**ORIGINAL RESEARCH** 



# **Committing Fallacies and the Appearance Condition**

Hans V. Hansen<sup>1</sup>

Accepted: 26 January 2023 / Published online: 10 February 2023 © The Author(s), under exclusive licence to Springer Nature B.V. 2023

## Abstract

This appearance condition of fallacies refers to the phenomenon of weak arguments, or moves in argumentation, appearing to be okay when really they aren't. Not all theorists agree that the appearance condition should be part of the conception of fallacies but this essay explores some of the consequences of including it. In particular, the differences between committing a fallacy, causing a fallacy and observing a fallacy are identified. The remainder of the paper is given over to discussing possible causes of mistakenly perceiving weak argumentation moves as okay. Among these are argument caused misperception, perspective caused misperception, discursive environment caused misperception and perceiver caused misperception. The discussion aims to be sufficiently general so that it can accommodate different models and standards of argumentation that make a place for fallacies.

**Keywords** Fallacy  $\cdot$  Appearance condition  $\cdot$  Committing a fallacy  $\cdot$  Causing a fallacy  $\cdot$  Observing a fallacy  $\cdot$  Aristotle  $\cdot$  Perceiving that  $\cdot$  Perceiving as  $\cdot$  Argument caused misperception  $\cdot$  Perspective caused misperception  $\cdot$  Discursive environment caused misperception  $\cdot$  Perceiver caused misperception  $\cdot$  Francis Bacon

## **1** Introduction

The world of fallacy theorists may be divided into those who think that the appearance condition is essential to fallacies and those who think it isn't. In this essay I do not pledge allegiance to either camp, but I think the appearance condition is an interesting problem to try to understand, even for those who have already decided against it as a necessary condition of fallacies. So that is what I am setting out to do. I am motivated by Steve Oswald and Thierry Herman's recent essay, "Give the standard treatment of fallacies a chance!". They are interested in how it is that the

Hans V. Hansen hhansen@uwindsor.ca

<sup>&</sup>lt;sup>1</sup> Centre for Research in Reasoning, Argumentation and Rhetoric, University of Windsor, Windsor, ON N9B 3P4, Canada

fallaciousness of arguments can go undetected (2020, 42, 45). I too find this question to be intriguing and want to join the conversation.

In Sect. 2 a very broad definition of fallacy which includes the appearance condition is proposed. In Sect. 3 distinctions between committing a fallacy, causing a fallacy and observing a fallacy are volunteered. Section 4 seeks to distinguish different causes of argument misperception and Sect. 5 is hindsight including acknowledging an historical predecessor.

## 2 Variations on the Idea of a Fallacy

Let's start with what we may call Df. H, mentioned by Hamblin (1970, 12):

Df. H. A fallacy is an argument that *seems* to satisfy the validity standard but fails to do so.

This definition identifies three aspects or necessary conditions of fallacies. They are (i) arguments (ii) that are invalid but (iii) seem to be valid. These three conditions can be labelled the argument (or ontological) condition, the invalidity (or normative) condition, and the appearance (or psychological) condition. In light of post-Hamblin theorizing about fallacies it will be suitable to broaden some of the conditions. The ontological condition may be extended from arguments to moves in argumentation (I will use these terms interchangeably) so that not just inferences but also premises, questions and other speech acts are possible locales for fallacies. With this broadening of the ontological condition of fallacies we must free the concept of fallacy from the narrow strictures of deductive validity and/or inductive probability so that the other kinds of moves can also be subject to argumentation-related norms. One example of this widening of the range of fallacies is the set of norms connected with the Pragma-dialectical standard of a critical discussion (van Eemeren 2018, 52). But we need have no particular argumentation-related standard in mind for the purpose of discussing the appearance condition. I propose simply that a move in argumentation is 'okay' if it meets the standard a model of good reasoning specifies and 'not okay' or 'nix-kay' if it does not. So, holding on to the appearance condition but broadening the other components of fallacy we have this schema ('schema' because 'okay' is undefined) for fallacies.

Df. F. A fallacy is a nix-kay move in argumentation which seems to be okay.

Some philosophers hold that the appearance condition is essential for an argument to be a fallacy (Aristotle, *Soph. Ref.*165<sup>a</sup>; Powers 1995, 287), but not everyone agrees (Johnson 1995, 110; van Eemeren 2010, 199). In this essay I attempt to bypass discussion of that question and instead focus on what is involved in someone *committing a fallacy*—accepting a nix-kay argument or argumentation move as an okay argument or argumentation move—and what the causal factors contributing to such a mistake might be.

## 3 Committing Fallacies, Causing Fallacies and Observing Fallacies

The appearance condition will be the focus of our attention. Fallacious arguments are nix-kay arguments that *seem*—that is *appear*—to be okay. So, they are perceived to be something they are not.<sup>1</sup> It is to Aristotle that we owe the analogy that arguments that seem-to-be-what-they-are-not are like other objects that seem-to-be-what-they-are-not.

