NAÏVE REALISM IS NOT NAÏVE

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ABSTRACT

What is the problem of perception? Why naïve realism about perception has long been challenged or even depreciated? The problem of perception mainly has two aspects, the structure of perception and the sensory experience. The naïve realism which I defend claims that the subject perceives the object, its sensible qualities, the event it partakes in, etc. without any mental mediator. So structurally, perception does not involve any mental mediator, and phenomenologically, the perceived plays a role in explaining the sensory experience. In my dissertation, I discuss and answer three main challenges for naïve realism, namely the time-lag argument, the argument from illusion and the argument from hallucination. I show that all these arguments are unconvincing, and that naïve realism can answer each of them. I also show that the position these problematic arguments lead to—namely representationalism—has its own problems. My overall strategy is negative, which I think fits with the core 'nature' of naïve realism, namely naïve realism is a commonsensical view about perception, our default view.

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1. Introduction

The topic of this dissertation, as the title suggests, is naïve realism about perception. The basic idea of naïve realism is that the subject perceives the object, its sensible qualities, the event it partakes in, etc. without any mental mediator (e.g. a representation, a sense-datum, an idea, etc.). This naïve and commonsensical view has long been challenged, ever since the pre-Socratic times. But why such a commonsensical view is not welcomed in philosophy? What is the problem of perception? J.J. Valberg concisely and precisely presents the problem,

> The puzzle [of perceptual experience] takes the form of a conflict, or antinomy… If we follow a certain line of reasoning about our experience, we are led to the conclusion that the object of experience is not part of the world, an external object. However, if we are open to our experience, all we find is the world. So, if we reflect in the right ways, we get pulled first in one direction and then another. (Valberg, 1992, p. 3)

Valberg's puzzle can be transformed into a campaign against naïve realism. The certain line of reasoning about experience he has in mind leads to the rejection of naïve realism, while the openness to experience couples to naïve realism. My strategy in defending naïve realism is to reveal those problematic reasonings about experience. In the philosophical literature, the "certain line of reasoning about our experience" has various forms, which includes the time-lag argument, the argument from illusion, the argument from hallucination, and so on. I shall criticize these three arguments in my dissertation.

1.1 Naïve realism: the formulation

I have formulated naïve realism as the claim that the subject perceives the object, its sensible qualities, the event it partakes in, etc. without any mental mediator (e.g. a representation, an idea, a sense-datum, etc.). In the literature, in addition to the emphases on the non-representational and non-mediated features, most naïve realists also focus on the constitutive relation of experience. Here are three examples:

> On a Relational View, the phenomenal character of your experience, as you look around the room, is constituted by the actual layout of the room itself: which particular objects are there, their intrinsic properties, such as colour and shape, and how they are arranged in relation to one another and to you. (Campbell, 2002, p. 116)

> …[Our] sense experience of the world is, at least in part, non-representational. Some of the object of perception—the concrete individuals, their properties, the events these partake in—are constituents of the experience. (M.G.F. Martin, 2004, p. 39)

> …[Veridical] perceptual experiences are essentially relational: [they] are constituted at least in part by the mind-independent objects and properties in our environment that they are experiences of. (Allen, forthcoming)

In these passages, different terms, such as "non-representational", "constituents of/constituted by", "relational/relation", are used to emphasize the structural feature of perception. I believe that the terms "constituents of" and "constituted by" are too metaphorical, and as well as too metaphysical. They are, indeed, the side effects of naïve realists' rebellion against those problematic reasonings. Those reasonings push one to accept, say, representationalism; as such, the phenomenal aspect of a perceptual experience is not determined by the perceived thing. To emphasize the contribution of the perceived thing, naïve realists claim that the perceived thing *constitutes* the perceptual experience or the perceptual relation or the relation of acquaintance. But these formulations involving "constituents of" or "constituted by" are no more than claiming that the subject perceives various things. I thus prefer a simpler formulation, such as Tom Stoneham's: "…all that happens in the seeing is that the subject and the object get into a new relation: the object is perceived by the subject (2008, p. 313). I add the qualification "without any mental mediator" into my formulation because I have not yet dismissed those problematic reasonings.

