piller, since, in the example, *the archer* did not hit the target.

The claim made by Piller seems to be fraught with difficulties. This is so since it appears that the example *Pritchard's dog* is not quite structurally similar to the example *the archer,* which Sosa provides. Hence, the conclusion made regarding the status of the latter example on the basis of the former is at stake.

In the example *Pritchard's dog*, the dog catches the arrow shot by the archer. Then, the dog runs towards the bullseye. Two causal chains are involved here. While the dog catches the arrow, it is the end of one causal chain. A dog running towards the target and hitting the bullseye is another causal chain. One can see that any transfer of *mark* from the first causal chain to the second is absent.

Two causal chains are involved here. While the dog catches the arrow, it is the end of one causal chain. Dog's running towards the target and hitting the bullseye is another causal chain. One can see that any transfer of *mark* from the first causal chain to the second is absent.

When the dog catches the arrow, the momentum comes down to zero. [This is so since the velocity of the arrow comes down to zero (since momentum = mass × velocity)]. This is the modification that occurs as a result of the causal interaction between two processes, namely the arrow's movement and the dog's catching. It is not the case that when the dog is running with the arrow, the momentum of the arrow is zero. While the dog is running with the arrow, the arrow has a momentum which is higher than zero. Therefore, the modification happened as a result of the interaction between the moving arrow and the dog's catching, which does not get

transmitted. Thus, we can say that in the case of Pritchard's dog, the causal chain involved is not a single one.

This suggests that modifications in any part of the causal chain from the archer to the dog will not be transmitted to the causal chain which leads from the dog to the target. On the basis of this lack of transmission of *marks*, one can conclude that the example of *Pritchard's dog*, unlike the example of Sosa, consists of two distinct and unconnected causal chains. That is to say that the example *Pritchard's dog* (which consists of two distinct and unconnected causal chains) is not structurally analogous to the example provided by Sosa *the archer* (which consists of a single causal chain). Therefore, the claims made by Piller on the assumption that *the archer* and *Pritchard's dog* are analogous cases are fraught with difficulties.

5.3. The Light-Based Cases Reconsidered through Salmon's Causal Framework

Unlike the example of Sosa, the example *of the light and the Warden,* which Piller provides as well, seems to consist of two causal chains. The first causal chain begins when the agent presses the switch and ends with the ringing of the bell in Warden's room. The second causal chain begins at the switch of the light situated in the Warden's room which (s)he presses and it ends at the light in the agent's room. These are two separate causal chains since modifications in the flow of electricity in the first chain (from the switch in the agent's room to the bell situated in Warden's room) will not get transmitted to the second chain (the chain leading from the switch in the Warden's room to the light in the agent's room). For example, suppose that there is a sudden increase in voltage in the first causal chain. This increase in voltage will not be transmitted to the second causal chain. According to Salmon, as we have already seen, such transmission of *mark* is an important feature of the causal process. That suggests that the example the *Light and the Warden,* which Piller provides, is not a single causal chain as he takes it to be. Thus, the example of *the Light and the Warden* is not analogous to the example of Sosa, *the archer*.

If we follow the account of causality of Salmon (1993), like the *Light and the Warden* example, the modified example where the Warden is replaced by a heating device as well is not a single causal chain. There are two causal chains involved. The agent pressing the switch makes the heating device heat up. This portion, the portion from the switch to the heating device, is one causal chain. The heating device puts another switch on, and as a result, the light turns on: this portion, the portion from the heating device to the light, is another causal chain. This is because changes in the strength of the electrical current in parts of the wire, until the heating device, will not be transmitted to the parts of the wire that lead from the next switch to the

light. Modifications made to the flow of electricity until the heating device is not transmitted to the causal chain leading from the second switch to the light. This suggests that the first causal chain ends at the heating device. When the heating device presses the second switch, it is the beginning of another causal chain. These are two separate causal chains since there is no transmission of marks between the two. That suggests that, as in the example of *Light and the Warden*, this modified example, with the introduction of a heating device, is not an appropriate example for capturing Sosa's intuitions. This is because, unlike the example of Sosa, both the *Light and the warden* and the *Light and the heating device* (where the Warden is replaced by a heating device) are not cases of a single causal chain.

