

# A Formal Epistemological Defence of Direct Realism: Rebutting the Colour Delusion Argument

Wilfrid Wulf

University of Oxford

May 20, 2024

## **Abstract**

I defend J. L. Austin's direct realism against the colour delusion argument by employing epistemic logic to demonstrate that perceiving colours does not necessitate an intermediary such as sense-data, thus preserving the directness of perception.

## **1 Introduction**

J. L. Austin, in his seminal work "Sense and Sensibilia," argues for direct realism—the view that we perceive the world directly, without the mediation of sense-data. Certain critics challenge this view by positing colour perception as a potential delusion, which consequently undermines the directness of perception. I aim to rebut this particular challenge through an approach that will hinge on epistemic logic.

## **2 The Colour Delusion Argument**

The entailment of the the colour delusion argument should first be addressed before I can begin to challenge it. The colour delusion argument suggests that if any part of our perceptive experience can be shown to be delusive, then it is possible that there is not only direct perception in ordinary occurrences. Since colour perception is ubiquitous, it is argued that if Austin's direct realism is correct, then colour perception must be direct and non-delusive. Colour only undermines the argument that was put forth by Austin because it is a neurologically modified aspect of ordinary perception; it does not undermine Austin's argument by being a delusion since Austin has already addressed this.

### 3 Epistemic Logic and Direct Realism

Epistemic logic, particularly the KK principle (Knowing that One Knows), provides a framework for understanding knowledge and perception. According to this principle, if one knows  $p$ , then one also knows that one knows  $p$ . Applying this to perception, if one perceives a colour, one knows that one perceives the colour, and this knowledge is direct. The KK principle can be formally represented as:

$$K_i(p) \rightarrow K_i(K_i(p)) \quad (1)$$

where  $K_i(p)$  denotes that agent  $i$  knows  $p$ . This principle suggests a reflexivity in knowledge that is indicative of direct perception. Direct realism asserts that there are no intermediaries between the world and our perception of it. The KK principle reinforces this by implying that knowledge of perception is immediate and not mediated by any internal representations or sense-data.

#### 3.1 Formalising Direct Perception with the KK Principle

To apply the KK principle to direct perception, we consider the following formalise:

$$P(p) \rightarrow K_i(p) \quad (2)$$

$$K_i(p) \rightarrow K_i(K_i(p)) \quad (3)$$

where  $P(p)$  denotes the perception of proposition  $p$ . The first equation states that perceiving  $p$  leads to knowing  $p$ , and the second applies the KK principle, suggesting that knowing  $p$  leads to knowing that one knows  $p$ .

##### 3.1.1 A Possible Rebuttal and Refinement

One could argue that if one knows that one knows, that does not mean that they know, well, in this context since ‘know’ would be a delusion or some other alteration of ambience or something of that sort. So, this principle does not inherently guarantee the veracity of  $p$  itself; it only ensures that the agent is confident in their belief. To address the possibility of delusion, we can introduce a distinction between belief and knowledge. In epistemology, knowledge is often defined as justified true belief. This definition implies that for one to truly know  $p$ , three conditions must be met:

- The agent believes  $p$ .
- The agent has justification for believing  $p$ .
- The proposition  $p$  is true.

Considering the possibility of delusion, the KK principle can be refined to account for the distinction between belief and knowledge:

$$K_i(p) \wedge J(p) \rightarrow K_i(K_i(p)) \quad (4)$$

where  $J(p)$  denotes the justification for  $p$ . This refinement suggests that knowing  $p$  and having justification for  $p$  leads to knowing that one knows  $p$ . So, to align with the thesis of direct realism, the justification for our perceptual beliefs must be grounded in the immediacy of the perceptual experience itself.

## 4 Further Formalisation of Direct Perception

To address the concerns regarding the veracity of knowledge in the context of potential delusions, we can introduce a formal system that differentiates between veridical and non-veridical perceptions.

### 4.1 Veridicality Operator

We introduce a veridicality operator  $V$  to our epistemic framework:

$$V(p) \leftrightarrow (P(p) \wedge \neg D(p)) \quad (5)$$

where  $V(p)$  denotes that proposition  $p$  is a veridical perception,  $P(p)$  denotes a genuine perception, and  $D(p)$  denotes a delusive perception. This operator ensures that a perception is considered veridical only if it is genuine and not delusive.

### 4.2 Formalising Justification

Justification in the context of perception can be formalised as follows:

$$J(p) \leftrightarrow (V(p) \wedge K_i(p)) \quad (6)$$

where  $J(p)$  denotes the justification for believing proposition  $p$ , and  $K_i(p)$  denotes that agent  $i$  knows  $p$ . This formalise ties justification to both the veridicality of the perception and the agent's knowledge of it.

### 4.3 Direct Realism and Non-Veridical Perceptions

Direct realism does not claim that all perceptions are veridical. Instead, it posits that the pathway of perception is direct, even if the content of perception can sometimes be non-veridical due to external factors such as lighting conditions or internal factors such as physiological states.

The introduction of the veridicality operator allows for the acknowledgment of non-veridical perceptions without undermining the directness of the perceptual process.