That some *sullogismoi*[variously translated as 'reasonings', 'deductions', 'syllogisms', 'inferences'] are genuine,<sup>2</sup> while others seem to be but are not, is evident. This happens with arguments, as also elsewhere, through a certain likeness between the genuine and the sham. For physically some people are in vigorous condition, while others merely seem to be so by blowing and rigging themselves out ...; and some people are beautiful thanks to their beauty, while others seem to be so, by dint of embellishing themselves. So it is, too, with inanimate things; for of these, too, some are really silver and others gold, while others are not and merely seem to be such to our senses ... (*Soph. Ref.* 164a23–164b24)

This is an explanatory analogy in two ways. First, it is between, on the one hand, the familiar cases of (a) people who are not physically fit but dress themselves up so as to appear to be fit, (b) people who are not beautiful but who by the use of cosmetics make themselves appear to be beautiful, (c) metals that appear to be of one kind that is valuable but are really of another kind that is less valuable, and, on the other hand, the target case of arguments that appear to be okay but really are not so. Aristotle has then compared the perception of arguments to the visual perception of human bodies as well as to inanimate objects ("all that glitters is not gold"). Interestingly, the contexts that ultimately generated Aristotle's work on fallacies, as considered in his Topics and Sophistical Refutations, were ones in which arguments were spoken and heard rather than written and read. Hence, the second aspect of the explanatory analogy is that Aristotle is transferring a result from one perceptual mode to another, from the visual to the sonic mode. Not surprisingly, in our day, the analogy takes yet another step, reverting to its visual roots. Mostly, in our discussions of fallacies we are considering written or printed arguments, objects of visual perception. Ultimately, the point is that we can be deceived in our sense perception of arguments-in different perceptual modes-just as we can in our sense perception of other objects.

On the assumption that appearing to be an okay argument is a necessary condition of being a fallacy, let us explore the conditions under which someone commits a fallacy. In studying arguments as objects of perception we can benefit from considering some elementary distinctions from the epistemology of perception. Gelfert

<sup>&</sup>lt;sup>1</sup> Perceiving arguments is best explained as perceiving that a communicator intends a receiver to interpret their utterances as an argument.

<sup>&</sup>lt;sup>2</sup> A genuine syllogism is one that "rests on certain statements such that they involve necessarily the assertion of something other than what has been stated, through what has been stated". (*Soph.Ref.* 165a).

256

(2014, 59), taking seeing as the exemplary mode of perception, makes the following distinctions.

(a) Seeing that there is a well-groomed Dalmation in front of me.

(b) *Seeing* a well-groomed dog in front of me *as* a Dalmation (even if it isn't a Dalmation)

(c) Simple seeing a large dog with black spots and shiny coat in front of me.

The important distinction for our purposes here is between (a) and (b), *seeing that* and *seeing as.*<sup>3</sup> To see that something is the case (e.g., A *sees that* B is C) implies that A has the concepts B and C, and that the judgment is factive, or veridical—that B really is C. To *see something as* being a certain way (e.g., A *sees B as* a C) again implies that A has the concepts B and C, but it allows that the perceptual judgment may be in error. Finally, *simple seeing* (e.g., A *sees* B and B is C) does not involve the application of a concept to the perceptual experience; A does perceive the thing that is B but does not perceive it as a B.

Let us adapt these distinctions to the perceiving of arguments. Arguments may be perceived either visually (when we read them) or audibly (when we hear them).

(a') Perceiving that an argument is okay.

- (b') Perceiving as okay an argument that may or may not be okay.
- (c') Simply perceiving an argument that happens to be okay (or not okay).

That someone perceives that an argument is okay implies that they have the concept of an 'okay argument' (whatever 'okay' happens to mean) and that the argument they perceive really is okay. Similarly, perceiving arguments as okay implies having the concept 'okay argument' but it allows for the possibility of being mistaken in applying that concept. Hence, 'A perceives that B is C' implies that 'A perceives B as C', but not vice versa. The final possibility shown in (c') is that A perceives some fragment of discourse but does not make a judgment as to whether the concept 'okay argument' is fitting because for some reason A does not apply the concept. It is the isolating of 'perceiving as' from 'perceiving that' and 'simple perceiving' that is basic to our understanding of the appearance condition of fallacies. With the appearance condition included, to commit a fallacy is to mistake a nix-kay argument as okay because it 'appears as', 'looks like', 'seems to be', 'is taken to be', etc. an okay argument.

These distinctions allow us to say more clearly what is involved in *committing a fallacy*.

X commits a fallacy=

(i) argument A is not okay

- (ii) X does not perceive that A is not okay
- (iii) X does perceive A as okay, and,

<sup>&</sup>lt;sup>3</sup> The distinction can be traced back to Vesey 1955/56.

