

The Nyāya Misplacement Theory of Illusion & the Metaphysical Problem of Perception

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Abstract Tim Crane (The problem of perception. In: Zalta EN (ed) The Stanford encyclopedia of philosophy (Spring 2011 ed). <http://plato.stanford.edu/archives/spr2011/entries/perception-problem/>, 2011) distinguishes between the metaphysical problem of perception and the epistemological problem of perception. The metaphysical problem can be articulated as a function of the joint inconsistency between several theses concerning the nature of perception, such as the openness to the world thesis and the transparency of experience thesis. Disjunctivism holds that veridical and non-veridical perceptual experiences are distinct in some important way. Disjunctivism is often offered as a solution to the metaphysical problem of perception as well as a response to scepticism. In this comparative-philosophical-exploratory essay, I argue that on the basis of a specific reading of the Nyāya misplacement theory of illusion one can generate a specific kind of disjunctivism about perception, which I call *causal disjunctivism*. Causal disjunctivism is distinct from Duncan Pritchard's epistemic disjunctivism, and John McDowell's metaphysical disjunctivism. The core idea of causal disjunctivism is that the processes that bring about veridical perception are distinct from the process that bring about non-veridical perception at the level of causal generation. Second, on the basis of causal disjunctivism, I go on to show that it offers a plausible solution to the metaphysical problem of perception.

Keywords Nyaya • Illusion • Perception • Disjunctivism • Pritchard

Introduction

In contemporary analytic epistemology there are two philosophical problems that derive from reflection on the presence and nature of misperception in the human condition. The more familiar problem is the *epistemological problem of perception*. It is concerned with how we can have knowledge of the external world, given the presence of illusion and hallucination. The problem is typically generated through a sceptical challenge, such as that posed by the Cartesian sceptic. For example, in the

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case of an empirical proposition, such as $p =$ there is a yellow lemon before me, the sceptic argues: (1) x knows that p on the basis of perception only if x can rule out all possible defeaters; (2) x cannot rule out all possible defeaters; so, (3) x does not know that p . The defence of (2) is grounded in the idea that from the first-person perspective one *cannot* tell whether or not they are perceiving that p , since they could be the subject of a mere illusion or hallucination *as of* p . A response to the epistemological problem centres on providing an adequate response to the sceptical challenge. The less familiar problem is the *metaphysical problem of perception*. It is a paradox about the nature of perception, given the fact that we often do experience illusions and hallucinations. A response to the metaphysical problem centres on how best to either solve or dissolve the paradox. The paradox is generated through the following four independently plausible, but jointly inconsistent claims about perception¹:

Openness: Perception is openness to the world. The openness requires that perception put us in the appropriate relation to the objects and properties of the external world, and that the world either determines or is part of our perceptual experience.

Fallibilism: Humans are fallible. Often enough they are subject to illusions and hallucinations.

Common Kind: Perception, illusion, and hallucination fall under the same fundamental kind for an important explanatory purpose R .

Exportation: If it seems to S that Fa , then there is some x that is F , such that S is enabled to have an experience *as of* Fa .

Because the metaphysical problem of perception is a paradox, we can show, with the use of Leibniz Law, that any three of the claims can be used to generate an argument for the denial of the remaining claim. For example, consider the following argument for the denial of *Openness*.

1. *Fallibilism* maintains that we suffer from both illusions and hallucinations.
2. *Common Kind* maintains that perception, illusion, and hallucination fall under the same fundamental kind for an important explanatory purpose R .
3. By (1), (2), *Exportation* and *Leibniz Law*, it follows that the content of perception, illusion, and hallucination cannot be the world, *since* the kind of content across them would not be the same, if the content involved the world. Rather, something other than the world must be the common content.
4. So, *Openness*, which maintains that the world either determines or is part of the content of our perception, is false.

¹ This presentation and account of the *problem of perception* is based on Crane (2011). However, the terms I have used to present the paradox are distinct from those employed by Crane. For example, I use the phrase ‘metaphysical problem of perception’ to refer to what Crane calls the problem of perception.

