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Introducing a Counterfactual Theory of Perception to Replace the Causal Theory of Perception

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Abstract

The causal theory of perception (hereinafter CTP) proposed by Grice tries to explain genuine perception and address the issue of "veridical misperception." However, as Grice points out, his CTP "can hardly be sufficient" because it lists the bare minimum of elements that must be met for genuine perception. CTP faces two challenges: distant causes and atypical causal routes. Though clever, Lewis's hypothetical interpretation of CTP falls short. The likelihood that the content is accurate only unintentionally is a critical issue. We need a counterfactual theory of perception to take the place of CTP to rule out this option. Perception demands that the accuracy of the experience's content "tracks" throughout all neighboring worlds. Two counterfactual conditions must be satisfied for an experience to be a genuine perception. The first states that the perceiver S would not represent p if p were inaccurate. The second states that the perceiver S would still represent p if p were accurate under slightly different conditions.

The Causal Theory of Perception

The philosophical debate on the causal theory of perception (henceforth CTP) is still ongoing despite much discussion in the literature. Grice's (1961) position is by far the most insightful. According to this theory, there must be a causal connection between the object (O) and the subject (S) undergoing some sensory experience for perception to occur. In other words, the object (O) must be causally responsible for S's relevant token experience (E) for the subject (S) to perceive the object (O). That implies that the object (O) must cause S's token experience (E) of the object (O), thereby establishing the essential causal link required for the mere sensory experience to count as genuine perception.

Grice's proposal has been widely accepted until today. Searle (1983), Burge (1991), and more recently Hill (2019) and Sainsbury (2019) — to name a few examples — claim that we cannot perceive something if it plays no causal role

in generating our experience. Grice's version of CTP appears in the literature as an ingenious attempt to solve a series of issues. The first is the problem of the object of perception:

> Or, to leave the realm of fantasy, it might be that it looked to me as if there were a certain sort of pillar in a certain direction at a certain distance, and there might actually be such a pillar in that place, but if, unknown to me, there were a mirror interposed between myself and the pillar, which reflected a numerically different though similar pillar, it would certainly be incorrect to say that I saw the first pillar, and correct to say that I saw the second; and it is extremely tempting to explain this linguistic fact by saying that the first pillar was, and the second was not, causally irrelevant to the way things looked to me. (1961, p. 142)

Behind a mirror, there is a pillar. However, the pillar I see is another, qualitatively identical one outside my field of vision, whose image is reflected in the mirror at the place where the other pillar is. According to Grice, I see the pillar outside my field of vision because that pillar is the only one causally relevant to my visual experience. The other pillar behind the mirror is not seen because it is causally irrelevant to my visual experience. The second issue is the problem of "veridical misperception:"

> Suppose that I am looking directly ahead and that, unknown to me, there is a mirror in front of me placed at a 45° angle, and behind which there is a yellow cube. Off to the right of the mirror, and reflected in it, is a white cube. Through special lighting conditions, this cube appears yellow to me. (Tye, 2008, p. 79)

Behind a mirror set at a 45° angle is a yellow cube outside my field of vision. To the right of the mirror, whose image is reflected in the mirror, is a white cube. However, this cube appears yellow to me due to the special lighting conditions. Interestingly, suppose we assume the relevant cube is the yellow cube in front of me behind the mirror. In that case, we must come to the quite strange conclusion that my visual experience is simultaneously veridical (after all, there is a yellow cube in front of me) and illusory because what I see is the color white that appears yellow to me only because of the special lighting conditions. To avoid such a conclusion, we must assume with Grice that I see the white cube and not the yellow one because only the white cube is one of two causally relevant to my visual experience. The yellow cube behind the mirror is not seen because it is irrelevant to my visual experience. There is no such thing as "veridical misperception." The third problem is Lewis's puzzle of "veridical hallucination:"

> I hallucinate at random, I seem to see a brain before my eyes, my own brain looks just like the one I seem to see, and my brain is causing my visual experience. But this time, my brain is before my eyes. It has been carefully removed from my skull. The nerves and blood vessels that connect it to the rest of me have been stretched somehow, not severed. It is still working, and still hallucinating. (1980, p. 242)

Let us further assume that the real brain, which is outside of me and has been delicately removed from my skull, is the relevant object of my experience. In this instance, we must come to the unusual conclusion that my experience is both veridical — there is a brain outside of my skull; after all, I am hallucinating. The only way to avoid such a conclusion is to endorse Grice's CTP: Since there is no causal link between what happens inside and outside, I perceive nothing.