(iv) X forms the belief that A is okay based on (iii)

We must appreciate the force of the schematic sentence in the second condition: the placement of the 'not' before 'perceives that' makes all the difference. In the absence of that 'not', if one *perceived that* an argument was not okay, one could not consistently perceive it as okay (although one could be aware that it is possible to perceive it as okay: that is what happens when we realize we committed a fallacy, that we made a perceptual mistake.) So, perceiving that it is not okay keeps a perceiver from mistakenly forming the belief that the argument is okay and, thereby, committing a fallacy. The contrasting case of *perceiving that* an argument is okay also prevents the perceiver from committing a committing a fallacy, since they perceive the argument as satisfying the desired normative standard. So, *perceiving that* always takes epistemic precedence over *perceiving as*.

In the case of *simple perception* of an argument—in the absence of any concept of 'okay-ness'—one cannot commit a fallacy because one is not applying a relevant normative standard, and so cannot not form a belief that the argument is okay by that standard. If one simply perceives pieces of linguistic communication that happen to be arguments one may acquiesce or not, but not with respect to their okay-ness. It is only by perceiving an argument *as* okay that fallacies are possible.

When studying the committing of fallacies in argumentation we must consider them both from the senders and receivers points of view. Mostly we think that fallacies are committed by argument receivers who misperceive nix-kay arguments as okay arguments. Looking at the communication from the sender's perspective, however, there are two possibilities. On the naive model the sender does not realize that the argument they are communicating is a fallacy; it seems to them to be an okay argument. In that case the sender is committing a fallacy and if they are successful in getting the receiver to accept the argument, they have also caused a fallacy. On what we may call the sophistic, or fallacy-by-design, model, the sender believes that the argument they are communicating is a fallacy. In this case, if they are successful, the sender causes, but does not commit, a fallacy since the sender has not mistaken the nix-kay argument for an okay argument, they have not perceived it as an okay argument, and so they do not commit a fallacy. This is the sophistic model:

X causes Y to commit a fallacy =

- (i) A is not an okay argument
- (ii) X believes A is not an okay argument (X does not commit a fallacy)
- (iii) X wants Y to believe that A is an okay argument, and
- (iv) X communicates A to Y, and
- (v) Y perceives A as an okay argument
- (vi) Y forms the belief that A is okay based on (v).

Of course, if Y does not perceive A as an okay argument then X's attempt has failed, but it would still be an attempt to have Y commit a fallacy. So, there is a difference between committing a fallacy (an intellectual mistake) and intentionally enticing someone to commit a fallacy (perhaps a moral mistake). This sophistic model differs from the naïve model only by the second condition.

(ii') X believes that A is an okay argument (X has committed a fallacy).

In this case, X has committed a fallacy and should X succeed in causing Y to commit a fallacy, X will also have caused a fallacy. But should X's attempt to persuade Y fail, we cannot say that X's attempt to cause a fallacy failed, but only that the attempt to persuade failed.<sup>4</sup> The main points to keep in mind are the difference between causing and committing a fallacy, and that one cannot knowingly commit (be taken in by) a fallacy.

This leaves the case of a third-person judgment that a fallacy has been committed by someone else. When we observe others at argumentation or read their books or essays, and we say, "Aha! There's a fallacy," how do we justify such a claim? We judge them by our own standard of okayness, a standard we think others should share. We hold the identified move in argumentation to be nixkay but we can also imagine how it might have appeared to be okay to the arguers and to us. We see through the mistake but those we accuse do not unless they are sophistic arguers.

This leads us to the next step in our investigation, to study the causes of misperceiving nix-kay arguments as okay arguments, i.e., committing fallacies.

### 4 Causes of False Appearances

Committing a fallacy in the sense of taking an argument which is not okay as okay depends on an act of misperceiving a linguistic object.<sup>5</sup> Let us then begin by considering some of the causes of object misperception and then ask whether they are instructive in the inquiry into the appearance condition of fallacies. A passage from A.J. Ayer, in his discussion of the argument from illusion, is a good place to start.

... [M]aterial things may present different appearances to different observers, or to the same observer in different conditions, and that the character of their appearances is to some extent causally determined by the state of the conditions and the observer. For instance, it is remarked that a coin which looks circular from one point of view may look elliptical from another; or that a stick which normally appears straight looks bent when it is seen in water; or that to people who take drugs such as mescal, things appear to change their colours. (Ayer, 1940, 128)

Although this quotation comes from a passage in which Ayer's concern is to consider the sense-datum theory of perception—an argument we are not

<sup>&</sup>lt;sup>4</sup> There is a problem here that I am sweeping under the rug. How can arguments we make up in our heads to give to others be fallacies if they are not the object of sense perception to their makers? For now, I am assuming that arguments can "appear okay" to us in our heads without being sourced through our senses.