My purpose here is to enhance and enrich the contemporary discussion of the metaphysical problem of perception by building upon the work of other comparative philosophers, such as J. L. Shaw, that engage classical Indian philosophy and analytical philosophy. I see my project as falling in line with a long tradition of twentieth century philosophers working on Indian philosophy that have aimed to make classical Indian philosophy relevant to contemporary analytic and phenomenological philosophy. Key figures in this tradition include B. K. Matilal, J.L. Shaw, J. N. Mohanty, P. Bilimoria, A. Chakrabarti, J. Ganeri, S. Phillips, and more recently M. Dasti. In what follows I will engage a line of thought in Nyāya epistemology and perceptual theory that can be used to generate a response to the metaphysical problem of perception. My work owes a substantial debt to the prior work of B. K. Matilal, J. Ganeri, S. Phillips and M. Dasti, since part of what I will argue requires engaging a debate in the literature that they have been working on for quite some time. The debate concerns the presence or absence of *disjunctivism* in Nyāya perceptual theory. What I will argue is that a unique kind of disjunctivism, one that I call *causal disjunctivism*, which has its roots in the Nyāya *misplacement theory of illusion*, can be used to present a response to the metaphysical problem of perception. This form of disjunctivism is distinct in kind from those forms of disjunctivism already found in the contemporary analytic discussion of disjunctivism. I will argue that it can be used to provide an interesting response to the metaphysical problem of perception. My overall philosophical approach here is best characterised as one on which a philosopher trained in one tradition looks critically to another tradition, for example classical Indian philosophy, for insights and ideas that can motivate the generation of a novel theory which can be applied to a philosophical problem in a distinct problems space found in another cultural and temporal philosophical context. I am working here as an analytically trained philosopher who is investigating classical Indian philosophy for insights that can perhaps offer a novel dissolution to the metaphysical problem of perception.

The Varieties of Disjunctivism

What is disjunctivism? *Disjunctivism* is a controversial thesis about the nature and possibility of perceptually based knowledge of the external world. Crane (2011) holds that it has been argued by some to be a response to the metaphysical problem of perception. In contemporary Anglo-American epistemology “disjunctivism” has been articulated, explored, and defended in various ways over the last 50 years by J. M. Hinton, P. Snowdon, J. McDowell, M. G. F. Martin, and more recently by D. Pritchard and H. Logue. Because of how disjunctivism developed in the twentieth century through these various figures, the general strategy for introducing disjunctivism is to begin by contrasting the various kinds of “disjunctivism” that can be separated. This exercise will be extremely useful for delineating how Nyāya perceptual theory can be used to generate a unique kind of disjunctivism.

In the contemporary literature Haddock and MacPherson (2008) maintain that there are three kinds of disjunctivism that should be distinguished: experiential, epistemological, and phenomenological. Byrne and Logue (2009) and Logue (2013), agreeing with some of the distinctions offered by the former pair also distinguish between positive and negative disjunctivism. Pritchard (2012), by contrast, only distinguishes between epistemological and metaphysical varieties of disjunctivism. In what follows I will provide an account of the distinction between these views. My discussion will borrow from the discussions offered by Haddock, McPherson, Byrne, Logue, Pritchard, and Crane. But it will be different from those so far articulated. I begin with some general terminology.

Where a *veridical* experience is one whose content matches reality, and a *non-veridical* experience is one whose content does not match reality, we can say that a visual experience is either veridical or non-veridical. If it is veridical, it can either be veridical in every aspect or only in some aspects. If it is non-veridical, it is a case of *misperception*. A misperception can be of two distinct kinds. A misperception can either be an *illusion* in which an object is perceived to have a property it in fact does not have, or it can be a *hallucination* involving no object of predication. If the visual experience is an *illusion*, the *illusion* can either be due primarily to an *internal* factor or it can be primarily due to an *external* factor. For example, a person that fails to see the colour of an object because they are colour-blind misperceives the colour because of a biological malfunction, they don't hallucinate the colour, and they don't misperceive it because of something in their environment. However, a person that misperceives a rope for a snake or a person for a post because they are too far away from the object misperceives what is before them because of a non-biological malfunction. In addition, they don't hallucinate the snake or the person, because there is an object before them – a rope and a post. Against this backdrop of distinctions we can articulate four important cases that are in common between classical Indian and Western philosophical discussions of perception and illusion. The core example I will be using throughout my description of the different cases is Byrne and Logue's example of the perception, illusion, or hallucination of a yellow lemon on a table. However, the explanation I will offer in some cases for how the yellow lemon is misperceived borrows from discussions of illusion in classical Indian philosophy, such as the case of jaundiced eyes.

Case 1: Veridical

S's perceptual system F is *non-defective*, and environment E is conducive to veridical perception of the vicinity around S. In E, S's perceptual experience is *as of seeing a yellow lemon*. Finally, there is a yellow lemon causally interacting with S's perceptual system, and there are no intervening factors that foul up the causal nexus between the yellow lemon and S's perceptual system. S *perceives* a yellow lemon on the table before her.

Case 2: Non-veridical Due to Biological Malfunction

S's perceptual system F is *defective* because of jaundice of the eyes. However, the environment E around S is conducive to veridical perception. In E, S's perceptual experience is *as of seeing a yellow lemon*. However, there is a rotten green lemon causally interacting with S's perceptual system, and there is an internal intervening factor, jaundice of the eyes, that fouls up the causal nexus between the green lemon and S's perceptual state of awareness, which results in S's experience being *as of a yellow lemon being present*. S is the subject of an *illusion* as of seeing a yellow lemon on the table before her.