But as Grice notes, his CTP states at most necessary conditions for perception, "but as it stands, it can hardly be sufficient" (1961, p. 142). Indeed, as it stands, CTP faces two challenges: the distant causal and the deviant causal paths problems. Lewis' counterfactual version of CTP is an insightful but incomplete attempt to circumvent both problems. This paper presents a counterfactual theory of perception (CTP1) motivated by Nozick's solution to the Gettier problem and skeptical global scenarios. In Grice-like situations, it must be ruled out that the content is only accidentally accurate. Perception requires a representation that is sensitive to its accuracy and sensitive to its inaccuracy, i.e., that *tracks* its accuracy in all nearby worlds.

The structure of this paper is as follows. The formulation of the two critical CTP issues — the so-called distant causal and deviant path problems — is placed in the section that follows this introduction to CTP. The distant causal problem turns out to be trivial and can be easily solved. The deviant path problem is tricky, however: It is hard to determine ad hoc when a deviant path counts as a genuine perception and when it does not. I will argue that the CTP needs more than just an update.

In the following section, I will address Lewis's counterfactual version of the causal theory of perception (CTP). In my opinion, Lewis is on the right track, but it needs to be replaced. First, we need more than a counterfactual to solve the deviant path problem. Second, we do not need a counterfactual version of the causes of perception but a complete counterfactual theory of genuine perception.

The presentation and defense of a new counterfactual theory of perception occupy the following section, drawing inspiration from Nozick's (1981) conditional account of knowledge. Later, in the final section, I will present my

concluding remarks and highlight the advantages of my counterfactual theory of perception. One of its significant benefits is that it avoids the deviant path problem that the causal theory of perception faces. My theory outperforms Grice's causal theory of perception. Additionally, it offers a normative basis for justifying perceptual judgments.

Distant Causes and Deviant Paths

Grice certainly provides a compelling case for the requirement of a causal connection between the perception of an object and its visual experience. However, as he conceded (1961, p. 142), his CTP is still not good enough to provide sufficient conditions for perception, i.e., to make the crucial distinction between genuine perception and mere experience. The explanation is simple: not every causal relationship between an object and the token experience it represents leads to genuine perception. Distal causes and deviant causal path are the two main situations in which CTP cannot distinguish between perception and non-perceptional sensory experience.

Suppose one accepts the trivial tenet that events cause other events, which in turn cause other events. In that case, the problem of different causes, or, in short, the distance problem, calls attention to the difficulty of specifying the perceived object in this causal process. For example, consider the simple case of me wearing contact lenses when I see a yellow lemon. It is reasonable to assume that I would not have seen this yellow lemon without wearing contact lenses. So my contact lenses affected my visual perception of the lemon. Imagine that I am looking at a yellow lemon in complete darkness when someone turns on the light. Again, it is safe to assume that I would not have seen the yellow lemon if no one had turned on the light. Why do I not see the contact lenses, the ophthalmologist who made me use the contact lenses, or the person who turned on the light when I see the yellow lemon right in front of me? The point is that the context in which I perceive the lemon is causally related to an indeterminate number of things, all of which are partially causally responsible for my seeing the lemon. Not all of them, however, are the objects I see, namely the yellow lemon. This is the so-called distance problem: a causal path can continue to infinity. The causal theorist must provide a non-arbitrary explanation of which causal event or entity is what we perceive.

The problem is that while some deviant causal pathways are considered examples of genuine perception, others are not. Let us first consider what we can call "normal vision" or vision under "normal conditions." Since Marr (1982), everyone knows this process is quite complicated, involving various visual cortices and subliminal computational processes controlled by algorithms and the retina. For simplicity, we will assume here that "under normal" conditions,

light reflects from an object, scatters to our eyes, and causes us to perceive the object.