<sup>&</sup>lt;sup>5</sup> Perhaps there are non-linguistic arguments. We can consider them another time.

considering—what I want us to notice is his survey of types of illusions. Ayer tells of three categories. One in which it is a certain perceptual perspective on the object that causes the illusion, another in which there is some factor in the environment that causes the illusion, and a third in which it is a condition of the perceiver that leads to a mistaken judgment. We will consider all these and how they might be transported to our understanding of the appearance condition in fallacies. But there is another and more basic cause of illusion, or false appearance, not mentioned by Ayer, which I call object-caused illusion, and which we should consider first.

## 4.1 Object-Caused Misperception

Suppose I go to open the door and it will not open even though I pull hard on it. It appears as if it is locked even though really it isn't. It is merely jammed due to humidity or a tilt to the door frame. But it appears to be locked and I mistakenly infer that it is locked. Next, consider the Mueller-Lyer (arrow) illusion: two parallel lines which really are the same length but appear to be of different lengths because the one has outward pointing fins and the other inward pointing fins. The visual image formed by placing the two lines next to each other creates the illusion that the one line is longer than the other. Nearly everyone experiences this arrow illusion the same way (Gregory 1978, 138).

<------> Mueller-Lyer Illusion.

Another familiar example is the moon appearing larger when it is near the horizon than when it is at its zenith, although it does not change its size. Scientists are still in search of a complete explanation of this phenomenon (the brain is under suspicion—see NASA Science 2020) but it is an illusion most people have enjoyed. These examples are unlike the duck-rabbit and the Necker cube<sup>6</sup> which are truly ambiguous figures: there is no correct way to see them, no way they really are. The examples of perceptual illusions I am bringing forward here are different: there is a fact of the matter about the door, the size of the moon and the length of the two lines which there isn't about ambiguous figures. The relevant examples are those in which the objects of perception (the door, the moon, and the Mueller-Lyer diagram) are themselves causes of the illusions—they appear that way to normal observers in standard conditions.

We can transpose these object caused illusions to the problem of perceiving arguments. Some examples of arguments that might cause this kind of misperception are, "The end of life is death and happiness is the end of life; so death is happiness." Another familiar example is Aristotle's "Everything aims at some end; so, there is some end at which everything aims" (*Eth. Nic.*, first sentence<sup>7</sup>). The first example

<sup>&</sup>lt;sup>6</sup> A line drawing of a transparent cube seen from a diagonal angle in which a face of the cube sometimes appears as the front face and sometimes as the back face.

<sup>&</sup>lt;sup>7</sup> I have made a paraphrase of it.

fails to notice the homonomy of 'ends' (a terminus vs a goal); and the second is most easily explained as an illicit quantifier inference— $(\forall x)(\exists y)Axy \supset (\exists y)(\forall x)Axy$ (e.g., that everyone has a mother does not imply that there is someone who is everyone's mother). In these cases it is the language of the arguments that is the cause of the arguments appearing to be okay. Half of the fallacies in *Sophistical Refutations* are classified by Aristotle as being language dependent, and Larry Powers, from his twentieth-century perch, thought that the other half was just the same. So, this is a familiar way of explaining argument misperception. In the examples just given the differences between the two kinds of ends is either not noticed or it is thought to be so small that it doesn't matter. In Aristotle's argument the difference between the forms of words, "everything ... some" and "some ... everything", does not register with inexperienced people who do not have the training to grasp the difference. This source of false appearances for arguments may be summed up in the following principle:

Argument-caused misperception of arguments. An argument, A, is not okay but to perceiver, P, it appears that A is okay because there is something about A that causes P to perceive A as okay.

#### 4.2 Perspective-caused misperception

Closely associated with object caused misperception are the illusions caused by perspectives: how the perceiver is situated in relation to the object perceived. Ayer mentioned that a round coin from a certain perspective (angle) will look elliptical. Moore (1921, 20) gave the example of a church steeple having a different appearance when we look at it from the perspective of a mile away than the perspective of a hundred yards. John Hospers (1967, 495) observed that a "... train whistle seems to be higher in pitch as the train approaches and lower as it recedes though the pitch (so we believe) is the same all the time". These examples involve perspectives due to spatial location of the perceiver vis-à-vis the object perceived. Another kind of perspective could be due to temporal location: an event (e.g., a car accident) which felt vividly horrible ten years ago may now seem to be not nearly as serious.

