

## The Causal Argument against Disjunctivism\*

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### Abstract

In this paper, I will ask whether naïve realists have the conceptual resources for meeting the challenge stemming from the causal argument. As I interpret it, naïve realism is committed to disjunctivism. Therefore, I first set out in detail how one has to formulate the causal argument against the background of disjunctivism. This discussion is above all supposed to work out the key assumptions at stake in the causal argument. I will then go on to sketch out several possible rejoinders on behalf of naïve realism. It will be shown that they all fail to provide a satisfying account of how causation and perceptual consciousness fit together. Accordingly, the upshot will be that the causal argument provides good reason to abandon disjunctivism and, instead, to promote a common factor view of perception.

### 1. *Naïve realism and disjunctivism*

In this paper, I would like to stress the empirically inspired causal argument against *naïve realism*. By naïve realism I understand the claim that, in perception, the perceiving subject stands in an awareness-relation to mind-independent objects and properties such as round tables, yellow tennis balls, clouds etc. Genuine perceptual states are *relational* states of affairs, requiring the presence of the perceiving subject S, the mind-independent external object x and the relation of direct awareness in which S stands to x. Therefore, a perception essentially depends on its mind-independent relata so that this kind of mental state is object-dependent, i.e. perceptions are necessarily *world-including*.<sup>1</sup> Following Evans, let us call these states Russellian.<sup>2</sup> That's the reason why worldly items are said to exhaustively determine and constitute the phenomenal character of S's experience in perception: by perceiving the mind-independent object x, x must supply all of the properties of which S is phenomenally aware. There is no place for qualia understood as intrinsic properties of genuine perceptual states.<sup>3</sup> Thus, naïve realists commit themselves to the claim that the

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<sup>1</sup> See Snowdon (2002) and Martin (2006).

<sup>2</sup> I apply the definition of Russellian thoughts of Evans (1982: 71) to perception: “[a perceptual state] is Russellian if it is of such a kind that it simply could not exist in the absence of the object or objects it is about.”

<sup>3</sup> See also Crane (2006).

phenomenal properties of which S is consciously aware in perception are nothing but the properties of physical objects that have been made experientially manifest on the mental side of the perceiver.

There are two main reasons for advocating naïve realism: phenomenology and epistemology. Phenomenologically speaking, external physical objects seem to be the constituents of perceptions – sense experience seems essentially relational and thus object-dependent. Once we take this phenomenological datum at *face value*, it follows that the outside world is presented to S in a metaphysically transparent way, i.e. we can perceptually scrutinize the real ontological nature of the empirical world. Accordingly, naïve realism articulates best this *presentational* awareness of an ontologically and causally independent world. As regards epistemology, it is thought that only naïve realism can make intelligible how perceptions can have the constitutive role of tracking truth. If the essence of perceptions is such as to necessarily relate the perceiver to the outside world, it becomes comprehensible why truth-tracking is a constitutive functional role of perceptions. So, ontology and phenomenology of perception support and make intelligible each other. If correct, naïve realism ensures that we perceivers can possess *knowledge* of the empirical world to which we are perceptually related.<sup>4</sup>

Thus conceived, naïve realism is committed to *disjunctivism*. Disjunctivists try to defend naïve realism in the light of the threat stemming from the “argument from illusion”.<sup>5</sup> Basically, disjunctivists submit that veridical and falsidical perceptions are tokens of different mental types. Perceptions are necessarily world-including whereas illusions and hallucinations are not. Perceptions and *pseudo-perceptions*, as we might dub illusions and hallucinations, thus have different constituents as their parts.<sup>6</sup> For sure, illusions and hallucinations purport to be about the world, but they are not really world-including. So, even if perceptions on the one hand and pseudo-perceptions on the other can all be subsumed under the general kind of perceptual experiences, this does still not reveal their real metaphysical nature or essence. Given that we individuate mental states with regard to their essence, we want to know to which *fundamental kind* these perceptual states belong. Disjunctivists tell us that due to the fact that perceptions are relational states of affairs that literally include the

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<sup>4</sup> For the importance of epistemology for naïve realism and disjunctivism, cf. for instance Soldati (2008).

<sup>5</sup> See Martin (1997) and (2006). In the text, I shall use interchangeably “naïve realists” and “disjunctivists”.

<sup>6</sup> There is no consensus among disjunctivists whether illusions belong to the good or bad cases (cf. Byrne & Logue (2008)). In this paper, I shall be mostly concerned with Martin’s (2004; 2006) conception of disjunctivism and he puts illusions and hallucinations together.

world whereas illusions and hallucinations have, if any, different relata, they have different metaphysical natures and, consequentially, must belong to different fundamental kinds of mental states.

We come to see that disjunctivists individuate perceptual experiences with regard to their relata. This taxonomical criterion is *non-introspective* and third-personal, for it rejects the Cartesian view according to which we should individuate the nature of mental states according to subjective and introspective evidence.<sup>7</sup> More precisely, disjunctivists do not accept the following epistemic principle about type-individuation of mental states (TIM):

(TIM) If two experiences are, after close and attentive introspection, subjectively indiscriminable from each other, then they are of the same metaphysical kind.

To be clear, the refusal of (TIM) is not the crux of disjunctivism; its main claim is one about the contrasting nature of perceptions and pseudo-perceptions. The crucial difference for taxonomizing perceptual experiences enters the picture by settling the distinction between “external objects present” and “no external objects present”.<sup>8</sup>

Furthermore, the reason why we face here a *disjunctive* theory of perception is that disjunctivists consider talk about look-statements as neutral concerning their ontological import. The proposition “x looks some way to S” remains silent whether S succeeds in picking out x or not. The proper analysis of such sentences is disjunctive and has the following form: “Either S perceives x or it merely seems to S as though there were an x”. This diagnosis of look-talk tries to account for the fact that perceptual experiences have the subjective character of seeming to be perceptions.

One last point worth mentioning is how disjunctivists conceive of the delusive disjunct. After all, the exclusive disjunction represents two metaphysically radically heterogeneous states of affairs. Disjunctivists submit that there is nothing more to the phenomenal or conscious character of delusive experiences as of an item x than that of being *subjectively indistinguishable* from a corresponding veridical perception of x.<sup>9</sup> Delusory experiences are parasitic upon genuine perceptions. In particular, disjunctivists want to circumvent the picture of a “highest common factor”<sup>10</sup> which is supposed to be present across all perceptual

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<sup>7</sup> See for instance Fish (2004).