Piller introduces cases where external agents - like the dog in the example, *Pritchard's dog,* and the Warden in the example *Light and the Warden* - are present. On the basis of such cases, Piller argues that Sosa's approach towards a diagnosis of the Gettier problem fails. Unlike the examples which Piller presents, Sosa's example, *the archer*, does not include any external agent. However, Piller seems to assume that the introduction of an external agent captures Sosa's intuition better. Thus, Piller makes an assumption that the difficulties which we see in the examples where external agents are involved are general problems for Sosa's attempt to provide a diagnosis of the Gettier problem. Piller assumes that the dog in the example, *Pritchard's dog,* and the Warden in the example, the *Light and the Warden,* play the role of the wind in the example of Sosa. However, we have seen that this assumption of Piller is fraught with difficulties. In the example, *Pritchard's dog*, where the dog interferes with the causal process of moving the arrow, the example consists of two distinct and unconnected causal chains. Despite the interference of the wind, the example *the archer* consists of a single causal chain. Unlike the example of *the archer*, the example of *the Light and the Warden* also consists of two causal chains. Thus, the introduction of an external agent in the example is not similar to the interference of the wind in the example of *the archer*.

As already mentioned, according to Piller, Sosa's attempt to provide a diagnosis of the Gettier problem is by 'loosening the causal connection' between the 'basic action' of the agent and the event it brings forth. Piller holds that this 'loosening of the causal connection' is what enables Sosa to claim that in *the archer* example, which he provides, the agent (archer) is not sufficiently *credited* for the success. Thus, according to Piller, this 'loosening of the causal connection' enables Sosa to hold that we have an analogous instance of the Gettier case in the realm of action. Piller holds that Sosa's analogy is doomed to fail. Piller holds this because of the following reason. He thinks that Sosa's example, which takes the *credit* of the success away

from the agent, also takes away the *causal responsibility* of the event from the agent. In other words, Sosa's example undermines both the *credit claim* - the claim that the agent is creditable for the success - as well as the *attribution claim* - the claim that the event occurs (namely, the arrow's hitting the target) is attributable to the agent and thereby sees the event as an action done by the agent. This is to say the following: (a) in *the archer* example, the accurate hitting of the arrow (success) is not *creditable* to the agent; and (b) the event of hitting the target is *not attributable* to the agent and thus is not an action done by the agent (archer).

6. From Severance to Loosening: Unpacking the Shifting Causal Vocabulary

Regarding the example of Sosa *the archer*, Piller says the following:

> "Sosa…wants diminished credit by *severing* the causal connection between what the agent did and the result. However, this is conceptually only possible if what the agent did is not identified by the result achieved. We have to move to a more basic level of action in order to make the severance between the action and the result conceptually possible. This more basic action, however, has not been interfered with and, thus, has not been gettierised. There is room for giving more or less credit- it depends on the kind of disposition that has been manifested- it is, however, not possible to create this room by *loosening* a causal connection which is the very basis of attributability" (Piller, 2015, p. 82, emphasis added).

Notice that Piller first says that in Sosa's example, the causal connection between what the agent did (releasing the arrow) and the event that occurs (the arrow's hitting of the target) is *severed*. However, subsequently, Piller says that the causal connection between what the agent did and the event that occurred is *loosened*. 'Severing the causal connection' and 'loosening the causal connection' seem to be different. It would seem that it is not clear as to how one should understand Piller's interpretation of Sosa's example.

6.1. Severing the Causal Connection

Let us first see how the expression 'severing of the causal connection' is to be understood. Piller holds that in the example *the archer*, Sosa requires a "diminished credit" for the archer by severing the causal connection between what the agent did (namely releasing the arrow) and the event occurs (namely the arrow's hitting of the target). The question to be asked is: diminished credit for what?

(a) One possible answer to this question is: diminished credit for the success[1]. The archer is credited less (partially credited) for the success. But this is not a viable answer. Once the causal connection between what the agent did and the event occurred is severed, it is not clear as to how the archer can be credited (even in a diminished sense/partially) for the success. So, if Sosa requires a diminished credit (where diminished credit is understood as partial credit) for the archer for the success, as Piller claims, it would seem that it cannot be done by severing the causal connection.