For argument perception the analogy with spatial, and maybe temporal, perspectives on material objects can be illustrated in a number of ways. One of them relies on the concept of dialogue types (persuasion, negotiation, inquiry, etc.). They provide different vantage points (perspectives) from which arguments and argumentation are viewed and they come complete with rules, standards and protocols (e.g., Walton and Krabbe 1995, 66). For example, an argument that is not okay from the perspective of a persuasion dialogue (e.g., appeal to force) may be okay from the perspective of negotiation dialogue; hence, if arguers mistakenly think they are in a negotiation dialogue when they are really in a persuasion dialogue, the appeal to force may appear better than it really is. In addition to Walton and Krabbe's dialogue kinds there are other perspective-caused illusions that can occur with arguments: some arguments may be okay in a legal context but will only have the appearance of being okay when considered from the perspective of moral theory. This may happen when we shift from consideration of legal rights to moral rights. And in cosmology, arguments that seem okay from a geocentric perspective will be nix-kay from a heliocentric perspective. Similarly, arguments about religion, race and sex, etc., that appeared to be okay arguments to perceivers in the nineteenth century may no longer be considered so from our modern perspective. Examples are many, and well-known, and do not need to be repeated here. To sum up these observations, let us propose this principle:

Perspective-caused misperception of arguments. An argument, A, is not okay but to perceiver P it appears that A is okay because there is something about the way that P is positioned relative to A that causes P to perceive A as being okay.

The difference between object-caused and perspective-caused illusions is that perspective plays little or no part in the explanation of object-caused illusions whereas it is the larger part of the explanation of false appearance in perspectivecaused illusions.

Cultural frameworks are perspectives on the world. Culture and physical environment can influence all the perceptual modes; hence, what are perceptual illusions in one culture may not be so in another (Deregowski 1987, 602). This is what we would expect with regard to *perceiving that* and *perceiving as* because culture-and/or language-dependent concepts are central to perception. Thus, with different concepts we should also expect that other cultures have their own interesting examples of perceptual illusions. My discussion is restricted to illusions that can happen within my culture, to the people who share my language (English) and my common sense assumptions about the observable world. Taking a multi-cultural approach would be additionally informative, but it is not needed to illustrate the varieties of misperception I am trying to identify.

In the discussion so far I have assumed the perceivers to be a normal observers in what are normal circumstances (standard conditions) within their culture. Such perceivers are susceptible to object- and perspective-caused illusions. When we give up these assumptions, one at a time, new possibilities for argument misperception come into view.

In the two kinds of causes of mistakes in perception we have just reviewed, there was something that perceivers are aware of, something about the way things appeared to them, that made the argument seem okay to them and led them to make a mistaken judgment. But mistaken judgments about arguments may also come about in another way. A perceiver may have no perceptual evidence to think that a nix-kay argument is okay yet fails to notice that it is not okay. In such cases there is no positive feature that leads to the mistake; there is only the failing to notice that the argument is not okay. Because the argument is not perceived as not-okay, the perceiver may infer that it is okay and be led to commit a fallacy in this way. We may give a name to this difference calling the first kind of case 'appearance present' causes of committing a fallacy and the latter 'appearance absent' causes of misperception.

#### 4.3 Environment-Caused Misperception

The environment in which perception takes place can be affected by interferences or alterations that make the conditions of perception non-standard and can therefore cause misperceptions. Sometimes this is brought about by natural causes. Recently a photograph depicts a large tanker ship appearing to hover above the water line, completely above the ocean. This kind of an illusion is called a *superior image* and occurs "because of the weather condition known as a temperature inversion, where cold air lies close to the sea with warmer air above it" (Braine 2021). A more familiar example of environment-caused misperception is the straight stick appearing bent when part of it is submerged in water. Putting the stick in water changes the medium through which the stick is seen and, in combination with perspective, makes it appear bent. These are naturally occurring phenomena, but we (the prestidigitators among us) have also learned to induce misperception. A well-known example of this is that in which we shine a yellow light on a blue tablecloth to make it appear green. In standard conditions the blue tablecloth would appear blue to a normal observer. The appearance of green is caused by a change to the standard environmental conditions of perception introduced by the yellow light.

Can there be analogous kinds of interference in argumentation? Let us consider the idea of *discursive environments*—environments made of a combination of cognitive environments and psychological climates.

Sperber and Wilson use the term 'cognitive environment' "to denote quite loosely the set of information that an individual knows and is capable of bringing to consciousness" (Oswald and Herman 2020, 46n.). Christopher Tindale extends the idea to shared cognitive environments-shared by the participants to argumentation events-and holds it is necessary for any two parties to engage profitably in argumentation. Tindale proposes that "the cognitive environment is a field of actual and potential ideas, beliefs, and facts available to us by virtue of the communities to which we belong" (2021, 73), including even the myths of our cultures and communities (108). With the concept of shared cognitive environments comes the possibility that they can be altered, especially with a view to facilitating misperceptions of arguments. There is the possibility that the environment is not really shared, that one party is keeping some information to themselves, or that they are insisting that some information is shared when it really isn't. Since our perceptual judgments depend on collateral information the manipulation of information in a shared cognitive environment can affect our judgments about argument okay-ness. The ways that arguers can influence their discursive environments by manipulating information is akin to what Frans van Eemeren identifies as strategic manoeuvring (van Eemeren 2018, 111-13), the kinds of moves one can attempt in the course of argumentation to influence a self-interested favourable outcome.