Case 3: Non-veridical Due to Environmental Condition

S's perceptual system F is *non-defective*, but the environment E around S is *non-conducive* to veridical perception. In E, S's perceptual experience is *as of seeing a yellow lemon*. However, there is no yellow lemon causally interacting with S's perceptual system. Rather there is a rotten green lemon causally interacting with S's perceptual system that shows up in S's experience *as of being yellow* because of the ambient lighting conditions in the room, and not because of any internal biological factor, such as jaundice of the eyes. S is the subject of an *illusion* as of seeing a yellow lemon on the table before her.

Case 4: Non-veridical Due to Hallucination

S's perceptual system F is *non-defective*, and environment E is conducive to veridical perception of the vicinity around S. In E, S's perceptual experience is *as of seeing a yellow lemon*. However, there is no lemon before S. Rather, S's perceptual system F is being stimulated by abnormal intervention so as to induce a perceptual experience *as of a yellow lemon being present* before her. S is the subject of a *hallucination* as of seeing a yellow lemon on the table before her.

One can further categorize the four cases through two distinctions: the distinction between anchor-dependent and anchor-independent cognition, and the distinction between internal and external causes of misperception. To say that a misperception is *anchor-dependent* is to say that there is a particular *a* in one's environment, and *a* is perceived, but the quality that is attributed to it in perception, say *F*, is not a quality of *a*. For example, *a* is a rope, which is the perceptual anchor, and it is not a snake, yet in one's perception *snakehood* is attributed and presented as out there at the location of the rope. In an *anchor-independent* misperception there is no perceptual anchor that is seen to have a property it in fact does not have. If there is an anchor, it is simply the generic world as background. One can further

understand the difference between anchor-dependent and anchor-independent misperception by noting that in a hallucination it should be the case that when one moves one's field of vision the hallucinated scene moves as well, which means that there is no anchor. The perceptual field is projected from mind-to-world, rather than having any world-to-mind involvement. By contrast, in an illusion, one has an anchor-dependent misperception because when one moves their field of vision the scene changes. For example, in the case in which the post is misperceived as a person from a distance, were one to move their field of vision, one would not continue to even see a post. Finally, one can say that a misperception is primarily due to an *internal* feature when it is a function of a biological malfunction or some other kind of internal foul up in the causal processing that leads to the misperception. And a misperception is due to an *external* feature when it is a function of the environment the subject is in. Re-described in this vocabulary:

Case (1) is a veridical anchor-dependent perception.

Case (2) is a non-veridical anchor-dependent-internal illusion.

Case (3) is a non-veridical anchor-dependent-external illusion.

Case (4) is a non-veridical anchor-independent hallucination.

Using these four cases and the differences between them one can articulate two distinct kinds of disjunctivism.

Metaphysical disjunctivism [MD] maintains that although (1)–(4) are cases *as of seeing a yellow lemon*, it does not follow that these four states all fall under the same *metaphysical* individuation of perceptual kinds. Rather they are distinct kinds of perceptual states. Thus, metaphysical disjunctivism holds that when one has a perceptual experience [*as of Fa*] it is either the case that one is (i) perceptually in contact with *a*, and *F*-ness is perceived on the basis of interaction with *a*; **or** (ii) *F*-ness is perceived of something, but *a* is not the cause of the perception of *F*-ness, **or** (iii) *a* is the causal ground of what is perceived, but *G*-ness, rather than *F*-ness is what is perceived, **or** (iv) one is in a state that is indistinguishable from (i), but there is no perceptual anchor.

Epistemological disjunctivism [ED] maintains that although (1)–(4) are cases *as of seeing a yellow lemon*, it does not follow that these four states all fall under the same *epistemological* individuation of perceptual kinds. Rather, these states have different kinds of epistemic warrant. Thus, epistemological disjunctivism holds that when one has a perceptual experience [*as of Fa*] either one has good epistemic warrant for *Fa*; **or** one does not have good epistemic warrant for *Fa*.

Each view maintains that there is an *as of seeing a yellow lemon* phenomenal character that is constant across the four cases, but each view denies something different. MD denies that sameness of phenomenal character entails sameness of the metaphysical kind of perceptual state underlying the similar phenomenal character. ED denies that sameness of phenomenal character entails sameness of the epistemic warrant delivered by the underlying perceptual experience. With respect to the metaphysical problem of perception the core point is that both varieties of disjunctivism are a denial of *the common kind assumption*.

The general idea is that we should not conclude from the fact that veridical and non-veridical states are phenomenologically indistinguishable from the first-person-point-of-view that the underlying states are either metaphysically or epistemologically the same. Disjunctivism is a direct attack on the classical argument from illusion, which aims to show that the content of perceptual experience must be something like an internal state, since perceptions, illusions, and hallucinations cannot all have objects of the external world as part of their content. According to the *highest common factor* view the content of perception must be what is in common between a perception of *p*, an illusion *as of p*, and a hallucination *as of p*. Disjunctivism is a rejection of the highest common factor account of experience.² Once a separation between MD and ED has been articulated it is natural to ask: what is the logical relation between the two? For example: Does metaphysical disjunctivism entail epistemological disjunctivism? Does epistemological disjunctivism entail metaphysical disjunctivism? Prichard (2012), for example, argues that ED does not entail MD.