Think again about the last example. My crystalline becomes less flexible with age. I develop myopia and must wear contact lenses to see the yellow lemon at a certain distance. Once I use my contact lenses to correct my near-sightedness, "normal perception" is no longer the case. A simple device has been placed, mediating the light that the yellow lemon reflects and my crystalline. However, the lemon still causes my visual experience of it. In addition, I can confidently answer that I see the yellow lemon when someone asks me if I see it while wearing the lenses. The lesson is that I still perceive the yellow lemon before me, even under this deviant causal pathway.

Now suppose that the information from the light coming from the yellow lemon and reaching my retina is processed in the following deviant way, unbeknownst to me. A manipulative neuroscientist captures the input emanating from the lemon but blocks the signals from my retina to my optic nerve while simultaneously converting that input into neural impulses in my visual cortex, precisely as it would have been activated if the signals had gotten through (example adapted from Tye, 2008, p. 83).

Is this a case of genuine perception? I think most of us are inclined to think of my visual experience as hallucinatory. Even reusing the information (input) and steaming the real yellow lemon in front of me, the neuroscientist is making me hallucinate its presence before me. Regardless, the scenario satisfies the causal connection: the lemon in front of me is still the ultimate cause — in a deviant way — of my visual perception of that lemon. The causal theorist faces the challenge of explaining why this deviant case is not a case of perception, while the first and second deviant cases are.

Let us take stock. Contrary to what some authors claim (e.g., Arstila & Pihlainen, 2009), I believe there is a simple, straightforward solution to the first problem here, the problem of distance. In the absence of actual cases of unusual overdetermination, the so-called distal cause of proximal stimulation ends the seemingly infinite regress of causes. To be sure, without the contact lenses, I would not see the yellow lemon. So the ophthalmologist forcing me to wear the lenses is undoubtedly one of the causes of my perception of the lemon. Still, the point is that the ophthalmologist is not contributing to my vision with additional data. The distal yellow lemon stimulating my retina provides all the sensory information my vision needs to perceive the lemon. Therefore, the lemon directly in front of me is the only relevant cause of my seeing it.

Regrettably, there is no easy answer to the deviant causal path problem. The following section will explain Lewis's counterfactual approach to perceptual causation, which deals with this second problem. However, as we shall

see, the final solution to the second problem is not to add further conditions to improve Grice's CTP, accepting his claim that his CTP provides necessary but insufficient conditions for perception. The definitive solution is to replace the CTP with another theory.

Lewis's Counterfactual Version of CTP

Lewis offered the counterfactual account of perception as a way to modify, substantiate, and better explain CTP in his 1980 paper, consistent with his general theory of causation. The definition of causal dependence in terms of counterfactuals is as follows: The statement "Event X caused event Y" can be interpreted by the statement "If X had not occurred, Y would not have occurred." Applied to the causal theory of perception, Lewis' theory states something along the following lines:

1. A perceived object O causes the event of seeing it if our visual experience matches O's appearance.

2. Crucially, if the object O had been different, our visual experience would also have been different.

Lewis's counterfactual explanation effectively addresses the concerns presented in the first section. To begin with, it aligns with Grice's intuition by clarifying why we perceive only the pillar reflected in a mirror and not the one behind it. Grice assumes that we see the pillar outside our field of view, not the pillar in front of us because the first pillar is the only one causally relevant to our experience. Lewis's analysis supports Grice's claim: the pillar whose image is reflected in the mirror is the one we see because our experience would be different if it were different. If, on the other hand, the second pillar behind the mirror were different, our experience would not change.

Lewis's counterfactual analysis can also handle "veridical misperceptions" easily. I would like to remind you of Tye's case of "veridical misperception" (Tye, 2008, p. 79). Behind a mirror, which is at an angle of 45°, is a yellow cube. To the right of the mirror is a white cube. However, this cube is white and appears yellow to me (its image in the mirror) because of the peculiar lighting conditions of the surroundings. Suppose we assume that the relevant cube in question is behind the mirror. In that case, we come to the strange conclusion that my visual experience is at the same time veridical (after all, there is a yellow cube behind the mirror in the direction I am looking) and illusory since what I saw is a white cube (the one behind the mirror, which is only white and appears yellow to me because of the peculiar lighting conditions of the surroundings).