Naïve realism is also widely accepted as relationalism, as John Campbell calls it in the above quotation. I do not deny that 'the subject perceives the object' is a relation, which is indeed a plain truth. However, I am not satisfied with the implicit motivation behind the term "relationalism". Similar to the terms "constituents of" and "constituted by", the use of term "relationalism" is also an overreaction to representationalism. It is widely assumed that a

relation cannot hold without the actual existence of its *relata*. Given this assumption, naïve realism is deemed to be unable to address the challenges caused by illusions and hallucinations because the perceived sensible qualities are not actually instantiated or existent in illusions and the perceived objects usually do not exist in hallucinations. A representational account of illusion and hallucination is supposedly able to overcome the difficulty, because the feature of intentionality is built in representationalism. That is, perceptual experience is intentional; it is about something which need not exist.[1] Intentionality (or aboutness) is thus thought of as a nonrelational property of perceptual experience.

Naïve realists do not need to buy the assumption that a relation cannot hold without the actual existence of its *relata*. This assumption might be an overgeneralization from some paradigmatic examples. For instance, "I kick the wall"; "the moon is 384400 km away from the earth"; etc. But there are other relations which do not require the actual existence of their *relata*. A relation seems more like a linguistic notion and is projected onto reality. For example, '4 is smaller than 5' is true, which nominalists about number also admit. P.F. Strawson is Galen Strawson's father; this father–son relation did not change when P.F. Strawson passed away and stopped to exist. Thus, the assumption about relations is shaky and should be abandoned. If a relation is a linguistic projection, then to claim that perceptual experience involves a relation is not to make a claim about the *nature* of perceptual experience. As such, naïve realists also do not need to emphasize RELATIONALISM as opposed to representationalism.

In Allen's formulation (forthcoming), the term "mind-independent object" is used to refer to the perceived thing. Philosophers also use other terms such as "physical (material) objects", "external objects" and "environmental objects" in the same way. All these terms are not quite

[1] For the detailed discussion of intentionality see chapters 4 and 5.

satisfactory. For example, "mind-independent object" usually means something which can exist without any mind; then the sentence which I just typed is ambiguous with respect to being mind-independent, because without me, it would not exist, but it exists and will continue to exist even if I now cease to exist. The term "external objects" is also ambiguous. I can see my skin; but is my skin an external object? I can even see the blood vessels in my eyeballs if I cover my eyes with a white paper which has small holes at the eyes' position; blood vessels are not external objects. The term "physical (material) objects" is too narrow to cover various perceived items. For example, rainbows, shadows, holes, etc. can be perceived; but they are not quite like physical or material objects. Given these considerations, I use the term "the perceived thing" to refer to ordinary objects and stuff, sensible qualities, events, etc.[2]

Honestly, it is difficult to avoid all these terminologies to defend a naïve realism which is free from philosophical jargons, especially you need to reveal the opponents' arguments which creates the relevant jargons. So I hope the reader to keep in mind that those aforementioned overreacted terminologies can be innocuous, and they are just ladders to the truly naïve "naïve realism".

Strictly speaking, I do not think that naïve realism is a philosophical theory which provides a particular insight into the nature of perception; it rather urges us to respect the face value of perceptual experience. In this sense, it is truly naïve. However, it is difficult to reach this conviction; the process of the revealing of those reasonings which creates the puzzle requires subtle arguments, clarification of misunderstood scientific concepts, eliminating philosophical dogmas, etc. Naïve realism is thus also sophisticated.

[2] I am indebted in this discussion to my supervisor Hanoch Ben-Yami.

Let me assume that naïve realism is as I have characterized it. The motivation for naïve realism must then be negative, namely its aim is to reveal the problems hidden in those problematic reasonings. In other words, naïve realism is the default view about perceptual experience; it needs not any positive motivation. There are various positive motivations defended in the literature. For example, John McDowell argues that naïve realism can undermine Cartesian scepticism (2008, p. 378); Michael Martin believes that naïve realism best articulates our sensory experiences (2006, p. 354); Paul Snowdon shows that naïve realism can make sense of demonstrative thoughts (1990); Keith Allen proposes that naïve realism is transcendental, explaining how perceptual experiences become possible (forthcoming). I do not wish to take a stand on any of them.