Finally, as a further clarification of disjunctivism, let us turn to Logue (2013), who offers an account of disjunctivism and draws an important distinction concerning how to characterise cases of hallucination.

[A]ccording to disjunctivism, the good [veridical] and bad [hallucination] cases have *no* reasonably specific, *fundamental* experiential commonalities. A reasonably specific experiential commonality is fundamental just in case it characterizes what the experiences fundamentally consist in, i.e., each experience satisfies all other psychological characterizations ultimately in virtue of having the common property. (Logue 2013, p. 112, *emphasis added*)

First one should note that her account of disjunctivism focuses on veridical cases in contrast with *hallucination* cases, and not with mere *illusions*. In general it is possible for one to give one kind of account for the difference between perception and illusion cases, and another kind of account for the difference between perception and hallucination cases. This can be motivated by the fact that hallucinations lack a perceptual-anchor while illusions do have a perceptual-anchor.

Second she offers an articulation and discussion of the distinction between positive vs. negative accounts of the characterisation of a hallucination. A *negative* account characterises a hallucination through its *indistinguishability* from a veridical experience. To say that a visual state is a hallucination of a yellow lemon, for example, is just to say that it has exactly the kind of phenomenal character that would be involved in a veridical case of seeing a yellow lemon, except that it is not a veridical case. Rather, a hallucination of a yellow lemon is simply a visual state that is indistinguishable from a veridical case of seeing a yellow lemon. A *positive* account, by contrast, characterises a hallucination by characterising the

² See McDowell, J., “The Disjunctive Conception of Experience as Material for a Transcendental Argument,” in Haddock, A. & F. Macpherson, eds., *Disjunctivism: Perception, Action, Knowledge* (Oxford, Oxford University Press, 2008), pp. 376–389, for discussion of the *highest common factor* account of experience.

hallucination through some teleological or process oriented description, such as that a hallucination *consists* in representing one's environment as being a certain way or involves acquaintance with mind-dependent objects and their properties as opposed to mind-independent objects and properties. In the account of metaphysical disjunctivism above I have employed, for the time being, a negative characterization of the hallucination case. Finally, some, such as J. Dancy, have argued that disjunctivism, in order to be a tenable theory, needs a positive formulation. M. G. F Martin offers a negative characterisation. Logue argues for the plausibility of a positive characterisation.³

Causal-Disjunctivism in Nyāya

With the Western analytical discussion of disjunctivism in place, it is now time to turn to an examination and discussion of whether Nyāya perceptual theory offers a disjunctivist account of perception. In moving forward on this issue there are three questions that I will focus on:

- (i) Do Nyāya perceptual theorists, such as Vātsyāyana and Gaṅgeśa, hold that *pramāṇa*, such as perception and inference, are *factive*?
- (ii) If there is a kind of disjunctivism present, is the disjunctivism metaphysical or epistemological?
- (iii) If there is a kind of metaphysical or epistemological disjunctivism present, is it positively or negatively characterised?

Question (i) is a particular version of an important question in the general debate on disjunctivism. The more general question of interest is: are knowledge sources, such as perception, *factive*? This question is important for disjunctivism because the theory is often built on the fact that perceptions are distinct from illusions and hallucinations *in virtue of* the fact that perceptions are *factive*, while the other two states are not. The factivity of perception is often used as a ground for arguing that even though veridical and non-veridical states are superficially similar in terms of their phenomenal character, they must ultimately involve either distinct metaphysical or epistemic kinds, since only veridical states involve *truth*. In the current investigation of question (i) I will engage S. Phillips and R. Tatacharya's (2004) magnificent translation and interpretation of Gaṅgeśa's *Epistemology of Perception* in light of J. Ganeri's (2007, 2010) critique of it, as well as his subsequent exchange with M. Dasti and S. Phillips (2010) over the issue of whether *pramāṇa* are *factive*. The core of the debate between them rests on a disagreement over the following two claims:

³ See Crane (2011) for discussion of these points and Logue (2013).

- (a) Gaṅgeśa is an epistemological naturalist.
- (b) Gaṅgeśa is an infallibilist about knowledge sources.