In this scenario, condition 2 is violated. If the cube behind the mirror were not yellow, the white cube whose image covers the yellow cube behind the mirror would still appear yellow. This is because I see a different white cube that appears yellow to me only due to the special lighting conditions of the surroundings. As per Lewis' counterfactual analysis, in the case of "veridical misperception," I have no perception.

Lewis's counterfactual analyses can also deal well with "veridical hallucinations," as he asserts in his 1980 essay. Recall the case of Lewis. I have hallucinations at random. But now I hallucinate the presence of my brain before me. But in reality, my brain is actually in front of me. It was carefully removed from my skull. But it is still functions because the nerves and blood vessels connecting it to the rest of my body have somehow been stretched. So I visually hallucinate that my brain is in front of my eyes. However, this hallucination seems veridical because my brain is before me. Can my visual experience of my brain before my eyes be considered a genuine perception? Intuitively, no. Instead of perceiving, I am hallucinating. As before, condition 2 is violated. There is no guarantee that my visual experience would also be different if it were not my brain outside my skull in front of my eyes but something else.

Consider the previous case inspired by Tye (2008, p. 83). An evil neuroscientist captures the input coming from the yellow lemon standing right in front of me but blocks the signals from my retina to my optic nerve while at the same time converting that input into neural impulses in my visual cortex precisely as it would have been activated if the signals had gotten through. The result is that I visually experience a yellow cube. Can my visual experience be considered a genuine perception? Intuitively, no. Rather than perceiving, I am hallucinating. As before, condition 2 is violated. Since manipulating my visual cortex is up to the evil neuroscientist, I cannot guarantee that if the cube in front of me was not yellow, it would not appear yellow.

One may wonder if Lewis's counterfactual account of perception can also handle the problem of deviant causal pathways. Arstila and Pihlainen's paper (2009) is the case in the picture. They claim that Lewis's counterfactual account fails. They brought the case of the manipulative neurosurgeon, originally presented by Strawson (1974) but recently modified by Nöe (2003). On a closer look, the case is similar to the one Tye presents (2008, p. 83). Suppose a manipulative neurosurgeon captures the input coming from a clock on the shelf but blocks the signals from my retina to my optic nerve while at the same time converting that original input into neural impulses in my visual cortex precisely as it would have been activated if the signals had gotten through. The result is that I visually experience a clock on the shelf.

Lewis's counterfactual analysis runs into a problem with the additional

requirement that "this neurosurgeon makes it appear as if there is a clock on the shelf because there is a clock on the shelf." (Nöe, 2003, p. 93, emphasis in original). According to Lewis's counterfactual analysis, this assumption implies causal dependence even if the causal path is abnormal, which leads to a case of genuine perception. Nevertheless, Arstila and Pihlainen dispute this view by pointing out that a manipulative neurosurgeon is the cause of the visual experience in question. From this, they conclude:

> Considering Lewis's counterfactual approach, however, we can say that if the clock were different, it would be made similarly different in the experience created by the neurosurgeon. Thus, counterfactual dependence, as proposed by Lewis, does not resolve this situation. (2009, p.402).

Lewis's counterfactual account cannot rule out the possibility that Arstila and Pihlainen's scenario is a genuine perception; if the clock were different, the malevolent neurosurgeon would make it seem different to me following Lewis's condition. On closer inspection, however, Arstila and Pihlainen's scenario is not a case of genuine perception, despite the causal connection, but another case of what Lewis calls "veridical hallucination." The neurosurgeon makes me hallucinate the presence of a clock on the case, which is true. Even if he gets me to hallucinate the presence of the clock because there is a clock, this causal connection does not cancel out the fact that the neurosurgeon is making me hallucinate. The point is that there is no guarantee that the neurosurgeon will still let me experience the clock on the shelf if he does not want to. It all depends on his will. The problem is not the deviant causal link but the accidental accuracy. I want to call this the nonaccidental requirement for genuine perception. The content of my experience of a clock on the shelf is only accidentally accurate.