<sup>8</sup> This point is made explicit in Snowdon (2005).

<sup>9</sup> Cf. Martin (2006: 369).

<sup>10</sup> See McDowell (1986) and (1998: 386).

experiences, be they veridical or falsidical. By claiming that there is nothing more to the conscious character of pseudo-perceptions than the *epistemic* property of subjective indistinguishability, i.e. sameness of experiential states as far as S can tell, disjunctivists can be said to promote some sort of *quietism* with regard to the essence of illusions and hallucinations: the essence of delusory states *is* their being subjectively indistinguishable from a veridical perception. That's why disjunctivists are not willing to put forward some further positive characterization, since there cannot be any autonomous characterization of these pseudo-perceptions without making explicit reference to veridical perception.

As a result, disjunctivists are committed to embrace that delusory experiences cannot be content-bearing states that could be sensitive to truth and veridicality – pseudo-perceptions are literally *surd*. Hence, disjunctivists have to talk about delusive *experiences* and not about delusive *perceptions*: all there is to perception and perceptual content is veridical, that's all. Although they seem to be states with intentional content and satisfaction-conditions from S's inner perspective, pseudo-perceptions only “mock” genuine perceptual states. Disjunctivists may thus be considered as *atheists* about falsidical perceptions, since they do not believe in the existence of illusions and hallucinations conceived of as substantially intentional states that are answerable to the world.

## 2. *The causal argument*

After these introductory remarks, let us stress the causal argument.<sup>11</sup> The argument of my paper is supposed to do two things: a) make it clear whether it can succeed in providing a knock-down argument against naïve realism and b) provide a better insight into the theory of causation held by naïve realists. Importantly, I will assume throughout the whole discussion that perceptual experiences are events that are imbedded in the natural causal network; that is, broadly speaking, they are subject to mental and physical causes.<sup>12</sup>

As a first step, let us suppose that a subject S hallucinates his wife's face in every detail, meaning that S seems to be phenomenally conscious of her nose, her mouth, the colour of her hair etc. In hallucinating this particular face, S has a perceptual experience  $E_H$ .  $E_H$  has

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<sup>11</sup> See also Smith (2002: chapter 7). The present argument is different from his, though, for Smith's attack is directed against disjunctivism as McDowell conceives of it. McDowell promotes a mixed view of perceptual experiences: genuine perceptual states are Russellian whereas, in deceptive experiences, S is perceptually aware of mere appearances. This amounts to holding that sense-data are present in delusive experiences yet not in genuine perception. By contrast, I do not allude to sense-data.

<sup>12</sup> Martin (2004: 39) dubs this assumption “Experiential Naturalism”. Positions such as Leibnizian parallelism and the like are thus excluded from the outset. The same holds for backward causation.

*conscious* as well as *non-conscious* properties such as, for instance, neurobiological (physical) ones. Let us further assume that  $P_H$  stands for the conscious or phenomenal character of S's experience  $E_H$ . By constituting the *experiential* aspect of the hallucination, i.e.  $E_H$ 's what-it-is-likeness,  $P_H$  makes a proper contribution to S's stream of consciousness: there is something it is like for S to be in  $E_H$ . Of course, this does not hold for the neurobiological properties of  $E_H$ , since S is not phenomenally conscious of, say, the action potentials going on in the *fusiform face area* (henceforth called FFA).<sup>13</sup> For the sake of argument, it is helpful to treat this activity in FFA as a specific type of brain state. So defined, whilst hallucinating his wife's face, S is in the brain state FFA which gives rise to S's hallucinatory experience  $E_H$  with the particular conscious character  $P_H$ .

In a second step, let us suppose that by veridically perceiving the face of his wife, S has a perceptual experience  $E_P$  with a conscious character  $P_P$  and, as before, the same type of brain state FFA. Crucially, nothing hinders disjunctivists from accepting that hallucinations and perceptions can share the same neurobiological properties. After all, they submit that genuine perceptual states are Russellian and do not locally supervene on the state of S's central nervous system. Quite to the contrary, perceptual content is externalistically individuated and therefore necessarily includes S's current environment too. Naïve realism is thus not incompatible with empirical data stemming from recent research on the neural correlate of consciousness. Those studies in fact strongly suggest that activation of FFA *per se* serves as the common cortical supervenience base in perception and in hallucination. Naïve realists are able to embrace these scientific results.<sup>14</sup>

We further stipulate that  $P_H$  and  $P_P$  are subjectively or *introspectively indistinguishable* from each other. This is to say that  $E_H$  and  $E_P$  are not knowably distinct from each other, i.e. their conscious character introspectively seems to be the same as far as S can tell. This does not imply *a priori* that  $E_H$  and  $E_P$  are tokens of the same fundamental mental kind. That conclusion would only logically follow if we subscribed to the above epistemic principle (TIM). Therefore, the causal argument, as it has been hitherto spelled out, does not beg the question against disjunctivism, for it makes only use of the idea of subjective sameness of

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<sup>13</sup> FFA is the cortical area where the neural correlate of conscious face-perception is thought to be localized. See for instance Gazzaniga et al. (2002: 230) for more on this topic.

<sup>14</sup> According to disjunctivists' token-externalism about perceptual states, perception neither happens in the sense receptors nor in the brain. These structures are of course necessary for perceptual mental states, yet do not exhaust them, since S's mental state is also constituted by items beyond S's skin. Following Putnam's (1975: 227) memorable slogan "Meanings just ain't in the head", McDowell (1992: 36) resumes this radical anti-individualistic conception of the mind as follows: "the mind [...] is not in the head either."

perceptual consciousness, whatever the *ontological ground* of this indiscriminability turns out to be. After all,  $E_H$  and  $E_P$  might be mental states with completely distinct identity-conditions. In order to accommodate disjunctivism as far as possible, I shall refer to  $E_H$  as a “mock sensory experience” and talk of  $E_H$  as having the power to bring about  $P_H$  which “mocks”  $P_P$ .<sup>15</sup>

In this way we emphasize that delusory experiences on the one hand and Russellian states on the other may have different ontological realizers that account for what it is like to be in such states. This allows the possibility for mock sensory experiences to not logically be due to an awareness-relation in which S stands to the existence of sensory items. In principle, some cognitive higher-order states such as a self-reflexive or *introspective belief* might also do this job in so far as it “mocks” the what-it-is-likeness of a state of genuine sensory awareness. It might be the *epistemic perspective* on his own mind that misleads S about the intentional objects of the perceptual experience as well as about the real nature of the mental state S is in.