According to Ganeri, *pramāṇa* are not *factive* for Gaṅgeśa because (a) and (b) are incompatible and it is preferable to drop the untenable position that Gaṅgeśa was an infallibilist about knowledge sources; that is, one should drop the position that *pramāṇa* are *factive*. The basic argument is that a naturalist is one who will accept the idea that humans are fallible and as a consequence that a source of knowledge, such as perception, is fallible, even if ‘perception’ as a success term is only correctly used in a veridical case. Dasti and Phillips argue that (a) and (b) are conceptually compatible, and that there is strong textual evidence for both (a) and (b) in Gaṅgeśa’s work. For example, in defence of the claim that *pramāṇa* are *factive* for Nyāya in general, Phillips says the following:

A non-veridical perception is not really a perception at all but a “pseudo-perception,” *pratyakṣa-ābhāsa*, “apparent perception,” a perception imitator or perception solely from a first-person point of view. You don’t really *see* an illusory snake; you only think you see one. An apparent perception P may be indistinguishable from the subject’s own perspective from a bit of genuine perceptual knowledge P, both forming *a-as-F* type dispositions. But Nyāya insists they are different, taking a *disjunctivist* position. (Phillips 2012, p. 10, *emphasis added*)

Here I will neither attempt to settle the textual question concerning (a) and (b), nor the question of whether Nyāya in general held the view that *pramāṇa* are *factive*. However, I will note two things about the debate between Ganeri and Dasti and Phillips.

First, with respect to the analytic question of whether epistemological naturalism is consistent with infallibility about perception we should ask: what exactly do we mean by ‘fallibility’ and ‘naturalism’? The question of whether they are compatible may turn ultimately on what is meant by these terms. Is it fallibility with respect to our capacity to perceive or fallibility with respect to exercises of our capacity to perceive in certain conditions? Correspondingly, coming from the other direction, one might ask: what exact component of *naturalism* makes it the case that perception cannot be infallible?⁴ How is it that naturalism *precludes* infallibility of perception?

Second, in looking at the debate concerning disjunctivism in Nyāya it appears to me that Dasti and Phillips provide an interesting and strong argument for the conclusion that Nyāya epistemology and perceptual theory engages a substantial form of disjunctivism based on their account of perception as being *inerrant*.⁵

⁴ I would like to thank Krupa Patel for bringing this point to my attention. It appears to me that the debate between Burge and McDowell involves similar moves to the debate between Ganeri, on the one hand, and Dasti and Phillips on the other.

⁵ Dasti (2012) provides a rich argument in defence of a Nyāya perceptual theory as being disjunctive. In addition see Vātsyāyana’s Nyāyabhyāṣa 1.1.4 for an articulation of perception as being essentially inerrant.

However, in Vaidya (2013), I argue that T. Burge's perceptual anti-individualism could provide an alternative account.

Putting those points aside, and moving forward, it should be noted that from a logical point of view factivity is neither necessary nor sufficient for presenting a disjunctive account of a phenomenon, such as perception. One main reason why is that disjunctivism, in general, rests on the following logical-metaphysical claim: *Although x's are similar along dimension F, their similarity along dimension F is not explanatorily relevant for maintaining that all x's similar in dimension F, fall under a deeper common kind along dimension G.* For example, Jadeite and Nephrite are macroscopically indistinguishable, but microscopically distinguishable, and what matters in the case of gems is their microstructure, not their macrostructure and superficial look. Their superficial similarity is not sufficient for classifying them at a lower level that is considered to be more important. Likewise, one can argue as follows: although veridical and non-veridical perceptions are superficially similar from the phenomenological perspective, they do not fall under the same metaphysical or epistemic kind, since, from another perspective, that of factivity or epistemic warrant, veridical states have a feature that non-veridical states simply lack; and that feature is what is important. Finally, it should be pointed out that the primary motivation for disjunctivism about perception derives from the world-involving truth of veridical states as opposed to the first person phenomenal similarity between veridical and non-veridical perceptions. The reason for this is that at least from the perspective of gaining knowledge or engaging in successful action on the basis of knowledge, both truth and epistemic warrant matter, while phenomenal character would appear to be less relevant.

Given that disjunctivism does not logically depend on factivity, I maintain that there is an alternative kind of disjunctivism that can be generated from Nyāya perceptual theory, even if it cannot be attributed to them as a position they would stress. The alternative kind of disjunctivism does not derive from their position, as Dasti and Phillips argue, that *pramāṇa* are *factive*. Rather, *the alternative comes from how Nyāya perceptual theory aims to account for the factivity of perception against the non-factivity of illusion and hallucination.* Nyāya perceptual theory maintains that factive perceptions can be distinguished from non-factive illusions and hallucinations through the *misplacement theory of illusion*, MTI. On MTI illusion and hallucination are distinct from perception because of a *process-wise-causal* differentiation that occurs between the indeterminate first stage of perception and the determinate second stage of perception where a subject has a personal level conscious perceptual experience. This alternative kind of disjunctivism I will call *causal disjunctivism*.⁶

Let me begin my presentation of this alternative form of disjunctivism by taking note of one of the best renderings of MTI in the classic snake-rope illusion. S. Phillips describes the theory as follows:

⁶I would like to thank M. Dasti for discussion of these issues.