Just as natural environments have climates that affect our behaviour so do discursive environments have psychological climates or social atmospheres that can affect how arguers function as they go about their business. Psychological climates can be negative, positive or neutral in regard to how they affect argumentation. A neutral, interference-free, or clean *discursive environment* is ideal. Interferences in psychological climates are of interest to us insofar as they affect the performance of arguers. The interferences may be either unintentional (i.e., uncaused by any participant to the argumentation event) or intentional (i.e., caused by someone who is participating in the argumentation event). Unintentional factors may form a backdrop for argumentation events. Construction noise, crying babies, poor lighting, icy road conditions are all factors that may affect the activity of argumentation while it is in progress. Such conditions can contribute to a climate which affects clear thinkingin-the-moment and lead to argument misperception.

As is becoming increasingly clear not only are we affected by our natural climates, we can also (knowingly) affect the very same climates. So, in addition to the unintentional factors that pollute psychological climates, there is also the possibility that arguers themselves affect the climate in which they are operating by their conduct in relation to their interlocutors. We have noted how taking liberties with a shared cognitive environment can undermine correct argument perception. It is also possible to affect the psychological climate in which the argumentation takes place. Intimidation by a loud and aggressive interlocutor<sup>8</sup> can cause someone to give assent when it is not really deserved (see Aristotle, Soph Ref. 169a34; and Walton 2010, 182). Also, turning up the stereo, making personal attacks, using inappropriate language, making needless interruptions, or imposing time constraints are examples of factors that can induce a negative discursive environment and impair an argument evaluator's ability to function as well as they otherwise might. Again, attention to gender or race can be brought forward to affect the judgment of an evaluator by either making them feel insecure or angry because they are the object of prejudice, or ill-at-ease because they are accused of discriminatory views. Any of these kinds of alterations to the psychological climate of the discursive environment can create an unfriendly or insecure psychological climate which can impair the exercise of critical judgment and may lead to a nix-kay argument being perceived as an okay argument. In summary,

Discursive-environment-caused misperception of arguments. An argument, A, is not okay but to perceiver, P, it seems that A is okay because there is something about the discursive environment that either (i) causes P to perceive A as being okay or (ii) causes P to fail to perceive that A is not okay.

It might be asked whether environment-caused misperception is not really the same as perspective-caused misperception. It is not wrong to say that environmental factors can change our perspective on the objects of perception. Well, yes, but what I mean by environmental factors is some kind of interference or disturbance in the normal observation conditions, over and above the time and space conditions that are factors in perspective-misperception.

I have focussed on the ways discursive environments can foster psychological climates that are negative and can therefore be a causal factor in argument

<sup>&</sup>lt;sup>8</sup> Apparently there still are, or were, until recently, such people about. Edmonds (2020, 164) writes about a famous twentieth century philosopher as follows: "In debate, truth for [Sir Karl] Popper always had a lower priority than victory. What mattered was that he both vanquish and belittle opponents. ... [I] n public he embodied the Nietzchean will to power".

misperception and fallacies, but it should be noticed that argument misperception can also be induced by positive psychological climates. A climate might be constructed that is euphoric in which, because they are over-eager to get along, arguers relax their critical standards (this might happen among friends); or they relax their guard out of admiration for a famous and distinguished speaker. Also of interest is our recent realization of the role that trust plays in successful argumentation. The way that we behave in the course of argumentation can influence the building of a psychological climate that fosters trust, and trust is a precondition to persuasion by argument (McIntyre 2021, Dutilh Novaes, 2020). So, I think that the concepts of 'discursive environment' and 'psychological climate' are important ones in that they can aid in the explanations of both successful and unsuccessful argument perception.

#### 4.4 Perceiver-Caused Misperception

Critical impairment can be brought on not only by external conditions in the discursive environment, it can also stem from perceivers themselves. So, varying not the standard conditions of perception (the environment) but instead the state of the perceiver, we come to another cause of how we may fail to see things as they really are. We find that there are two ways in which a perceiver can be a non-normal perceiver. The one is when the perceiver's perceptual equipment (their senses) is affected, the other is when their mental state is a distorting factor in perception.

Let us first consider the ways in which mistakes can arise from states of the sensory organs. Familiar is the case in which a child has been playing in the snow without mittens for a period of time and then goes to a parent for help with freezing sensations in their hands. The parent runs cold water over the child's hands but it is perceived as warm, almost hot, by the child. In this case the conditions may be standard but the perceiver's sense organs are in an abnormal state causing her to misperceive the cold water as warm or hot. More generally, some perceivers have suffered damage to their sense organs, some others inherited poor eyesight or hearing and those who have good sense organs will eventually find that they are subject to natural deterioration with the years. There is nothing new here: some of our misperceptions are due to our sense organs not working as well as we wish they would.