(b) Another possible answer to the above-raised question is the following. The archer is less credited (partially credited) for the 'basic action' (as Piller calls it), namely, releasing the arrow. However, this answer seems to be fraught with difficulties as well. The archer releases the arrow skillfully: the releasing of the arrow is adroit. So, it is not clear as to why (s)he should be receiving only a "diminished credit"/ partial credit (rather than full credit) for her/his skilful act of releasing the arrow. So, it would seem that the severance of the causal connection should not be a reason for only a lesser credit (partial credit) to be ascribed to the agent for her/his skilful release of the arrow.

(c) The following is another way to answer the question raised above. In the example, *the archer* had the causal connection not severed, the archer would be credited for both the following: (a) the skilful release of the arrow; and (b) the success (hitting the target). In the example, *the archer,* if the causal connection is severed, as Piller claims, the agent is credited only for the skilful release and not for hitting the target. Thus, the overall credit is diminished in the case where the causal connection is severed. Thus, the agent is partially credited. However, such an understanding of Piller's position does not do justice to the view of Sosa. The *credit* which Sosa is interested in is 'credit for the success' and not 'credit for adroit performance'. What Sosa is interested in is whether the archer is creditable for hitting the target, or whether an agent is creditable for the true belief (s)he has. In short, the credit which Sosa talks about is the credit for Success.

The points discussed above suggest that Sosa's example cannot be understood in those lines.

6.2. Loosening of the Causal Connection

How should one understand the expression "loosening of the causal connection" which Piller talks about? As already mentioned, Piller also uses the term 'loosening of the causal connection' to characterise the relationship

between the 'basic action' of the agent and the event that occurred (releasing of the arrow and the arrow's hitting the target, respectively). To the surprise of the reader, as already noted, Piller uses the expressions 'severing of the causal connection' and 'loosening of the causal connection' interchangeably. However, these two expressions seem to be very different in its meanings. 'Severing the causal connection' suggests that what the agent did does not have any causal influence whatsoever on the event that occurred. 'Loosening of the causal connection' apparently means that what the agent did has some causal influence on the event that occurs. It would seem to mean that the agent's 'basic action' does not produce a sufficient causal influence for the event to occur. However, the difficulty is that, even in the cases of normal causal chains[2], the agent's action is often not a sufficient condition for the event to occur. Even in the cases of normal causal chains, there have to be so many factors (other than the agent's basic action), such as a normal environmental condition, for the event to occur. However, in such cases, we do not say that the causal chain is "loosened". For example, consider the case of striking a matchstick to produce flame[3]. Striking the matchstick is not sufficient to produce a flame. The matchstick should have enough amounts of chemicals such as phosphorus on its head. The head of the matchstick and the side of the matchbox where the matchstick strikes should be dry. Oxygen should be present there, etc., are also required for the striking of the match stick by an agent to cause the flame. That makes it clear that the action of the agent is not sufficient to produce the effect, even in the cases of normal causal chains[4]. So, it is not clear as to how the expression 'loosening of the causal chain' is to be understood[5].

Thus, Piller's use of "loosening" to describe the causal relationship in Sosa's archer example risks conflating ordinary causal dependence with an atypical or compromised causal structure. If causal insufficiency due to background conditions were enough to qualify as a "loosened" connection, then virtually all successful actions would involve such loosened links. Therefore, Piller's distinction lacks the conceptual clarity needed to sustain his critique of Sosa's example.

That makes it clear that the action of the agent is not sufficient to produce the effect even in the cases of normal causal chains[6]. So, it is not clear as to how the expression 'loosening of the causal chain' is to be understood[7].

The following table summarises the ideas discussed in a succinct manner.