In a third step, the causal argument highlights that a neurosurgeon can appropriately stimulate S’s brain in order to produce hallucinations.<sup>16</sup> Therefore, the causal stimulation of FFA is a *minimal sufficient condition* for bringing about  $E_H$ . It follows that  $E_H$ , this particular token, cannot be essentially object-dependent.  $E_H$  can occur in the absence of any suitable object, since causally stimulating FFA is minimally sufficient for its occurrence – i.e.  $E_H$  narrowly supervenes on FFA. Therefore, even if we agree with disjunctivists that the perceptual content of  $E_P$  is not determined by the stimulation of FFA alone,  $E_H$  *is*.

Notice that the causal argument does not commit one to take a particular stance on how to conceive the ontological relation between S’s conscious experiences  $E_H$  and  $E_P$  and the underlying neural state – it is compatible with both reductive and non-reductive theories of the perceptual mind. Accordingly, the relation between FFA and  $E_H/E_P$  is not couched in causal terms but in terms of supervenience, leaving it open how exactly the causal stimulation of FFA gives rise to  $E_H$  or  $E_P$ .

To go on, note that the causal chains in hallucination and perception differ: Concerning  $E_H$ , the causal chain begins with the neurosurgeon’s artificial microstimulation of area FFA and gives rise to S’s delusive experience. Whereas in genuine perception the face of S’s wife itself is the alleged causal origin. In spite of their distinct aetiology the two causal chains

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<sup>15</sup> By using this terminology I intend to parallel the idea of mock-thoughts. According to Evans (1982) a mock-thought fails to express a genuine Fregean thought; rather it is something that *prima facie* appears to act like a genuine thought, yet has no truth-value.

<sup>16</sup> See for example Bickle & Ellis (2005) for a discussion of cortical micro-stimulation and phenomenology.

nevertheless contain FFA as a *type-identical* causal link. Moreover, given that we have previously seen that the causal stimulation of FFA is minimally sufficient to bring about  $E_H$  and  $P_H$ , and  $P_H$  introspectively matches  $P_P$ , it seems a short step to urge that what FFA brings about must be *type-identical* across the two kinds of experiences. For whatever remote cause  $x$  may add to FFA and  $E_H$ , genuine perception surely cannot contain less than a hallucination. FFA is *type-identical* in both causal chains, and it seems hopeless to suppose that the adding on of  $x$  suddenly makes the upshot  $E_H$  disappear. The same *proximate* cause FFA may plausibly be said to produce the same *immediate* effect  $E_H$ , even though, let us grant for the moment, the supplementary presence of the *remote* cause  $x$  may, in a sense to be specified, be able to produce some *extra* effect  $E_P$  in addition to  $E_H$ . Or, if disjunctivists are right,  $x$  ought to become the *direct* object of  $S$ 's perceptual consciousness in virtue of the simple addition of  $x$  to FFA and  $E_H$ .

Therefore, the causal argument yields the conclusion that  $E_H$  and  $E_P$  share a *type-identical* conscious character  $P_H$ . This is nothing but the idea of a "highest common factor" in perception and hence flatly unacceptable for disjunctivists. Recall that causally stimulating FFA is a minimal sufficient condition for the occurrence of  $E_H$ . If so, the argument then claims that  $E_H$  must also be present in the extended causal chain of genuine perception. Due to the fact that both perceptual experiences are arrived at by a partly *overlapping* causal chain, mock sensory experiences must be present in both perceptual circumstances. Even if we conceded to disjunctivists that the extra presence of  $x$  added something more in genuine perception and were thereby constitutive of  $E_P$  and  $P_P$ , this would still not make  $E_H$  and  $P_H$  vanish.

Obviously, this outcome gets disjunctivism on the hook. For how should it be likely for  $E_H$  suddenly to discontinue being the sufficient ground for supplying  $S$ 's perceptual awareness in genuine perception? The adding of  $x$  to FFA and  $E_H$  is supposed to execute this task in that it dislodges whatever metaphysically grounds mock sensory appearances and replaces it by the face of  $S$ 's wife as the direct object of awareness. However, if  $E_H$  must be present in genuine perception as well, then it reasonably accomplishes the same function as it performs in hallucination. Yet it clearly belongs to the function of  $E_H$  during hallucinations to metaphysically ground  $S$ 's seeming visual awareness of  $x$ . Accordingly, the occurrence of  $E_H$  must also be sufficient for instantiating the conscious character that makes up the sensory awareness of  $S$ 's alleged genuine perception. Hence, there are no seeming phenomenal qualities left that could be instantiated by  $x$  and of which  $S$  is said to be directly aware, because all seeming phenomenal properties are already supplied by  $E_H$ . This means that a

mock sensory experience is put in between S and x and thus, according to the causal argument, exhaustively constitutes S's perceptual awareness.

The upshot of the causal argument is that x is not the relatum to which S stands in a direct awareness-relation whilst being in E<sub>P</sub>. The type of token-externalism about perception embraced by disjunctivists must therefore be false. Nonetheless, showing that *some* instances of perceptual experiences are not world-including does not license the conclusion that *all* instances of perceptions can be non-relational. The causal argument leaves it open whether type-externalism about perception is correct.<sup>17</sup> In any case, given that E<sub>H</sub> has the power to metaphysically ground S's perceptual consciousness, the actual existence of x can be dropped out of the explanatory picture with regard to perceptual tokens of the experiential x-type. As a consequence, E<sub>H</sub> *pre-empts* E<sub>P</sub> from fulfilling any cognitive task in S's overall psychological architecture and thereby renders E<sub>P</sub> *explanatorily idle*.

In conclusion, it is noteworthy that we have our conclusions based on the assumptions that E<sub>H</sub> locally supervenes on FFA and that P<sub>H</sub> must also be present when E<sub>P</sub> occurs due to the partially overlapping causal chain. From this follows that E<sub>P</sub> would have to give rise to something like a conscious character built up of both P<sub>H</sub> and P<sub>P</sub>. But given that P<sub>H</sub> covers all aspects of S's conscious character, P<sub>P</sub> is deprived of potentially playing any substantial role for explaining ontological or psychological facts of E<sub>P</sub>. Being an explanatory competitor of E<sub>P</sub>, E<sub>H</sub> highlights that Russellian perceptual content can at best be *epiphenomenal* with no causal or explanatory powers.