There is more to perception than sense organs. Perceptions are also influenced by our beliefs and attitudes. Here I want to consider individual rather than the social or cultural dispositions we associate with perspective-caused illusions. Assuming the perceptual conditions are standard, and that sense organs are working as they should, what psychological factors might lead someone to make a visual misperception? Mill, giving seeing ghosts as an example, believes that misperception can be caused by fear (1843, V i §3). The emperor perceived himself to be dressed in the finest clothes but according to H.C. Anderson he was mistaken due to vanity and gullability. Similarly, all our perceptual receivers can be affected by the use of psychedelic drugs. Illnesses, like COVID-19, can cause a loss of taste or smell. Other familiar causes of perceptual malfunction are, fever and sleep deprivation: these can all affect the way we perceive ourselves and other objects. When considering the causes of argument misperception due to sense organs we list exactly the same factors we just reviewed. An argument may be misread by someone with weak eye-sight or misheard by someone who is hard of hearing; hence, because of a weakness or fault in the sense organs, an argument might seem okay to a perceiver when it really isn't.

More important to consider are the psychological factors that can lead someone to uncritically accept a nix-kay argument as okay. One example comes from Whately (1846, 121) who wrote that "men are liable to deceive themselves as to the degree of Deference they feel towards various persons". In deferring to someone, even unknowingly, we may allow their arguments to appear stronger than they really are. Think also of someone who may be the victim of gaslighting, and all those who have had their confidence shaken by earlier episodes of aggressive discursive-environmental interference. There are also biases. For example, the possibility of being overly committed to a position such that one will be too sympathetic in supporting conclusions with which one concurs and too little sympathetic in fairly considering those with which we disagree (Tindale 2019, 261). Such inclinations are part of what Mill (1843 V i §3) talked about in broader terms as the moral causes of fallacy, "indifference to the attainment of truth, and bias". Our ability to perceive arguments accurately may also be influenced by recent events: a party to argumentation may be anxious because they have received a troubling medical report, another might suffer from an over-inflated ego because of a recent promotion; others might recently have been in a car accident or a house fire; they may have suffered an unexpected bereavement. Such impactful events can influence a person's perception of arguments: someone whose house has been demolished by fire may not see that a proposed argument in support of increasing the budget for the local fire department is a nix-kay argument. This suggests the following principle,

*Perceiver-caused misperception of arguments.* An argument, A, is not okay but to perceiver P it seems that A is okay because there is something about P's perceptual functioning that (i) causes P to perceive A as being okay, or (ii) causes P to fail to perceive that A is not okay.

## 5 Summary

The fourfold division of causes of argument misperception is not claimed to be exhaustive or based on scientific research. It is merely based on reflection within a folk-psychological framework. Perhaps these causes sometimes act in combination as when a condition of a perceiver that makes them prone to commit fallacies is acerbated by an unwelcoming discursive environment. Moreover, some of the examples I have placed in a given category might well be placed in another. Should we consider the moon illusion *object caused* (normal observers in standard conditions all see it the same way) or is it *environment caused* (because the horizon is a distorting influence on our perception)? A case can be made for each point of view. Some cases of taking a given nix-kay argument as okay might well be placed in more than one of the causal categories. io.

As I was nearing the end of trying to figure out the different kinds of causes of argument misperception it slowly dawned on me that I was re-discovering Francis Bacon's idols. He spoke of false idols, saying that they inhibit the interpretation of nature in the same way that fallacies frustrate good reasoning (1620, aphorism 40). Thus, the different ways in which we are led to misperceive the natural world has a parallel in the different idols of the mind. Bacon's division of idols is not a perfect fit with my classification of the causes of argument misperception named above, but there are enough similarities that a failure to acknowledge them would be disingenuous. Bacon's idols of the marketplace (1620, aphorism 43) are language-based causes of fallacies and that is similar to what I identified as object-caused fallacies. His idols of the cave (aphorism 42) are those that affect us as individuals, depending on our peculiar natures or acquired beliefs; this is much like what we termed perceiver-caused fallacies. Both Bacon's idols of the tribe (aphorism, 41)-faults belonging to human nature in general—and his idols of the theatre (1620, aphorism 44)-acquired scientific and world views-are very close to what we classified as perspective-caused misperception. The remaining-causes of argument misperception discussed above-those due to discursive environments-do not have obvious corresponding Baconian idols but maybe they can be accommodated under idols of the marketplace.

On the view that to commit a fallacy is to perceive an argument that is not okay as an argument that is okay, I have proposed an analysis of the perceptual phenomenon of committing a fallacy and causing a fallacy. I have supplemented the analysis with an exploration of the possible causal factors that could lead someone to mistakenly perceive a weak argument as a good argument.

Acknowledgements I thank John Casey and Scott Aikin for their helpful feedback on an earlier version of this essay.

#### Declaration

**Conflict of interest** As co-editor of the journal, *Argumentation*, and guest editor of this issue, I invited all the submissions including the one from Catherine Hundleby who is a fellow member of the Centre for Research in Reasoning, Argumentation and Rhetoric at the University of Windsor. Hundleby was asked to contribute because of her unique specialization. I have no conflicts of interest with regard to the present essay and no funding to acknowledge.