2.1 Plan of the dissertation

The dissertation is structured, in the following order, to debunk the mentioned problematic reasonings:

Chapter 2: The time-lag argument and simultaneity reveals the problems of the time-lag argument. I show that the argument relies on a misunderstanding of the concepts of simultaneity and temporal order; and indeed, that naïve realism is consistent with the claim that the perceiver can perceive things as they were.

Chapter 3: The invalidity of the argument from illusion and the phenomenal principle debunks the argument from illusion. Following Paul Snowdon (1990), I show that the argument from illusion is invalid and there is no way to defend the Uniqueness Assumption which can make the argument valid. I also show that the appearance words such as "appears", "looks", "sounds" etc. have different meanings in different premises of the argument, which means that the argument is invalid due to equivocation.

Chapter 4: Propositional intentionalism and the argument from accuracy offers an objection to the argument from accuracy for representationalism (intentionalism). Following Charles Travis's objection (2004), I also argue that representational content cannot be read off from the way that things look to the subject. I critically analyze Roderick Chisholm's notions of appearance words (1957) and explain why Alex Byrne (2009) and Susanna Schellenberg (2011) misinterpret both Chisholm and Travis. I suggest that looks (appearances) can be objective, but a distinctive objective appearance can be associated with more than one kind of thing, thus from which, no particular representational content can be read off from that appearance.

Chapter 5: The phenomenological problem and intentionalism is concerned with another objection to representationalism (intentionalism), and in it I show that phenomenological intentionalism is not only no better than the sense-datum theory, but also explanatorily redundant. It is no better than the sense-datum theory because to explain the phenomenal character of hallucination it needs to appeal to something similar to a sense-datum; it is explanatorily redundant because representational content is as mysterious as phenomenal character, if the latter needs an explanation so does the former.

Chapter 6: Anomalous disjunctivism develops a new version of disjunctivism. I demonstrate that the mechanisms underlying visual perception and philosophers' hallucination (Robinson, 2013, p. 313) are distinct. I appeal to three analogies to show that the perceived thing and the failure of perception play essential causal role in perception and hallucination, respectively. Thus, whatever account one gives to hallucinations, the same account need not apply to perception. I also give a positive account to hallucinations. I propose that philosophers' hallucinations involve a relation between the hallucinator and a sensory profile, which is the common kind between perception and hallucination.

2. The time-lag argument and simultaneity[3]

2.1 Introduction

Naïve realism about perception, as formulated, maintains that the subject perceives the object, its sensible qualities, the event it partakes in, etc. without a representation or any mental mediator. The time-lag argument, inspired by some *empirical facts*, aims at rejecting naïve realism. As Russell famously argued,

> [Though] you see the sun now, the physical object to be inferred from your seeing existed eight minutes ago; if, in the intervening minutes, the sun had gone out, you would still be seeing exactly what you are seeing. We cannot therefore identify the physical sun with that you see; nevertheless what we see is our chief reason for believing in the physical sun. (Russell, 2009, p. 181)

Naïve realism, according to Russell's argument, is unable to accommodate the following two facts:

a) you see the sun now.

b) The stage of the sun that you see existed eight minutes ago.

This is because Russell's argument has the following two presuppositions: (1) perceiving must happen simultaneously with what is perceived; (2) it is an "empirical fact" that light takes time to transmit from distant objects to the subject, so what you see now of the sun is its eight-minutes-ago stage. With these two presuppositions, (a) implies that your seeing of the sun now must happen simultaneously with the stage of the sun of eight minutes ago given naïve realism, which is absurd.

[3] Many ideas of the chapter came from Hanoch Ben-Yami's course on Einstein's Special Relativity and many times of inspiring conversations with him. I am grateful for his generosity of sharing original thoughts with me.