Indeed, epiphenomenalism does not logically imply eliminativism, i.e. it is logically possible for E<sub>H</sub> and E<sub>P</sub> to coexist in perception. To achieve elimination proper of E<sub>P</sub>, proponents of the causal argument can invoke two further arguments: First, entering into causal chains seems to be the sole way for entities to become epistemically salient to us cognizers.<sup>18</sup> But E<sub>P</sub> cannot enter into causal chains, so this warrants its elimination. Second, disjunctivists are left with no *rationale* for upholding the idea of a Russellian perceptual content if the hallucinatory experience E<sub>H</sub> can undertake the whole job of metaphysically grounding conscious character of the perceptual episode. This too warrants the elimination of E<sub>P</sub>. In the remainder of the text, I will show that eliminating Russellian perceptual content is indeed the right moral to draw from the causal argument.

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<sup>17</sup> That is: whether S's capacity to have experiences of a certain type constitutively depends on the existence, although not actual existence, of mind-independent objects is left open by the argument. Causal-representational theories such as Dretske's (1995) are thus not put into jeopardy by the causal argument.

<sup>18</sup> See for instance Shoemaker (1980).



### 3. *The causal principle*

How can naïve realists reply to the causal argument? In my opinion, the sole strategy available for them is to question the idea according to which the addition of  $x$  to FFA lacks the possibility of banishing mock sensory experiences in genuine perception. More explicitly, disjunctivists need to show why the following causal principle (CP), which the causal argument decisively hinges on, does not threaten their point of view:

- (CP) If there occurs a causal chain  $\Phi$  that is made up of the causal links  $[c_{c-1}, c]$  and whose proximate cause  $c$  is sufficient for causing an effect  $\Omega$ , and if there is an extended, partly overlapping causal chain  $\Psi$  that is made up of the causal links  $[c_{c-x}, \dots, c_{c-1}, c]$ , then it is logically impossible that  $\Psi$  occurs without causing  $\Omega$ .

It is important to notice that (CP) does not entail that  $\Omega$  is *everything*  $\Psi$  can bring about. It is logically possible for the extended causal chain  $\Psi$  to bring about an extra effect  $\Omega^*$  together with  $\Omega$ . (CP) thus admits that *remote* causes such as  $c_{c-x}$  can play a role in leading to a supplementary effect  $\Omega^*$  that cannot be fully accounted for by the proximate cause  $c$ . So conceived, (CP) does for instance not logically exclude that  $E_H$  and  $E_P$  might coexist in perception. As seen above, the causal argument must rely on further reasons in order to show why  $E_P$  is epiphenomenal and hence gratuitous.

At this point, some advocates of the causal argument may voice the following query: (CP) is too weak a principle for the causal argument, for we should expect the same proximate cause to produce exactly the same effect. In particular, reliance on the idea of *local causation* dictates that if  $c$  is sufficient for  $\Omega$  in  $\Phi$ , then  $\Psi$  must cause  $\Omega$  too, and  $\Omega$  is everything  $\Psi$  can bring about. Concretely, the type-identical local conditions FFA must always produce the type-identical experience  $E_H$ , in perception as well as in hallucination. Once it is granted that FFA is minimally sufficient for  $E_H$ , remote causal links such as  $x$  are unable to exert whatever influence on the effect  $E_H$ . To think otherwise is to allow for *action at a distance*, because remote causes would directly causally influence the effect.<sup>19</sup> Let us dub this view the strong causal principle (SCP) and see whether it is applicable in the context of perception.

I find (SCP) wanting for two reasons: a) it is extremely dubious when applied to mental states and b) it begs the question against naïve realism. With regard to a), (SCP) is said to

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<sup>19</sup> For such a line of attack, see Robinson (1985; 2001: chapter 6).

cross-connect the physical cause FFA with S's perceptual experience. Unlike causation between physical events, however, cause and effect cannot be observed independently from each other in perception.<sup>20</sup> Whilst perceiving  $x$ , S *perceives* the physical cause but *undergoes* its mental effect. Naïve realists can thus simply question the permissibility of (SCP) when applied to *physical-to-mental* causation.

With reference to b), naïve realists can underscore that their externalist framework entails that the perceptual mind is not in the head. Against this background, the assumption that local cortical conditions, i.e. the neural activity in FFA, should always give rise to exactly the same mental effect becomes *vacuous*. If perception necessitates the interaction of a broad intricate network that comprises both S and S's environment, then it seems natural to suppose that the artificial stimulation of S's brain fails to give rise to the same mental effect as in genuine perception; after all, brain-activation constitutes just one piece within this broad network. Disjunctivists may thus argue that all that can be reasonably expected in the abnormal case of hallucination is, at best, a *similar* mental effect. And as we have seen above,  $E_H$  is said to be similar to  $E_P$  inasmuch as  $E_H$  is not being knowably different from  $E_P$ . Therefore, (SCP) would only be intelligible if we assumed that perception exclusively happened in S's central nervous system; only then should one expect the same proximate cause to be followed by the same immediate effect. It is obvious, though, that this internalist assumption begs the question against naïve realism. It is therefore inadmissible to make use of it in the causal argument.

In conclusion, point a) and b) emphasize that the articulation of the causal argument has to side-step (SCP) and rely instead on (CP). Henceforth I will thus concentrate on (CP).

#### 4. *The reply of relationally defined mental types*

I suggested above that naïve realists should show how (CP) fits into their conceptual framework. They ought to do so because (CP) is a well motivated principle whose rationale is backed up by current research in relativity physics. Research in this field shows that a theory of causation should stick only to local causation and thus exclude the possibility of action at a distance. Note that (CP), as used in the causal argument, does not violate the principle of local causation as long as the supplementary effect  $\Omega^*$  is treated as epiphenomenal. That is, the local cause  $c$  cannot bestow extra causal powers on  $\Omega^*$  over and above the causal powers conferred on the common effect  $\Omega$ . Glossed in concrete terms, this means that nothing hinders  $E_P$  from existing in perception alongside with the common element  $E_H$ . And as we have seen above, the causal argument does surely not exclude *a priori* the coexistence of  $E_P$  and  $E_H$  in

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<sup>20</sup> Hume (1978) famously argued for this independence between cause and effect.

perception. There are thus good reasons for endorsing (CP). In what follows, I shall sketch out the only way I think naïve realists can show how (CP) can be compatible with an externalist individuation of Russellian mental states.