Table 1: Severing the causal connection and loosening the causal connection

Aspect	Severing the Causal Connection	Loosening the Causal Connection
Definition	Complete break between the agent's action and the result	Partial or weakened causal link between action and result
Causal Influence	Agent's action has no causal influence on the result	Agent's action has some causal influence, but not sufficient alone
Credit for Success	No credit for success is possible	Some credit may be preserved, but less than full attribution
Interpretation by Piller	(a) Partial credit for success (b) Partial credit for basic action (c) Credit for basic action only	Suggests agent's influence is diminished, but not nullified
Philosophical Problem	Total severing precludes any form of partial credit	Even in normal causal chains, action alone is not sufficient – so what makes this "loosened"?
Use of Terms	Piller uses this term to explain diminished credit but implies full causal disconnection – creates difficulties.	Piller uses this term interchangeably with "severing," though it implies continued causal relevance
Fit with Sosa's Epistemology	Poor fit – Sosa is interested in credit for success (hitting the target / having a true belief)	Still problematic – may mischaracterise Sosa's account of full epistemic credit through successful performance

6.3. Diminished Credit

As already noted, Piller holds that in the example *the archer*, "Sosa…wants diminished credit by *severing* the causal connection between what the agent

did and the result" (Piller 2015, 82). There are at least three ways to understand the expression "diminished credit": (a) "diminished credit" as "partial credit"; (b) "diminished credit" as "no credit"; and (c) both "partial credit" and "no credit" are cases of diminished credit. So by "diminished credit" one can mean any amount of credit which falls short of "sufficient credit" (which can be partial credit or no credit).

Let us first consider "diminished credit" in its first sense: *partial credit*. Can the agent be *partially credited* for the *success* in Sosa's example – *the archer*? I assume that Sosa would hold that the agent is *not credited at all* (not even partially) for the success. Sosa holds that the agents in Gettier cases are *not credited* at all (not even a diminished credit/partial credit) for their success. Sosa presents the example *the archer* as an analogous case of the Gettier cases. Therefore, in the example *the archer*, Sosa would not aim the agent to have any *credit* for her/his success.

Contrary to the claim of Sosa, Jennifer Lackey (2009, 35-36) contends that in the Gettier cases, the agent is *partially credited* for success. The agents' exercise of the intellectual virtues (competences) *partially explains* the truth (*accuracy*) of the agent's belief. Lackey holds that the agents in the Gettier cases exercise their intellectual virtues to get the true belief. She suggests that though the agent's belief turned out to be true partly out of luck, partly it is true out of the exercise of the competence/intellectual virtues by the agent.

Sosa would disagree with Lackey. As already mentioned, Sosa (2007, 95-97) holds that the agents in the Gettier cases are not *credited* at all (not even partially) for their success. So, Sosa would maintain the same regarding the agent in the example *the archer*. So certainly Sosa does not aim for a *partial credit* for the archer in the example *the archer* which he takes to be analogous to the Gettier cases. Sosa holds that in Gettier cases, the *competence* of the agent explains why the true belief *exists* in the agent but it does not explain the *correctness (truth)* of the belief. To make this point, Sosa considers the Gettier cases where the agent forms the belief that someone in his office owns a Ford on the basis of the belief that Nogot does. However Nogot does not own a Ford. Unbeknownst to the agent, another person in the office namely Mr. Havit owns a Ford. So the belief that 'someone in the office owns a Ford' is true. Sosa holds that in this example, the competence of the agent explains why (s)he has the belief that 'someone in the office owns a Ford'. But, according to Sosa, it does not explain the *correctness* of the belief. Sosa expresses this point as follows:

> "Since Nogot owns no Ford, however, the reasoning via Nogot fails to explain how the believer gets it right in concluding that someone here owns a Ford. The reasoning by

> way of Nogot does, of course, help explain why the believer has that belief, but it does not in the slightest help explain its *correctness*" (Sosa 2007, p. 96, emphasis in the original).