### 4.4 Modal Logic and Perception

Modal logic allows us to express the possibility ( $\diamond$ ) and necessity ( $\square$ ) of propositions. We can apply this to perception as follows:

$$\diamond V(p) \rightarrow \square K_i(p) \quad (7)$$

This states that if it is possible for a perception to be veridical, then it is necessarily the case that the agent knows the perception.

## 4.5 Combatting the Delusion Argument with Modal Logic

Using modal logic, we can argue that even if delusions are possible, the necessity of knowledge in veridical perceptions remains intact:

$$\Box(V(p) \rightarrow K_i(p)) \quad (8)$$

This formalisation asserts that for all veridical perceptions, the agent necessarily has knowledge of them, and so the directness of perception is preserved against the delusion argument.

# 5 Refuting the Colour Delusion Argument

## 5.1 Modal Logic Preliminaries

We introduce the necessary modal operators:

- $\Box$  - Necessity: It is necessarily the case that.
- $\Diamond$  - Possibility: It is possibly the case that.

## 5.2 The Epistemic Logic Argument

I construct the argument as follows:

1.  $\Box(P \rightarrow K_i(P))$ : It is necessarily the case that if a colour property  $P$  is perceived, then agent  $i$  knows  $P$ .
2.  $\Box(\neg I \rightarrow (P \leftrightarrow K_i(P)))$ : It is necessarily the case that if there is no intermediary  $I$ , then  $P$  is equivalent to  $K_i(P)$ .
3.  $\Box(K_i(P) \rightarrow \Box K_i(P))$ : If agent  $i$  knows  $P$ , then it is necessarily the case that agent  $i$  knows  $P$ .
4.  $\Diamond(P \wedge \neg I)$ : It is possible that  $P$  is perceived directly without an intermediary  $I$ .

# 6 Refining the Epistemic Logic Argument

The argument hinges on the robustness of the epistemic logic used to interpret the process of perception. To solidify the premises, we must ensure that the axioms and derived rules are not only logically sound but also applicable to the phenomenology of perception.

## 6.1 Axioms Part II

The axioms of epistemic logic should reflect the intricacies of perceptual knowledge. For instance, the axiom  $K_i(P) \rightarrow P$  assumes infallibility of the agent's knowledge. However, in the context of perception, this may not always hold due to perceptual errors. A more nuanced axiom might be:

- $K_i(P) \rightarrow \Box P$ : If agent  $i$  knows  $P$ , then it is necessarily the case that  $P$  is true in the context of  $i$ 's perceptual experience.

This accounts for the subjective certainty that accompanies direct perception, without claiming objective infallibility.

## 6.2 Addressing the Possibility of Illusion

The argument must also account for the possibility of perceptual illusions without conceding to the colour delusion argument. This can be done by distinguishing between veridical and non-veridical perceptions:

- $\Diamond(K_i(P) \wedge \neg \Box P)$ : It is possible that agent  $i$  knows  $P$  (believes to perceive a colour), but  $P$  is not necessarily true (the perception is non-veridical).

This allows for the acknowledgment of illusions while maintaining that not all perceptions are illusory, thus preserving the directness of perception where it holds.

## 6.3 Formalising Direct Perception — Pt. II

To further strengthen the argument, we can formalise the concept of direct perception using modal logic:

- $\Box(P \wedge \neg I) \rightarrow K_i(P)$ : If it is necessarily the case that a colour property  $P$  is perceived directly (without an intermediary  $I$ ), then agent  $i$  knows  $P$ .

This formalisation aligns with the phenomenological aspect of perception, where directness implies an immediate awareness of the perceptual content.

## 7 Conclusion

From the premises, we can conclude that the possibility of direct perception without an intermediary is consistent with the formal structure of epistemic logic. This refutes the colour delusion argument and supports Austin's position that our perception of colours can be both direct and veridical. The colour delusion argument fails to undermine direct realism. Colours, as part of our perceptive experience, can be understood through direct perception without invoking sense-data. Epistemic logic supports this stance, ensuring that our knowledge of colours, and thus the world, is direct and immediate.

## References

- [1] M. Matthen, *The Oxford Handbook of Philosophy of Perception*. Oxford University Press, 07 2015.
- [2] C. Yetman, “Colour and the argument from illusion,” *Stance*, vol. 12, no. 1, pp. 13–21, 2019.
- [3] M. S. Gram, *Direct Realism: A Study of Perception*. Boston: M. Nijhoff, 1983.
- [4] D. Hilbert, “Hallucination, sense-data and direct realism,” *Philosophical Studies*, vol. 120, no. 1-3, pp. 185–191, 2004.
- [5] C. Ladd-Franklin, “On color theories and chromatic sensations,” *Psychological Review*, vol. 23, no. 3, pp. 237–249, 1916.
- [6] M. Huemer, *A Direct Realist Account of Perceptual Awareness*. PhD thesis, Rutgers University, 1998.
- [7] D. R. Hilbert, “Theories of colour,” in *Routledge Encyclopedia of Philosophy: Genealogy to Iqbal* (E. Craig, ed.), Routledge, 1998.

[\[1\]](#) [\[2\]](#) [\[3\]](#) [\[4\]](#) [\[5\]](#) [\[6\]](#) [\[7\]](#)