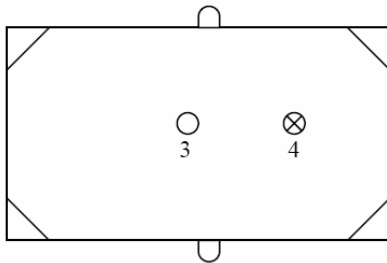


Figure 1

Consider the following situation in an ongoing billiard game: There are two billiard balls left on the pool table (figure 1). Ball<sub>4</sub> has been hit by ball<sub>3</sub>, meaning that the impact of ball<sub>3</sub> is causally sufficient for the actual position of ball<sub>4</sub>. The position of ball<sub>4</sub> can thus be causally explained by its being hit by ball<sub>3</sub>. This causal story is about impact, trajectory, impulsion, speed, constitution of the surface etc.

All these data figure in the causal description in order to explain the position of ball<sub>4</sub>. Hence we describe intrinsic properties of ball<sub>3</sub> and ball<sub>4</sub> and their relevant background conditions. In contrast to the making up of the surface, the fact that there may be an audience watching the billiard game does not count as a background condition, since it is irrelevant for the causal description. The key idea is that once the entire description is available, we dispose of a *causally sufficient* explanation of why ball<sub>4</sub> is located where it is. Now, the player has to drive ball<sub>4</sub> into the right upper pocket of the pool-table to win the game. As illustrated, this task can be done quite easily by the player.

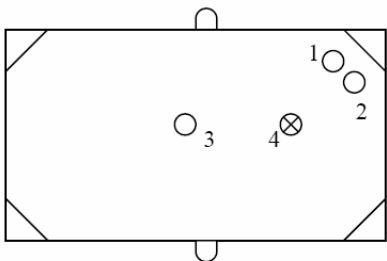


Figure 2

At present, consider figure 2. Ball<sub>3</sub> and ball<sub>4</sub> are still in the same position, but this time there are two more billiard balls on the pool-table, namely ball<sub>1</sub> and ball<sub>2</sub>. Let us assume that ball<sub>1</sub> hit ball<sub>2</sub>, ball<sub>2</sub> in turn hit ball<sub>3</sub> and ball<sub>3</sub> hit ball<sub>4</sub> exactly as described in figure 1. Therefore, ball<sub>3</sub> and ball<sub>4</sub> are at the same positions as in figure 1. So the two

games have a partly overlapping causal history. In particular, the causal description explaining the location of ball<sub>4</sub> is type-identical in both figures. It is crucial to notice that the additional presence of ball<sub>1</sub> and ball<sub>2</sub> does not have to appear in the causal description under the heading of relevant background conditions, for they are not relevant for what happens between ball<sub>3</sub> and ball<sub>4</sub>. If our causal protocol starts with ball<sub>3</sub>'s moving, thus abstracting from the antecedent events, then we have type-identity of causal processes.<sup>21</sup>

Obviously, the *additional* presence of ball<sub>1</sub> and ball<sub>2</sub> does radically change the whole game and therefore shows directly relevant for the overall possibilities of ball<sub>4</sub>. In order to do full

<sup>21</sup> We assume that ball<sub>1</sub> cannot have any direct causal influence on ball<sub>3</sub> and ball<sub>4</sub>. To argue the converse would be tantamount to accept that ball<sub>1</sub> can directly causally act at a distance.

justice to the *potential* of ball<sub>4</sub>, one has to describe its situation in relation to the other balls. Otherwise, one lacks the descriptive means for listing all the manoeuvres ball<sub>4</sub> can potentially be used for. One might say that to describe the potential, we have to let in relational properties in addition to the intrinsic properties of ball<sub>4</sub>. Nonetheless, the potential does not play any significant role in our causal description.

Amongst other relational properties, we cannot dispense with the externally defined property of standing in a particular relation to ball<sub>1</sub> and ball<sub>2</sub> if we are to explain the potential of ball<sub>4</sub>, i.e. why the player is unable to win in this particular way. Analogously, disjunctivists might highlight that the addition of some antecedent, distal causal conditions can importantly alter the final outcome, even if the causal chains partly overlap. To be sure, the intrinsic properties of ball<sub>4</sub> which our protocol sufficiently describes in causal terms are still the same as in figure 1. However, its relational properties have changed considerably.

Applied to the causal argument, this billiard-example brings to mind that it is not logically impossible for the remote cause *x* to make partially disappear what has been formerly produced by the proximate cause FFA, namely some relational properties of E<sub>H</sub>. Similarly, it is logically possible in perception that the Russellian mental state E<sub>P</sub> alters P<sub>H</sub> in exchange for P<sub>P</sub> in so far as relational properties of mental states have the ability to modify S's overall psychology.

A closer look at the idea of externalist individuation of perceptual content helps us to see why ball<sub>4</sub> cannot be subsumed under the same fundamental kind in figure 1 and figure 2. We have to individuate the two settings with reference to the causal *and* relational properties of ball<sub>4</sub>, and not exclusively by looking at its isolated position. This is due to the fact that the focus is on billiard games and not on balls. As soon as we ask for the potential of ball<sub>4</sub>, we necessarily allude to its relational properties by means of which we individuate its fundamental kind. These relational properties thus become critical and essential for having a criterion of kind-individuation. Basically, that's why one can reasonably claim that ball<sub>4</sub> fails to be type-identical in figure 1 and figure 2.

Likewise, disjunctivists emphasize that E<sub>H</sub> and E<sub>P</sub> also belong to metaphysically distinct mental kinds that are relationally individuated. They can argue that the causal argument fails to pay heed to the logical possibility that the hallucinatory state E<sub>H</sub> might owe its property of having P<sub>H</sub> to the *absence* of further external circumstances. That is, the powers of E<sub>H</sub> may be contingent upon properties extrinsic to it. Consequently, the additional physical presence of S's wife can truly convert the hallucinatory state E<sub>H</sub> into the perceptive state E<sub>P</sub>. Disjunctivists may argue that this is all they require in order to block the causal argument.