## References

Aristotle. 1928. Sophistical refutations. W.A. Pickard-Cambridge (trans). In The works of Aristotle translated into English, vol 1. London: Oxford University Press.

Aristotle. 1928. Topics. In The works of Aristotle translated into English, vol 1 (trans: Pickard-Cambridge, W.A.). London: Oxford University Press.

Aristotle. 1954. Rhetoric. Trans. W. Rhys Roberts. New York: Modern Library.

Aristotle. Nichomachean Ethics. Many translations.

Ayer, A. J. 1940. The argument from illusion. In *Perception and the external world*, ed. R. J. Hirst, 128– 34. New York: Macmillan, 1965.

Bacon, Francis. 1620/2000. The new organon, eds. L. Jardine and M. Silverthorne, Cambridge: Cambridge University Press.

- Braine, David. 2021. 'Hovering ship' photographed off UK coast in rare optical illusion. https://globa lnews.ca/news/7679642/floating-ship-optical-illusion-superior-mirage/. Accessed April 7, 2021.
- Deregowski, J.B. 1987. Perception: Cultural differences. In *The Oxford companion to the mind*, ed. R.L. Gregory, 601–603. Oxford: Oxford University Press.
- DutilhNovaes, Catarina. 2020. The role of trust in argumentation. Informal Logic 40: 205-236.
- Edmonds, David. 2020. *The murder of Professor Schlick: The rise and fall of the Vienna Circle*. Princeton and Oxford: Princeton University Press.
- Gelfert, Alex. 2014. A critical introduction to testimony. London and New York: Bloomsbury.
- Gregory, R.L. 1978. Eye and brain: The psychology of seeing. New York: McGraw-Hill.
- Hamblin, Charles. 1970. Fallacies. London: Methuen.
- Hospers, John. 1967. An introduction to philosophical analysis, 2nd ed. Englewood Cliffs: Prentice-Hall.
- Johnson, Ralph H. 1995. The blaze of her splendors: suggestions about revitalizing fallacy theory. In Fallacies: classical and contemporary readings, eds. H.V. Hansen and R.C. Pinto, 107–119. University Park: Penn State Press.
- McIntyre, Lee. 2021. How to talk to a science denier. Cambridge: MIT Press.
- Mill, John Stuart. 1843. A system of logic, ratiocinative and inductive. In The collected works of John Stuart Mill, vols. VII-VIII, ed. J.M. Robson. Toronto: University of Toronto Press, 1974
- Moore, G. E. 1921. What is philosophy? In *Some main problems of philosophy*. London: George Allen and Unwin
- NASA Science. 2020. The moon illusion: Why does the moon look so big sometimes. https://solarsystem.nasa.gov/news/1191/the-moon-illusion-why-does-the-moon-look-so-big-sometimes/ [audio, accessed 2021 04 22]
- Oswald, Steve, and Thierry Herman. 2020. Give the standard treatment of fallacies a chance! Cognitive and rhetorical insights into fallacy processing. In *From argument schemes to argumentative relations in the wild*, ed. Frans H. van Eemeren and Bart Garssen, 41–62. Cham: Springer.
- Powers, Lawrence. 1995. Equivocation. In *Fallacies: Classical and contemporary readings*, eds. H.V. Hansen and R.C. Pinto, 287–301. University Park: The Pennsylvania State University Press.
- Tindale, Christopher W. 2021. The anthropology of argument. New York: Routledge.
- Tindale, Christopher W. 2019. An introduction to the study of fallaciousness. In *Studies in Critical Think*ing, ed. J.A. Blair, 249–264. Windsor: Windsor Studies in Argumentation.
- van Eemeren, Frans H. 2010. Strategic maneuvering in argumentative discourse. Amsterdam: John Benjamins.
- van Eemeren, Frans H. 2018. Argumentation theory: A pragma-dialectical perspective. Cham: Springer.
- Vesey, G.N.A. 1955/56. Seeing and seeing as. In *Perceiving, sensing and knowing*, ed. R.J. Swartz, 68–83. New York: Doubleday, 1965.
- Walton, Douglas. 2010. Why fallacies appear to be better arguments than they are. *Informal Logic* 30: 159–184.
- Walton, Douglas N., and Erik C.W.. Krabbe. 1995. Commitment in dialogue. Albany: State University of New York.
- Whately, Richard. 1846. Elements of rhetoric. Edited by Douglas Ehninger. Carbondale: Southern Illinois University Press.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Springer Nature or its licensor (e.g. a society or other partner) holds exclusive rights to this article under a publishing agreement with the author(s) or other rightsholder(s); author self-archiving of the accepted manuscript version of this article is solely governed by the terms of such publishing agreement and applicable law.