The apparent *undisputable empirical facts* (a) and (b) lead Russell and many others to firmly believe that something goes wrong with naïve realism. Hence, Russell claims:

> The supposition of common sense and Naïve realism, that we see the actual physical object, is very hard to reconcile with the scientific view that our perception occurs somewhat later than the emission of light by the object… (Russell, 1927, p. 155)

Some philosophers (Robinson, 1994, pp. 80–81) even believe that the time-lag argument based on specific cases (e.g. seeing the sun; seeing an explosion of a star) can be extended to all perceptions. This is because a temporally extended causal process is supposed to be the essential feature of perception regardless of the length of the process. So even those mundane cases—for example, I see the waving flowers in the wind outside the window—involve time lag. Hence, if such a generalized version of time-lag argument stands, naïve realism about perception would be false even regarding of mundane cases.

In this chapter, I shall demonstrate that both presuppositions that Russell's argument relies on are groundless. In particular, I argue that whether or not light takes time to arrive from a distant object to a subject depends upon a prior stipulation or a definition of the concept of simultaneity from the Theory of Special Relativity (SR for short). I also argue that naïve realists need not hold that perceiving must happen simultaneously with what is perceived. The temporal order or causation only sets a physical constraint upon perception in the sense that a subject cannot perceive things as they will be. Naïve realism is consistent with the claim that a subject perceives things as they were or as they are.

The chapter proceeds as follows. In section 2.2, following Einstein (1920, 1923), Reichenbach (1927) and Ben-Yami (2006), I explain that simultaneity involves convention according to SR. In section 2.3, I use the conventional concept of simultaneity to argue that it is not a matter of fact that perception happens later than the perceived event. Furthermore, if perceptual simultaneity—the velocity of the light signal emitted from the distant object to the perceiver is

infinite—is adopted, then perception will happen simultaneously with the distant event. Given perceptual simultaneity, naïve realism will stand even if the claim that a subject cannot perceive a thing as it was is granted. In section 2.4, I explore the concept of perceptual simultaneity and the daily concept of perception; I suggest that the concept of perception is more fundamental than the concepts of simultaneity and temporal order. Section 2.5 is concerned with a suspicion of the objection from SR, since SR is only concerned with light signal which is not causally relevant to hearing and smell. In section 2.7, I show that the generalized version of the time-lag argument presupposes several conceptual idealizations, such as perception and the perceived event are momentary in the mathematical sense, and "present" or "now" refers to an extensionless point; these idealizations are at odd with many daily perceptual cases. I offer a further objection to the time-lag argument in section 2.8, where I argue that temporal order only sets a constraint on perception in the sense that a subject cannot perceive future things. In other words, in principle she can perceive a thing as it was. Section 2.8 is my response to Houts' objection against the claim that a subject could see a thing as it was.

2.2 Special Relativity and simultaneity

Russell asserts that naïve realism is "very hard to reconcile with the *scientific view* that our perception occurs somewhat later than the emission of light by the object" (1927, p. 155). Does science really teach us this? What is in Russell's mind presumably is this: the velocity of light is finite (i.e. in the vacuum, it is c, approximately 300,000 km/s), and one necessary condition for seeing a distant object O is that the light emitted from O hits the perceiver's retina. Therefore, the perception of O must occur somewhat later than the emission of the light from O.

I would not assert that Russell is completely wrong, but he overlooks a more fundamental theoretical hypothesis behind his reasoning, namely simultaneity of distant events are a matter

of convention. This misunderstanding is universal among the advocates of the time-lag argument, which is ironical given their scientific attitude towards the argument.