5. *Intrinsic, causally efficient properties and perceptual epiphenomenalism*

Albeit I take the disjunctivist's response to be in line with (CP), it nevertheless masks two important problems, namely a) explaining the role and contribution of the shared intrinsic properties that are, in the above billiard paradigm, relevant for the sufficient causal explanation of ball<sub>4</sub> and b) giving an account of how Russellian states *qua* contentful states can be causally efficacious.

Point a) appeals to the insight that ball<sub>4</sub> has exactly the same, causally explained *intrinsic properties* in figure 1 and figure 2. If so, opponents of naïve realism may highlight that this hints at the idea of a “highest common factor”.<sup>22</sup> Keep in mind that the brain state FFA is not only shared by both causal chains but also minimally sufficient for bringing about the hallucinatory state E<sub>H</sub>, whose conscious character P<sub>H</sub> introspectively matches a genuine perception in all respects. Keep further in mind that (CP) predicts the occurrence of a common outcome Ω in perception and in hallucination, even though, as the billiard-example is supposed to point out, there is an extra outcome Ω\* which arises from E<sub>P</sub>'s relational properties. In the light of these facts, it becomes quite natural to *identify* the shared intrinsic properties with the hallucinatory experience E<sub>H</sub>. If this is correct, opponents of naïve realism are thus warranted in suggesting that E<sub>H</sub> and *eo ipso* P<sub>H</sub> justly constitute a common mental kind in perception. This being so, E<sub>H</sub> and E<sub>P</sub> turn out to be subjectively indiscriminable at the experiential level in virtue of the fact that they effectively share a type-identical phenomenal content P<sub>H</sub>. This shows naïve realists to be wrong. How might they react to this line of thought?

I think they would accept that perceptions and delusions might share their common intrinsic properties. Nonetheless, as the billiard paradigm illustrates, these intrinsic properties *per se* do not provide a criterion for identifying the fundamental mental kind. Quietism about pseudo-perceptions enables disjunctivists to abstain from saying anything positive about the role played by the shared intrinsic properties in hallucination. They tell us that *all* we can reasonably know about the essence of E<sub>H</sub> is that its conscious character P<sub>H</sub> is not knowably distinct from a corresponding perception. Contrary to what the common factor view asserts, the alleged commonality between perceptions and hallucinations is not situated at the phenomenal level, but at the epistemic higher-order level where S is inclined to judge that things are thus and so.

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<sup>22</sup> It is completely irrelevant at this stage to have a particular conception of what the “highest common factor” consists in: S's being related to sense-data, representational content, qualia, ways of sensing, or what have you – they may all equally fill this position.

This disjunctivist rejoinder is hardly convincing. The worry is that quietism as regards the delusive disjunct seems incredible. Why on earth should the absence of  $x$  the mental state appears to be about have the power to silence us about the nature of a delusory mental state which we perfectly know in the corresponding veridical case? Even if we take for granted the falseness of the epistemic principle (TIM) and thereby accept that self-reflexive consciousness does not provide the ultimate criterion for finding out the essence of perceptual experiences, the lack of any positive, non-parasitic and direct characterization of the essence of delusive experiences seems unacceptable to most of us. To be clear, the charge against disjunctivism is not inconsistency, but *incredibility*. There is no logical necessity that the shared intrinsic properties constitute a type-identical conscious character across all perceptual experiences. However, the fact that  $E_H$  and  $E_P$  are subjectively indiscriminable cries out for an explanation that goes far beyond simply stating that the unique mental property of  $E_H$  is its being indiscriminable from  $E_P$ .<sup>23</sup>

After all, it is rational and scientific practice not to stop at this stage and instead seek for further underlying properties that ground this indiscriminability. Consider for example research on mental disorder such as schizophrenia: some patients suffering from *verbal hallucinations* report that the alien voices they hear are subjectively like genuine auditory perception.<sup>24</sup> It is noteworthy that most researchers in the field implicitly adopt a disjunctivist stance insofar as they conceive of verbal hallucinations and auditory perceptions as tokens of two distinct mental types. That is, they think that hallucinators mistake their inner speech for external voices and account for this kind of misattribution of authorship in terms of various *cognitive* defects.<sup>25</sup> So, they do not explain subjective indiscriminability of verbal hallucinations and genuine auditory perception by means of a shared phenomenal content. Yet, and this is the key point at issue, they agree that there must be a robust positive explanation of why patients mistake their verbal hallucinations for external voices, i.e. why they introspectively mistake a hallucinatory kind for a perceptive kind of mental state. Unlike naïve realists, these researchers tell us a story about the structure of verbal hallucinations by means of which we gain further insight into the underlying properties of this kind of mental state, i.e. that verbal hallucinations genuinely originate from inner speech. By doing this, they aim to explain the match between the introspectible properties of verbal hallucinations and of

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<sup>23</sup> Dancy (1995: 436) also presses the point that a direct way of characterizing the delusive disjunct should be offered by disjunctivists.

<sup>24</sup> See for instance Aggermaes (1972) and Junginger & Frame (1985).

<sup>25</sup> For a philosophical discussion of schizophrenia cf. Graham & Stephens (2000).

auditory perception. Of course, these remarks are rough and ready. Yet they give you an idea about what sort of explanation would be needed in order to render disjunctivism intelligible. Therefore, it is up to naïve realists to say more about the essence of the hallucinatory experience  $E_H$  and the role played by the shared intrinsic properties of  $E_H$  and  $E_P$ . Otherwise their theory fails to explain delusions and the charge of incredibility will persist.<sup>26</sup>

Over and above that, disjunctivists owe us a reply concerning point b). As the above reading of (CP) set out, the relational properties of  $ball_4$  fail to be causally efficacious ones. The causal protocol neither mentions  $ball_1$  nor  $ball_2$  nor, *a fortiori*, the fact that  $ball_4$  stands in some relation to them: the local event between  $ball_3$  and  $ball_4$  is all the causal protocol mentions. Equally, given that naïve realists individuate Russellian perceptual content relationally with reference to  $x$ , it follows that perceptual content is causally impotent. Consequently, there is no causal work left for Russellian mental states.