The Counterfactual Analysis of Perception

Let us take stock. Grice claims that his causal theory of perception (CTP) provides necessary but insufficient conditions. Providing sufficient conditions faces two significant challenges. The first is the problem of distant causes. As we have seen, the infinite set of possible perceptual causes seems to lead us into an infinite regress in any attempt to determine the real causes of the token experience. However, we have also seen that this challenge does not have quite the bite it first appears to have. What counts as the cause of perception is the ultimate source of information that stimulates our cortices, namely the distal cause of proximal stimulation.

The second is the problem of deviant causes. As we have seen, the problem is that some deviant causal pathways are examples of genuine perception, while others are not. Lewis's attempt to address this problem through a counterfactual analysis falls short because it cannot exclude the possibility of a malicious neurosurgeon causing someone to see a clock on a shelf. After all, a clock is on the shelf as a genuine perception. However, even if we acknowledge the truism that we cannot perceive something if it plays no causal role in generating our experience, we do not need a counterfactual analysis of the causal theory of perception to rule out undesirable deviant causes. We need to replace the causal theory of perception with a counterfactual theory. As we shall see, the counterfactual theory of perception includes the causal theory as a special case since the counterfactual theory is a generalization of the causal theory.

The first step toward a counterfactual theory of perception is the content view of perception. In this paper, we take the content view of perception as our starting point without needing to justify it further. Whenever we perceive a scene, we do so under certain conditions, the so-called accuracy conditions, which the world may or may not satisfy. In the first case, the content is considered accurate; in the second case, it is considered inaccurate. For example, when I perceive a clock on a shelf, the content of my perception is accurate if there is a clock on the shelf; otherwise, it is inaccurate. We also take for granted that this content is simultaneously nonconceptual (even if the perceiver has a content for what he perceives, this concept does not determine the content) and nonpropositional (the perceiver also perceives x *as* p, but the property p is not a predicate on what he is perceiving). Given this, we can quickly formulate the two initial conditions for genuine perception. A subject S perceives a as p if:

a) The subject S represents a as p.

b) S's content is accurate: a instantiates the property p. (trivial condition).

According to a), there is no genuine perception if the experience has no representational content. And according to (b), this representational content must be accurate. For example, I see the clock on the shelf because (a) I have a visual experience that represents the clock on the shelf. Because that representational content is accurate, i.e., the clock is on the shelf. In Grice's original scenario, the conditions (a) and (b) can easily explain the intuition that the pillar the subject perceives is the one that is out of his line of sight (and whose image is reflected in the mirror) rather than the one that is directly in front of the subject (behind the mirror). The reason for this is trivial: the representational content of the pillar in front of the subject is inaccurate, while

the representation of the pillar outside the subject's field of view is accurate (except for its location).

However, the initial conditions (a) and (b) cannot handle the cases of "veridical misperception" and "veridical hallucinations." To deal with those cases, we need a further condition as the following counterfactual (d):

d) If the content of S's experience were inaccurate (i.e., if a did not instantiate property p), S would not represent a as p. For example, if the clock were not on the shelf, S would not represent the clock as being on the shelf.

D) is not incompatible with a situation where the person represents p, though it is inaccurate. D) does not cover all scenarios in which p might be inaccurate. It does not imply that S does not represent p in situations where non-p is accurate. It is false to assume that non-p leads to non-(S represents p). D) is a subjective counterfactual, i.e., a conditional whose antecedent is unreal. Therefore, the existence of a possible situation where p is inaccurate but S represents p is not a counterexample to (d). The counterfactual (d) holds even if there is a scenario in which non-p and S represent p.

The counterfactual (d) speaks of the situation that would occur if the content p were inaccurate. Not every possible situation in which p is inaccurate is the situation that would occur if the content p were false. The counterfactual d) speaks of the non-p world closest to the actual world, the non-p worlds closest to the actual world, or even more strongly, of the non-p neighborhood of the actual world. And from this or these non-p worlds, it says (in them) that S does not represent p. What happens in other, more distant non-p worlds is none of the business of the counterfactual (d).