A correct understanding of the time-lag argument relies on a correct understanding of the concept of simultaneity. Einstein writes, "it is not possible to compare the time of an event at A with one at B without a further stipulation" (1923). How does he reach this unintuitive conclusion? In his famous article "On the Electrodynamics of Moving Bodies", he first explains why all judgements involving time are judgements about simultaneous events,

> If we want to describe the motion of a particle, we give the values of its coordinates as functions of time. However, we must keep in mind that a mathematical description of this kind only has physical meaning if we are already clear as to what we understand here by "time". We have to bear in mind that all our judgments involving time are always judgments about simultaneous events. If, for example, I say that "the train arrives here at 7 o'clock," that means, more or less, "the pointing of the small hand of my watch to 7 and the arrival of the train are simultaneous events." (Einstein, 1923)

Einstein is concerned with the meaning of "time", because without a proper understanding of it the mathematical description of the motion of a particle would be physically meaningless. To understand the meaning of "time", one must understand the meaning of "simultaneity" or "simultaneous events", since all judgments involving time are judgements about simultaneous events, namely the evaluated event is simultaneous with the movement of the hands of the clock. The difficulty is how to determine simultaneity among events at a distance. Einstein describes how we assign a temporal value t to an event with a local clock. We do this via a local clock. For example, if there is a clock at point A (B) in space, then an observer located at A (B) can evaluate the time of events in its immediate vicinity according to the clock. Through this method, we define an "A-time" and a "B-time," but not a common "time" for A and B; it is not possible to compare the time of an event at A with one at B without a further stipulation. This issue was ignored before Einstein, since the dominant Newtonian physics as well as our common sense embrace an absolute conception of time. That is, in whichever frame of reference, with whichever accurate clock, time is the same. Given the absolute conception of

time, there is no difficulty in determining the temporal order of events at a distance; i.e., the clock at B can be used to determine the time of an event at A, and *vice versa*. This is exactly the notion that Einstein challenges.

As quoted above, Einstein only grants that Clock-A can unproblematically tell the time in the immediate vicinity of A; it cannot tell the "time" of an event located at other points without a further stipulation. The further stipulation that Einstein mentioned is the standard synchronisation: the time that it takes light to travel from A to B (Δt_1 for short) and from B to A (Δt_2 for short) are equal. Only by a definition like this, could a common "time" for A and B be established. So clearly, Einstein does not think it is an empirical fact that $\Delta t_1=\Delta t_2$; it is a stipulation, instead. In the standard synchronization, the velocity of light is stipulated as constant. But it is conceivable that $\Delta t_1\neq\Delta t_2$, since Clock-A only records the light's starting moment and the receiving moment, which means that we only know the average velocity of light. Therefore, we can in principle have infinitely many determinations of simultaneity (Winnie, 1970), and the standard synchronisation is widely adopted only because of the pragmatic reason.

Einstein, on another occasion, expounds the same point through another model (the distances AM and BM are given as equal):

> That light requires the same time to traverse the path AM as for the path BM is in reality neither a supposition nor a hypothesis about the physical nature of light, but a *stipulation* which I can make of my own free will in order to arrive at a definition of simultaneity. (Einstein, 1920, VIII)

This passage describes a tentative way of measuring and comparing the time at A and B, and M is the location where the observer receives the light signals from A and B. It is supposed that if the observer receives the A-signal and the B-signal at the same time, then these signals were sent at the same time, and the simultaneity of distant events (e.g., A-signal and B-signal)

thereby is determined. But Einstein points out that this way of arriving at the definition of simultaneity of distant events still involves a stipulation, namely the velocity of light is constant. In other words, the constancy of the velocity of one-direction light, according to Einstein, is "neither a supposition nor a hypothesis about the physical nature of light" (Einstein, 1920, VIII).

To put it in another way, suppose that we want to measure the velocity of light. We know the length of AM. To know the velocity, we then need to know the time that light traverses the path AM. There is no problem of knowing the time at M because M is the observer's location. The observer needs to know the time when the A-signal was sent out at A so that she could know how much time that light traverses the path AM. But to know the sending out time, we need to establish the definition of simultaneity of distant events first.