This corresponds to the dilemma of externalists when they have to explain how mental states *qua* contentful states can be causally efficacious.<sup>27</sup> In brief, content-properties that are relationally defined run the risk of turning out to be epiphenomenal and this puts the understanding we have of ourselves as rational agents who act in accordance to intentional properties of mental states into peril. Disjunctivists are in the same boat. Russellian perceptual content turns out to be epiphenomenal and hence only intrinsic vehicle-properties of  $S$  do the causal work. That's why  $S$ 's perception-based actions and beliefs cannot be *causally* explained by what  $S$  is perceptually aware of whilst perceiving  $x$ , but only by  $S$ 's being in the internal brain state FFA. Therefore, disjunctivism is to be rejected due to the fact that it implies a highly unattractive commitment to perceptual epiphenomenalism.

In order to sidestep the challenges highlighted under point a) and b), naïve realists may opt for a more radical strategy and abandon (CP) altogether. In particular, they might seek to deny the existence of a common effect in perception and hallucination and claim instead that the remote cause  $x$  in the extended causal chain brings about a completely new effect  $E_P$  whose metaphysical nature radically differs from  $E_H$ . That is to say that FFA would not be minimally sufficient for  $E_H$  in perception due to the actual presence of  $x$ . If such an account can be intelligibly construed, its big advantage would be that it avoids all the troubles stemming from the assumed type-identical phenomenal content  $P_H$  in perception and hallucination. It is clear that the challenge of explanatory pre-emption and epiphenomenalism about perceptual

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<sup>26</sup> So I reject the disjunctivist solution offered by Martin (2004) according to which  $E_H$ 's ("a causally matching hallucination" in Martin's terms) being indiscriminable from  $E_P$  should be explanatory of  $E_H$ .

<sup>27</sup> See Fodor (1987: chapter 2).

content does not come up if there is no common element to hallucination and perception. In what follows, I shall check out this proposal on behalf of naïve realism.

6. *An alternative conception of causation*

In a few words, naïve realists can argue that the *causal aetiology* that leads to  $E_H$  or  $E_P$  *directly* determines what kind of mental state  $S$  is in.<sup>28</sup> Perception and hallucination have different causal histories, since the former includes the mind-independent object  $x$  whereas the latter is initiated by the neurosurgeon. This alleged difference in aetiology is crucial, for it is directly responsible whether  $S$ 's psychological occurrence is perceptive or hallucinatory. When  $S$  perceives  $x$ ,  $x$  is an essential part of the whole causal chain that brings about  $E_P$ . Hence, the causal process from  $x$  to FFA *in toto* is necessary and sufficient for perception and causally fixes the identity of  $E_P$ . FFA thus fails to be minimally sufficient for  $E_H$  in perception. Any deviance in this normal causal chain has a merely negative influence on the psychological outcome, in that a delusory experience takes place in lieu of a genuine perception. Therefore, the identity of  $E_H$  and  $E_P$  are essentially bound to the way they have been *de facto* caused. In what follows, I will call the causal aetiology in perception  $C_P$  and that in hallucination  $C_H$ . Hence,  $C_P$  is necessary and sufficient for  $E_P$  and  $C_H$  is necessary and sufficient for  $E_H$ .

Thus conceived, naïve realists would side-step the causal argument by denying that hallucinations issue from the same proximate cause as do perceptions. The complete causal chain is now treated as the proximate cause, because causes are taken into account only as links of causal chains *as wholes*. If correct, the principle “same proximate cause, similar immediate effect”, with which the causal argument works, becomes pointless. In hallucination, a different proximate physical cause gives actually rise to a different mental effect.<sup>29</sup> Accordingly, the causal argument as stated above is unsound because it rests on a principle that is beside the point.

But at first sight, this alternative account of causation appears awkward. Causation does not seem to work this way. Nonetheless, it is worth noting that naïve realists seem to be committed to hold a rather abnormal theory of causation anyway. The problem kicks in once we try to make sense of the notion of object-dependence of perceptual states at the *causal* level. Perception is thought to be a relational state of affairs.  $E_P$  essentially depends on  $x$ , such

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<sup>28</sup> Such a purpose has recently been advanced by John Foster (2000: 23-43), even though Foster himself does not endorse naïve realism.

<sup>29</sup> That is,  $C_P$  gives rise to  $E_P$  and  $C_H$  gives rise to  $E_H$ , and  $C_P \neq C_H$  and  $E_H \neq E_P$ .



that  $E_P$  would not have occurred if  $x$  had not been present on this occasion. But if this direct awareness relation between  $S$  and  $x$  must be essential, the causal relation between  $S$  and  $x$  must be essential too. The causal level parallels the experiential level with regard to essential dependency, since object-dependence has to be shown as realized at both levels.  $X$  must therefore be a *necessary* causal element for perception with the power to *directly* causally influence  $S$ 's perception when  $x$  acts in concert with the other elements of  $C_P$ . The above alternative account of causation on behalf of naïve realism is supposed to pay heed to these requirements.

To reformulate, the problem is that a token of a mental state *essentially* depends on a physical item that is, at the same time, also the causal initiator of a causal chain that brings about this very token of mental state. Such a kind of constitutive dependence is unavailingly sought for in the rest of the physical realm. So it becomes after all natural to expect that whatever the naïve realists' theory of causation turns out to be, it must significantly differ from standard theories of causation that focus on the purely physical realm.

Nevertheless, I think such an image of how physical-to-mental causation works is untenable. First, the brain state FFA would have to *know* whether it belongs to  $C_P$  or to  $C_H$ . If FFA failed to contain any information concerning its causal antecedents, it would become utterly mysterious how FFA could manage to *systematically* produce  $E_H$  and  $E_P$  as a function of their causal aetiology. Even if we took for granted that the complete causal chain as a whole could directly determine its mental effect, the causal stimulation of FFA would still be a necessary stage through which the causal process would have to pass. If so, then FFA must contain information that transcends its adjacent conditions, i.e. it must retain backward information of its own remote causal origin. Yet this is highly implausible. Empirical findings in the neural sciences show that neurons are the fundamental data processing units in the central nervous system that communicate by means of action potentials. Yet a neuron or a population of neurons has no possibility to know whether the incoming action potential is part of  $C_P$  or of  $C_H$ . That is why FFA fails to carry over transcendent information about either  $x$  or the neurosurgeon to its mental effect.