As we saw in Tye's scenario, I was unknowingly standing at a 45-degree angle in front of a mirror, behind which was a yellow cube, while a white cube was reflected in the mirror to my right. Due to special lighting, the white cube appeared yellow to me. If we assume this content is existential, it must also be accurate. After all, my experience represents a yellow cube, and indeed, there is a yellow cube in front of me. Both initial conditions a) and b) are fulfilled, but my visual experience is illusory and not a genuine perception. Why is this so? The answer lies in the fact that the additional condition d) is not fulfilled: if the content were inaccurate (there would be no yellow cube in front of me), my visual experience would still represent the yellow cube in front of me.

The counterfactual condition (d) can also treat sound cases of veridical hallucinations. Imagine that the light hitting my retina from a yellow lemon is processed differently without my knowing it. If a neuroscientist catches the input from the lemon but prevents the signals from reaching my optic nerve but still converts them into neural impulses in my visual cortex as if

they were getting through, it would appear like a yellow cube in front of me. Assuming that this content is existential, it must be accurate. After all, my experience represents a yellow cube in front of me, and indeed, there is a yellow cube in front of me. Both initial conditions (a) and (b) are satisfied, but my experience is hallucinatory. Why is this so? The answer is (d) is not fulfilled: if the content were inaccurate (there would be no yellow cube in front of me), my visual experience would still represent the yellow cube in front of me.

But let us stay with Tye's scenario. There is a yellow cube in front of me, and my visual experience represents it accurately as it is. However, the cube I see is another one to my right that is white and appears yellow only because of the special lighting conditions. Now let us change the scenario a bit. Let us additionally assume that this white cube is now removed while the yellow cube is still behind the mirror. That explains why I did not genuinely perceive the yellow cube behind the mirror for a second reason. Why is this so? The answer is that another counterfactual condition (e) is not fulfilled:

e) If, under changed circumstances, the content p continued to be accurate, S would continue to represent p accurately.

The lesson is that there are two ways in which it could be a coincidence that the content of the experience is accurate, and both must be ruled out if the experience is to count as genuine perception. The first is that the subject would not represent the content as accurate if it were inaccurate. We rule out this counterfactual possibility by adding condition d) to the first two conditions. However, there may be somewhat different circumstances in which the content is still accurate but is no longer represented as accurate. We rule out this possibility by adding the fourth condition, e).

These four conditions of the conditional counterfactual theory of perception can be symbolized as follows: "S" stands for the subject, "p" for the representational content of perception, and "r" for the representational attitude. The symbol ">" is Stalnaker's notation for the counterfactual or subjective condition in colloquial language: "if it were the case that..., it would be the case that...". The counterfactual theory aims to articulate the intuition that for an experience to count as a genuine perception, it must be particularly sensitive to the accuracy of the representational content. In the words of Nozick (1982), it must "track" accuracy in all nearby worlds.

1. The content p is accurate.
2. S represents p as accurate.
3. $\sim p > \sim \mathrm{S}rp$.
4. $p > \mathrm{S}rp$.

Concluding Remarks

Let us take stock. What is at stake in genuine perception is the existence of representational content (condition a) that is accurate (condition b). However, counterfactual theory teaches us that representational content cannot be accidentally accurate if an experience is to count as a genuine perception. As we have seen, there are two primary forms of accidental accuracy, and both must be ruled out in a counterfactual theory of perception. The first possibility that must be ruled out is that subject S would continue to represent the content p as accurate even when it was inaccurate (assuming that the content is accurate). Our first counterfactual assumption (d) rules out this accidental accuracy. In our example, my vision represents the existence of a yellow cube in front of me, and indeed, there is a yellow cube in front of me. However, since the yellow cube is behind a mirror, even if this content were inaccurate (an unreal antecedent), I would still represent it as accurate since what I see is the image reflected in the mirror of another white cube that appears yellow to me only because of the special lighting conditions.