Sosa holds that a factor that explains the existence of an entity may not explain why it has a particular property[8]. Sosa holds that the error in the argument that the agents in the Gettier cases are partially credited for their success is in "supposing that what explains there being my true belief explains why my belief is true" (Sosa, 2007, p. 96-97). Hence, Sosa holds that in Gettier cases, the competence of the agent is not part of the explanation as to why the agent's belief is true (*accurate*). So, according to Sosa, the agents in the Gettier cases are not at all credited for their success. Therefore, Sosa would hold the same regarding the success of the archer in the example, *the archer*: Sosa would hold that the archer is not credited at all (not even partially) for her/his success. So, according to Sosa, the "diminished credit" which Piller talks about should mean "no credit" (option 'b' mentioned at the beginning of this section and not the options 'a ' or 'c')[9].

What about option c which holds that both 'no credit' and 'partial credit' are cases of "diminished credits"? According to option C mentioned above, one can understand "diminish credit" as "partial credit or no credit". Both "partial credit" and "no credit" are cases of "diminished credit". Sosa holds that the agents in the Gettier cases are not credited at all (not even partially credited). Therefore, he would hold that the agent in the example, *the archer*, which he presents as analogous to the Gettier case, also is not *credited at all*. Therefore, this characterisation of the example of *the archer* (where the agent is either not credited at all or is partially credited) would not be acceptable to Sosa.

Table 2: *Interpretations of Diminished credit*

Concept	**Details / Explanation**	**Sosa's Position**	**Other Views / Notes**
Piller's notion of "Diminished Credit"	Three interpretations: (a) Partial credit; (b) No credit; (c) Either partial or no credit	-	Diminished credit means any credit less than sufficient credit
Partial Credit (a)	Can the agent be partially credited	Sosa says no— agents in Gettier cases get no credit for	Jennifer Lackey argues agents exercise of intellectual

Concept	Details / Explanation	Sosa's Position	Other Views / Notes
	for success in The Archer?	success; The Archer case is analogous	virtues partially explaining the truth of belief
No Credit (b)	Agent receives no credit at all for success	Sosa's view aligns here: no credit given for the Gettier cases and to the archer	-
Partial or No Credit (c)	Both partial and no credit seen as diminished credit	Sosa rejects this since he holds agents get no credit at all	Unclear why one would call this diminished credit instead of simply "no credit"
Sosa's Explanation of Gettier Cases	Competence explains why the agent has the belief, but does not explain why the belief is true.	Competence explains belief formation but not its correctness	Example: Belief based on Nogot owning a Ford fails because Nogot owns none, but Mr. Havit does

Conclusion

The gettier problem indeed inaugurated a plethora of debates in epistemology, and it enriched epistemology. However, most of the attempts to resolve the Gettier problem ended up in providing accounts of knowledge that are convoluted and not so intuitive. Contrary to this, one of the strengths of virtue epistemology is that it has the resources to provide an elegant resolution of the Gettier problem. The success of virtue epistemology's diagnosis of the Gettier problem depends on the theoretical strengths of this approach in epistemology. Therefore, the diagnosis of the Gettier problem can perhaps be considered as the litmus test of virtue epistemology's success, at least for the virtue reliabilist version which is under discussion here (virtue responsibilsm is not interested in addressing

traditional epistemological puzzles such as Gettier problem. They rather attempt a radical departure from traditional epistemology).

The first step of Virtue epistemology to provide a resolution of the Gettier problem is to identify Gettier structures in the realm of action. This is so, as we have seen, since virtue epistemology holds that both action and belief are instances of performance. The claim is that if one can provide a diagnosis of the Gettier problem in the realm of action, it will equally be applicable to the realm of belief. It is assumed by virtue epistemology that identifying the normative features in the realm of action is easier in comparison to that of the realm of belief.

This paper discusses an important line of criticism levelled against virtue epistemology's attempt to address Gettier cases. The gist of the criticism of virtue epistemology's diagnosis of the Gettier problem is that it is impossible to provide a Gettier kind of scenario in the arena of action, and therefore, virtue epistemology's diagnosis of the Gettier problem fails. If the criticism stands, it is devastating for virtue epistemology as it challenges one of the basic assumptions of virtue epistemology, namely that both action and belief have the same structure.