For the sake of argument, let us nevertheless suppose that the brain state FFA could implement this transcendent information. This information is then either physically realized or it is not. If physically realized, it follows that FFA would not be type-identical in both causal chains, for FFA would instantiate different properties in perception and in hallucination. The brain state FFA would instantiate the property of having been caused by  $x$  in the right way in perception, whereas, in hallucination, FFA would have the property of having been caused in

a deviant way. This obviously contradicts our assumption of type-identity of brain states in both causal chains. On the other hand, if the information is not physically realized, then we might speculate that it amounts to some hidden magic force or *occult energy* that is carried through from one causal link to the next and in virtue of which FFA knows its causal past. Yet, in the present context, the appeal to magic forces is illicit. First, the debate assumes at the outset that perceptions are part of the natural causal order; the idea of occult energies does not fit into this framework. Second, this would be tantamount to action at a distance, since all elements in the causal chain – i.e.  $x$ , the retina, the optic nerve etc. – would function as *markers* for S's brain state FFA to know whether to bring about  $E_H$  or  $E_P$ . This means that the remote item  $x$  could exert a *causally unmediated* influence on FFA. But this idea is deeply at odds with what we empirically know about the functioning of the brain so far. The information contained in FFA can thus not be non-physically realized either. Consequently, this short *reductio* rules out that FFA could implement transcendent information about its own distal causal origin.

Furthermore, the present idea is flawed for still another reason: there is no rationale for expecting hallucinations to be consciously like perceptions. After all, it is the causal chain *as a whole* that is supposed to determine the essence of its mental outcome, whether it is normal or deviant. So why should the two physically dissimilar causal chains  $C_P$  and  $C_H$  give rise to a similar conscious upshot? The fact that they partly overlap, i.e. that they have FFA in common, is of no help here, for the contribution of FFA to S's experience is only accountable in so far as FFA belongs to either  $C_P$  or  $C_H$ . And given that  $C_P$  and  $C_H$  are made up of different elements, they fail to constitute the same proximate cause.

Do not forget that the assumption that FFA constitutes the *same proximate cause* in perception and hallucination was the only reason we had with regard to causal mechanisms for making sense of why  $E_H$  and  $E_P$  should be subjectively indiscriminable. Yet this idea is no longer available if the actual proposal on behalf of naïve realism is correct. We are thus left with no causal grounds for expecting  $C_H$  to bring about a parasitic mental effect in so far as it is not, for S, knowably different from a perception. As a consequence, naïve realists have to bite the bullet and declare that this is a *primitive fact* not amenable to further explanation. But such a conclusion seems incredible – more than brute coincidence must be involved here.

Similarly, a second worry can be voiced on that score. Note that there is huge class of possible deviant causal chains that ought to give rise to the same fundamental kind of delusory experiences. As soon as one interferes with the normal causal process at some stage, genuine perceptions are prohibited from occurring and replaced by mock sensory experiences.

These deviant causal chains, of which  $C_H$  is just one instance, can be composed of quite heterogeneous elements, since numerous ways of causal deviance are possible, such as the interventions of neurosurgeons, computers, artificial stimulation of retina implants etc. The sole property that groups them together as a uniform class is “not having been caused by  $x$  in the appropriate way”.<sup>30</sup> This class-property is thus instantiated by a lot of chain-tokens whose causal elements may importantly differ from one chain to the other, i.e. the members of the class may widely differ with regard to their physical make-up. Consequently, still within the present framework of the alternative causal account, how can naïve realists explain why all the members of the class of deviant causal chains bring about the same psychological effect? As before, I think the unique reason is that all deviant causal chains share a type-identical brain state FFA whose causal stimulation is minimally sufficient for producing  $S$ 's delusory experience. But again, if the chain *as a whole* is supposed to determine directly and sufficiently the fundamental kind of  $E_H$ , then FFA fails to be minimally sufficient for  $E_H$ . This lack of minimal sufficiency hinders FFA from playing any *distinguished* function within  $C_H$ . As before, disjunctivists must view it as a primitive, unexplainable fact that heterogenous deviant causal chains bring about the same fundamental mental outcome.

What these considerations illustrate is that we can't help but to assume that the brain state FFA *per se* plays the key role both in perception and in hallucination. FFA is the common element that *explanatorily unifies* the phenomenon of causal dissimilarity giving rise to subjective indistinguishability, and renders thereby intelligible the relation between causality and phenomenality of perception. Hence FFA plays the same *causal role* in perception as well as in hallucination. The appeal to complete causal chains, instead of single causal elements, is therefore not a viable loophole for naïve realists. If so, it finally turns out that disjunctivists have no plausible theory on offer by means of which they could counter the causal argument.

## 7. Conclusion

We have seen that, by accepting that perceptual experiences are embedded in the natural causal network, disjunctivists get entangled in difficult problems they cannot convincingly overcome unless they would be ready to accept a bizarre theory of causation that allows for direct action at a distance. I argued that such magic causation had better ruled out. From this follows that the causal considerations which the causal argument works with override the

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<sup>30</sup> One notorious problem for advocates of the causal theory of perception is to make clear when a subject  $S$  is causally related to  $x$  in the appropriate way. I will not discuss this problem here and assume that there is such a notion. For a discussion see Coates (2000) and Davis (1983).

phenomenological data that ultimately drive the motive force for endorsing disjunctivism – perception is not what it intuitively seems to be. That is, tokens of genuine perceptions do not essentially involve mind-independent objects, i.e. perceptions are not necessarily relational. This shows that the ongoing enthusiasm for naïve realism in the philosophy of perception is really unfounded. Whether we like it or not, naïve realism has to be given up and be substituted by a theory of perceptual consciousness in which the proximate cause FFA brings about a common, type-identical mental effect in perception as well as in hallucination.

So, in the face of the causal argument and principle (CP), an error-theory of perception becomes unavoidable. This might be bad news for all those who wish to do justice to phenomenology in the first instance. Nonetheless, an error-theory allows us to introduce the idea of a mentally mediating interface between mind and world, thus opening the way for the idea that delusions are, like veridical perceptions, genuine intentional states that are answerable to the world. I take this to be good news, for it does justice to the experiential fact that perceptual experiences, be they veridical or delusory, strike us as being occurrences of the same fundamental mental kind. If so, we cognizers are at least not fatally mistaken about the phenomenal nature of our own mental states of which we are self-consciously aware in perception.

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