But as we have seen, a second coincidence between representational content and accuracy must also be ruled out. That is the case when the representational content remains accurate under slightly different circumstances, but the subject S no longer represents p accurately. My visual experience represents the existence of a yellow cube in front of me, and indeed, there is a yellow cube in front of me. However, if someone removes the white cube to my right, whose image is reflected in the mirror (an unreal antecedent), I no longer represent the existence of a yellow cube in front of me. Our counterfactual (e) excludes this accidental accuracy.

The first point in favor of the counterfactual theory, in my opinion, is that it began to give a theoretical sense of the intuition that too much luck was involved in cases of "veridical misperception" and "veridical hallucination." Indeed, the counterfactual theory of perception gives us a description of what it means for representational content to be accidentally accurate, as follows: The extent to which content p is accidentally accurate is the extent to which, even if it were inaccurate, S would still represent it as accurate, or, if even content p continued to be accurate under changed circumstances, S would not continue to represent it as accurate. We may call this perceptual luck.

The theory seems to have some means by which it can explain the factive nature of the verb "perceive." Indeed, someone who claims that a subject S "perceives" an object a as F implies that S would not represent it if a was not F (i.e., S would not represent the content p if p of experience were incorrect) and that S would continue to represent it if the content remained accurate under slightly different circumstances.

Moreover, the two conditions of the counterfactual theory of perception capture the essence of the causal theory and can therefore replace it without loss. It assumes that the accuracy of the perceptual content should not be due to chance but rather should "track" the accuracy of the content. At the same time, this theory also circumvents the problem of identifying which deviant causal path counts as a genuine perception. But the counterfactual theory also encompasses the causal theory since we can say that if both conditionals are accurate, the fact p causes the content p.

But by far, the most significant advantage of the counterfactual theory is its ability to provide a reasonable explanation for the epistemic entitlement of basic perceptual judgments. According to Block, "a direct perceptual judgment is based solely on perception with no intermediary, inferential or otherwise" (Block, 2023, p. 12). So I can perceive nonconceptually and nonpropositionally that "that as X." The problem is, how does this "pure perception" epistemically entitle the subject S to believe, without adverting to further beliefs and additional evidence, for example, that "that is circular," when "x" is appropriately conceptualized as being "circular" and that property is now genuinely predicated of the object that "that" picks out or identifies?

As we have already said, our counterfactual theory of perception parallels Nozick's conditional epistemology, which supposedly solves Gettier's problems and the problem of global skepticism. What does Nozick's theory look like? It contains parallel conditions: S knows that p if and only if: 5) the content p is true; 6) the subject S believes that p is true; 7) S would not believe that p is true if p were not true; and finally, if p is true under somewhat different conditions, S continues to believe that p is true:

5. p.

6. S believes p.

7. $\sim 1 > \sim 2$.

8. $1 > 2$.

Two remarks are in order. First, Nozick's epistemology is not limited to basic perceptual judgments but includes all kinds of beliefs (empirical or not). Second, and most importantly, Nozick's epistemology is not a theory of epistemic justification. Let me first reformulate Nozick's epistemology for the case of a basic perceptual judgment that, as we have seen, is direct or not based only on perception and inference, such as when S judges that p, i.e., that "that is circular." What we have is the following: 9) p, i.e., it is the case that "that is circular." 10) S judges that "that is circular." (11) S would not judge that

"that is circular" if "that were not circular." (12) S would further judge that "that is circular." if "that were circular" under slightly different circumstances:

9. That is circular.
10. S judges that that is circular.
11. $\sim 9 > \sim 10$.
12. $9 > 10$.

All we need now is a counterfactual theory of epistemic justification. Dretske's (1971) "conclusive reasons" theory is what we are looking for. Since we are dealing with a basic perceptual judgment based only on perception, the formulation of this "conclusive reason" leads us directly to perception: the nonconceptual, nonpropositional content of "that x" constitutes a conclusive reason for the basic perceptual judgment "that is circular" only if the nonconceptual, nonpropositional content "that x" would not be accurate unless the perceptual judgment "that is circular" were the case.

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With admiration and gratitude, Roberto Horácio de Sá Pereira.

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