Snakehood is available to become illusory predication content through previous veridical experience of snakes. It gets fused into a current perception by means of a foul-up in the normal causal process through the arousing of a snakehood memory-disposition (*samskāra*) formed by previous experience of snakes. The content or intentionality (*viśayatā*, “objecthood”) of an illusion is to be explained causally as generated by real features of real things just as is in genuine perception although they are distinct cognitive types. Illusion involves the projection into current (determinate) cognition (which would be pseudo-perception) of predication content preserved in memory. (Philips 2012, p. 37)

My understanding of MTI borrows heavily from Matilal (1992). As I see it the core of MTI in the snake-rope case is the following:

1. S possesses the concepts of *snake* and *rope* based on past experiences in which S veridically interacted with snakes and ropes. In addition, in a given instance S’s failure to correctly deploy the concepts of snake and rope *asymmetrically depends* on S possessing the concepts of snake and rope through prior veridical interaction with snakes and ropes.
2. S has an emotional relation to snakes, such as fear, due to prior experiences with snakes in a specific situation.
3. Snakes and coiled ropes, when viewed from a sufficient distance, inter-subjectively *look* similar to humans *because* objectively snakes and ropes satisfy a sufficient similarity relation. The sufficient similarity relation is satisfied because of the actual properties that ropes and snakes have, such as being *tubular*. Moreover, snakes don’t *objectively* look like elephants, but they do look like ropes. In addition, humans inter-subjectively see them as being similar because of our shared perceptual apparatus.
4. When S is at a sufficient distance from a rope, S receives a sensory signal due to contact between their sensory system and the rope. This sensory signal is input into S’s stage one indeterminate level perceptual processing.
5. Because ropes and snakes satisfy an objective sufficient similarity relation and S fears snakes the sensory signal *can* trigger a snake-concept from S’s memory when S is in sensory contact with a rope.
6. When S has an illusion of a snake on the basis of being in sensory contact with a rope it is because there is an internal foul up in causal processing between the indeterminate first stage of perceptual processing, and the second determinate personal stage of conscious perceptual experience.
7. S’s determinate personal level conscious perceptual experience is *as of a snake being present at a distance* because a memory-sourced snake concept entered the causal stream between stage one perceptual processing and conscious perceptual experience. The memory-sourced snake concept is *misplaced* into the conscious level perceptual experience.

In other words, it is *because* coiled ropes are objectively similar to snakes that *when* an individual, who has experienced snakes and ropes in the past and has a certain emotional attitude toward snakes, such as fear, *causally* interacts with a rope from a sufficient distance, that the rope and the agent’s cognitive profile trigger a snake memory. The snake memory is fused into the personal level perceptual

awareness through a *foul up* in processing that occurs between the indeterminate stage of perceptual processing and the determinate stage where one has conscious perceptual experience. At the type level, the story is simply the following: illusions involve misplaced memory content, while perceptions do not involve misplaced memory content.

Furthermore, it is important to note that the account the Nyāya offer is presented in the case of illusion and *not* hallucination. However, it can be extended to the case of hallucination as well.⁷ In hallucinations it is possible to claim that part of the content of the hallucination comes from misplaced memory content. The idea being that hallucinations and illusions, unlike perceptions, involve a common internal story that accounts for the non-veridicality of the personal level perceptual states that are the output of the overall process. Illusions and hallucinations have misplaced memory content, while perceptions do not.

Finally, although the account in the snake-rope case involves *emotions* as part of the trigger for a memory-sourced content being fused into the determinate level perceptual stream, emotions are *not* a *necessary* component of the misplacement occurring. Rather, the presence of emotion in the presentation of the snake-rope case leads to an interesting question one should consider when theorizing about perception: what role do emotions play in determining the content of our perceptual consciousness? For example, they can play, as the Nyāya suggest, a role in triggering a memory that leads to a misperception. However, emotions could, as some cognitive psychologist would argue, play a role in determining what we attend to and what is salient in our perception.⁸

With this understanding of MTI we can now show how it is a ground for a kind of causal-metaphysical-disjunctivism. First, recall that metaphysical disjunctivism is the view that veridical and non-veridical perceptual states do not share a common metaphysical kind that is important, although they are phenomenologically indistinguishable from the first-person perspective. What MTI further maintains is that illusions, hallucinations, and perceptions do not have a common *causal* story, that the type-level *causal* story is explanatorily important, and the asymmetry in causal processing between perceptions and misperceptions shows that they don't fall under the same *metaphysical kind*. That is, MTI can be used to defend the view that the differentiating factor between misperceptions, hallucinations, and perceptions is

⁷ See Matilal (1992, Ch. 6), for extended discussion.