As we have seen, Piller argues that Sosa's attempts to come up with Gettier structures in the realm of action is by loosening the causal connection between basic action and the end result. The aim is to come up with a scenario in which the success is not sufficiently creditable to the agent. However, Piller argues that this attempt to generate cases of success in which the agent is not sufficiently credible creates a wedge between the basic action and the result. It is argued that attempting to conjure up a scenario in which credit is denied to the agent due to insufficient causal connection fails, since it also deprives the agent of agency. That is, in such cases, Piller argues, when the agent is not credited for the success, the action cannot be attributed to her/him either.

This paper responds to the above criticism of virtue epistemology. It argues that the examples that are employed to criticise the case of Sosa are not structurally analogous to the examples which Sosa provides. To argue this point, the causal theory of Wesley C. Salmon is used. Slamon holds that mark transmission is a central feature of genuine causal process. While employing the account of causal theory of Salmo to the example of Sosa, it can be seen that it is a genuine causal process and it involves a single causal chain. However, in the cases of the examples which Piller uses to argue against the view of Sosa, this is not the case. These cases do not constitute a single causal chain. It is argued that the cases which Sosa uses and the cases which Piller employs are structurally dissimilar. As a result, the conclusions drawn about the latter's status based on the former are not acceptable.

Apart from this, this paper argues that there are serious conceptual muddles in Piller's position. This paper notes that concepts such as "loosening of causal connection", "severing of causal connection", etc., cannot be used interchangeably as Piler has done. There is also conceptual ambiguity in the way the notion of "diminished credit" is used. This lack of clarity also poses a significant challenge to Piller's position. Thus, the paper argues that the criticisms of Sosa's virtue epistemological diagnosis of the Gettier problem is not compelling enough.

Endnotes

[1] Where 'diminished credit' is understood as 'partial credit'.

[2] As opposed to 'loosened casual chains'.

[3] Adapted from Sosa (2010, 465).

[4] Often, what is sufficient might be a set of conditions. John L. Mackie's (1965) account of causation brings out this intuition- the intuition that what is sufficient for causation is a set of conditions- very clearly. In Mackie's account, the striking of the match stick will be an insufficient condition. But it is a necessary part of a set of conditions which are jointly sufficient to produce flame. However, the total set of conditions which causes the flame is not necessary. This is so because there can be an alternative set of conditions which are jointly sufficient to cause the flame. In the account of Mackie, a cause is an INUS condition: An *Insufficient but Necessary part of an Unnecessary but Sufficient condition*. The striking of the match stick causes flame since striking of the match stick is an INUS condition. This account of causality shows that the act of the agent is often not sufficient to bring about the effect though often we cite the act of the agent as the cause of the effect.

[5] Despite the intuitive differences between the expressions "loosening of the causal connection" and "severing of the causal connection" in the example *the archer*, the following seems to be common in both: If the causal connection is "loosened" or "severed" in the example *the archer*, this is due to the following: the modification made by the first gust of wind brings about a situation such that the arrow would not have hit the target without the occurrence of the second gust of wind which counteracts the effects of the first modification. However, though this characterization captures what is common in the expressions 'severing the causal chain' and 'loosening the causal chain' it does not capture the intuitive differences between the two. This characterization merely aims to understand the expression in the specific example under discussion. It does not pretend to be a general characterization of these expressions.

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[8] Sosa considers the example of a defective car. The fact that it is produced in the Volvo factory will explain the existence of the car, but it need not explain why it is defective now. It might be defective now not since it is produced in the Volvo factory but since it met with an accident. In support of Sosa, John Turri (2011) says the following:

"A might explain why B exists despite being irrelevant to B's having a certain property. A carpenter's skill might explain the existence of an abandoned house despite being utterly irrelevant to its state of being abandon. A printing press's efficient operation might explain the existence of a stolen book despite being irrelevant to its theft" (Turri 2011, 5)

[9] Piller might respond to this claim of Sosa as follows. Even if the argument of Sosa is true of the Gettier cases, it need not be true of the example *the archer*. After all, according to Piller, the example *the archer* is not analogous to the Gettier cases. Therefore, Piller might say, what is true of Gettier cases need not be true of the example *the archer*. However, as I argue in this chapter, the arguments which Piller provides to claim that the example of Sosa - the archer- is not analogous to the Gettier cases are fraught with difficulties.

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