⁸ One can further fill out an understanding of the Nyāya account of the snake-rope case by contrasting it with one of their common actual opponents: the Mīmāṃsā. On the Prābhākara (a sub-school of Mīmāṃsā) account of misperception, a misperception is a function of the agent being *unable* to distinguish in her consciousness between two distinct cognitions, one a memory of a snake, the other a perception of a rope, both of which are veridical. The contrast is that: For the Nyāya an indeterminate perception of snake/rope generated by sensory contact with a rope triggers a memory of a snake, then the snake content gets fused into the determinate perception S overriding the R content from being delivered to the determinate level of perceptual consciousness. The Prābhākara, by contrast, maintain that the indeterminate perception triggers two cognitions, one a memory of a snake, the other the perception of a rope, and the problem is that the mind *cannot* distinguish between the two.

that there is an asymmetry in causal processing. Perceptions involve the *absence* of misplaced memory sourced cognition. Misperceptions, both illusions and hallucinations, involve the *presence* of misplaced memory sourced cognition.

As a further clarification of the kind of metaphysical disjunctivism on offer here we should note the difference between the causal story and an object-dependent story. One kind of metaphysical disjunctivist could say that veridical and non-veridical states are distinct because they always involve distinct objects. That is, in an object-dependent account of metaphysical disjunctivism the key difference between a perception and a hallucination would be that the former has an anchor, but the latter does not. The causal story, at play in MTI, is different, since its focus is on the elements internal to the mind and the perceptual stream that are posterior to the proximate cause of perception at the indeterminate level. It is compatible with various object-dependent accounts. And it is consistent with the idea that in vision the proximate cause is a common cause between perception, illusion, and hallucination. What it says is different across the three cases is that in the latter two cases, after the proximate visual stimulus, something causally goes wrong.

Furthermore, MTI offers not only a causal form of metaphysical disjunctivism but also a *positive* form of disjunctivism, if not exactly, in the sense that Logue, Martin, and Dancy discuss. MTI offers a positive characterisation of illusion and hallucination by way of holding that a proximate cause of them is a memory-sourced cognition, usually a concept, which intervenes in the normal perceptual stream to produce a *presented-otherwise* perceptual state-of-affairs. As noted before MTI can be extended to the case of hallucination. In such a case a misplaced memory-sourced concept is present at the personal determinate level of perception, rather than the normal concept that would have occurred had the memory-sourced concept not intervened. One version of this story could go as follows. LSD, which often induces anchor-independent hallucinations, causes a foul up between stage one perceptual processing and stage two perceptual experience. It does so by allowing memory-sourced concepts to be misplaced during the construction of personal level perceptual states. Moreover, MTI does not merely maintain that hallucinations are distinct from veridical perceptions simply in virtue of being phenomenologically indistinguishable but non-veridical. Rather, even if veridical perceptions are phenomenologically indistinguishable from hallucinations, MTI offers a positive account of how hallucinations are produced in a way that is distinct from how perceptions are produced.

Finally, we can bring out some of what is significant about causal disjunctivism by situating it within the context of the debate between Burge and McDowell on disjunctivism.⁹ Burge (2005) maintains that all forms of disjunctivism are inconsistent with the proximality principle that is foundational to research in the vision sciences, and as a consequence disjunctivism is inconsistent with research in the vision sciences. Additionally, though controversial, this might be framed as a commitment to the view that disjunctivism is not consistent with naturalism

⁹ See Burge (2005), McDowell (2011) and Burge (2011).

about mind-to-world perceptual engagement, if consistency with vision science is the mark of a naturalistic perceptual theory. As I noted earlier, in Vaidya (2013) I argued that Burge's own perceptual anti-individualism offers an alternative account of Nyāya perceptual theory than that offered by McDowell's brand of disjunctivism.¹⁰ However, the causal-form of disjunctivism that I have delineated here is a unique kind of disjunctivism, not considered by Burge, and it is consistent with the proximity principle. It is consistent *because* it does acknowledge that the proximate cause of indeterminate perception across cases (1)–(4) is the same, which, for example, Burge argues McDowell's disjunctivism cannot maintain. What causal disjunctivism holds is that after the proximate stimulation at the indeterminate level there is an internal processing problem that occurs in cases of non-veridical perception. The problem has to do with a misplaced memory-sourced content intervening in the perceptual stream and fusing itself into the determinate level conscious perception. So, causal disjunctivism, being an internal kind of disjunctivism present at the level between indeterminate sub-personal perception and determinate personal level perception is not inconsistent with the proximity principle that maintains that the retinal image must be the same across veridical and non-veridical cases. That is causal disjunctivism, unlike general metaphysical disjunctivism, is consistent with the proximity principle and perceptual anti-individualism.

To summarize: MTI offers a ground for a causal form of disjunctivism that is both metaphysical and positive. Causal disjunctivism is consistent with the proximity principle, because it does not deny that there is a common retinal image across cases (1)–(4). Causal disjunctivism holds that there is a type level distinction between veridical and non-veridical perception that is due to misplacement.

The Metaphysical Problem of Perception

How does causal disjunctivism offer an interesting dissolution to the metaphysical problem of perception? The answer departs from the following argument.

1. If metaphysical disjunctivism, in general, is a possible dissolution to the metaphysical problem of perception, then causal disjunctivism, being a variety of metaphysical disjunctivism, is also a possible dissolution.

¹⁰ As a consequence, one might think that my defence of a causal form of disjunctivism in Nyāya perceptual theory is a retraction of my earlier view that anti-individualism offers a better account of Nyāya perceptual theory than that offered by disjunctivism. However, here I am not offering a retraction of my earlier view. Rather, I am presenting what I think is an alternative kind of disjunctivism that can be found in MTI, which is a core component of all Nyāya perceptual theory. This alternative kind of disjunctivism is consistent with perceptual anti-individualism as an interpretation of Nyāya perceptual theory.

2. Metaphysical disjunctivism is a possible dissolution to the metaphysical problem of perception.
3. So, causal disjunctivism is also a possible dissolution.

(1) is true, since causal-disjunctivism is a variety of positive metaphysical disjunctivism. (2) is controversial. However, there is ample evidence for the claim that metaphysical disjunctivism is in the space of responses to the metaphysical problem, if not also to the epistemological problem, of perception. Crane (2011) discusses disjunctivism as a possible dissolution to the problem of perception. McDowell (2008) argues that it dissolves the metaphysical problem of perception as well as the epistemic problem of perception by offering a transcendental argument against the Cartesian sceptic. Wright (2008) argues that McDowell's disjunctivism does not offer a response to the epistemological problem of perception regardless of whatever consequences it has for the metaphysical problem of perception. Langsam (2014) defends McDowell against Wright's response. He argues that McDowell's brand of disjunctivism is successful as a response to both the metaphysical and the epistemological problem of perception.

But why is causal disjunctivism an interesting solution to the metaphysical problem of perception, given that metaphysical disjunctivism is already a dissolution option? To understand how it is one must take into consideration the structure of Logue's (2013) discussion of Martin's arguments about the nature of disjunctivism. In her discussion Logue aims to show that Martin's arguments against positive disjunctivism fail, and that there is a positive characterisation of disjunctivism. With respect to MTI entering the debate as an option we should take note of one relevant point. On one reading, Martin's arguments against positive disjunctivism focus on the *presence* or *absence* of common *experiential* kinds. However, MTI as an account of positive disjunctivism will not characterise the hallucination case as being a bad case in virtue of the presence or absence of a *common experiential kind*. Rather, it will *positively* characterise the hallucination case as a bad case *because* of the *causal processes* that bring it about. That is it will ultimately characterize hallucination and illusion cases teleologically. The point of MTI is that *memory* interferes in the wrong way with normal perceptual processing to provide content that would not otherwise be there. The core difference between MTI and other accounts of positive disjunctivism is that MTI is based on the proper functioning of a causal process, while metaphysical disjunctivism is built upon the denial of experiential properties and similarity relations obtaining between veridical and non-veridical cases.

Of course, one might object to the view presented here by arguing that there is no reason to believe that MTI is true; and as a consequence it cannot provide a way to dissolve the metaphysical problem of perception. One could even continue the objection and argue that metaphysical disjunctivism, since it is based on the factivity of visual perception in veridical cases, is a better way to dissolve the paradox. However, this line of objection would miss the point of the current investigation.

Reflection on and examination of MTI enables one to start thinking about disjunctivism in terms of a *causal-processing* account rather than a *veritic* truth-based account. That is, disjunctivism about perception could be explored through a causal-processing lens, rather than a veritic lens. The fact that MTI uses the misplacement of *memory* to distinguish between perception, illusion, and hallucination as the significant fact is not as important as how looking at the theory allows one to think outside of the space of current investigation into disjunctivism. The insight is that *disjunctivism* can be found at another level of explanation. One that is upstream from the veridicality and non-veridicality that distinguishes the three states. While it might be false that misplaced memory is the best difference maker for distinguishing between the three kinds of states, it could nevertheless turn out that: (i) there is a systematic causal-process demarcation between perception, illusion, and hallucination; (ii) this process-wise distinction can be used to block the common-kind assumption that is used to generate the metaphysical problem of perception; (iii) this process-wise distinction is consistent with naturalism, if consistency with the proximality principle is a necessary condition on a perceptual theory being naturalistic.

Let me close by saying a couple of brief remarks on why I believe studying philosophy cross-culturally, such as in the case of examining classical Indian philosophy, is good for contemporary research in philosophy and the sciences of the mind. First, there are many important and intrinsically interesting discussions about the nature of the mind and epistemology in classical Indian philosophy. Studying these discussions provides one with a larger framework for thinking about how philosophical topics have been explored and what answers are possible. Second, many of these discussions are close enough, even on a cursory reading, to contemporary debates that when one engages these discussions critically one gains what I call a *comprehensive understanding of a phenomenon*. A phenomenon, such as human perception, has been studied and examined by many cultures. By critically engaging each of these different discussions, both separately and jointly, one gains a more comprehensive understanding of perception. A comprehensive understanding of a phenomenon, especially when it is cross-culturally based, is superior to a non-comprehensive understanding because it enables better human understanding.

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