Reichenbach (1927, §22) relates Einstein's conventional concept of simultaneity to causality and temporal order. He argues that the objective temporal order can be determined by the causal chain, namely a cause is temporally earlier than its effect, while causally disconnected events are *indeterminate* with respect to temporal order. Simultaneous events are thus stipulated among indeterminate events. Hence, for Reichenbach, simultaneity excludes causality. Consider a round trip of a light signal between two distant objects O_1 and O_2. Suppose e_1 represents the event of O_1 emitting a light signal at t_1 (on O_1 clock), e represents the event of O_2 receiving that light signal at t (on O_2 clock). The light signal is reflected immediately, and e_2 represents the event of the light signal arriving at O_1 again at t_2 (on O_1 clock). On Reichenbach's account. e_1 is objectively earlier than e, and e is objectively earlier than e_2. But e' (any events between e_1 and e_2) and e are indeterminate with respect to temporal order, since no signal can reach one another; that is, no causal connection holds between them. Reichenbach concludes, this "result leads to a clarification of the problem of simultaneity. The definition of simultaneity ascribes equal time values to different points in space. It must not contradict our definition of

time order…" (1927, §22), restricted by the mathematical formulated $t=t_1+ \varepsilon(t_2-t_1)$ $(0< \varepsilon <1)$. The value of ε reflects what kind of stipulation of simultaneity that we adopt. For instance, that $\varepsilon=1/2$ is the standard synchronisation which Einstein adopts for the pragmatic simplicity. When $\varepsilon=1/2$, the average velocity of light from O_1 to O_2 is equal to the average velocity from O_2 to O_1. Reichenbach then defines simultaneity of distant events as indeterminacy with respect to temporal order. That is to say, simultaneity excludes causality since temporal order is determined by causality. Therefore, Reichenbach, on one hand, inherits Einstein's thought on simultaneity, namely simultaneity is a matter of stipulation; on the other hand, he justifies the restriction of stipulation given $t=t_1+ \varepsilon(t_2-t_1)$ $(0< \varepsilon <1)$.

Ben-Yami (2006) revises Reichenbach's restriction and allows ε to be 0 or 1, which means that the velocity of light in one direction can be infinite while in the other direction be c/2. In particular, if $\varepsilon=0$, then the velocity of the incoming light (towards O_2) is infinite; if $\varepsilon=1$, then the velocity of the leaving light (towards O_1) is infinite. Accordingly, the concept of temporal order is revised, since the revised restriction allows the cause to be *no later than* its effect but not merely to be earlier than its effect. Therefore, simultaneity will cover two kinds of situations: (a) that the cause and its effect are causally connected by a light signal with the stipulation of infinite velocity in one direction; and (b) that there is no causal connection among these distant events. Both situations involve stipulation.

The problem is how to justify this revision. It is worth noting that Reichenbach does not provide a compelling argument against this revision. He only briefly mentions in the footnote of §22 that an infinite velocity implies that the first signal (light) would not be a signal at all but the limit of all signals. He seems to assume that to be a signal the velocity must be finite. In other words, the finiteness is conceptually contained by a signal. Yet this conceptual constraint is not

obvious. Why can't the velocity of a signal be infinite? Why is it a problem to be the limit of all signals?

Ben-Yami (2006) uses Kant's and Descartes' works to argue against Reichenbach's restricted condition. I am sympathetic to his revision, but do not agree with his reasons. First, Kant's ball/cushion case does support the simultaneity between the cause (the ball's pressing the cushion) and the effect (the depression of the cushion). But in Kant's example, the cause and the effect occur at the same location or in the vicinity, while Reichenbach is only concerned with distant events. Hence, Kant's argument for the simultaneity between a cause and its effect does not apply to Reichenbach's concern.

Second, Descartes describes how light extends its rays *instantaneously* from the sun to us based on our experience. Our vision cannot provide any *evidence* for the infiniteness of the velocity of light, since vision is unable to distinguish an infinite velocity from a finite but large enough velocity. Descartes' example thereby cannot support his claim that light extends its rays instantaneously from the sun to us as a *fact*. Indeed, given the conventional nature of simultaneity, the justification of it must be a priori rather than merely empirical. Hence, I think that Ben-Yami's defences for the revision are not convincing.

Nevertheless, we should allow ε to be 0 or 1. First, Reichenbach's reason is insufficient. There is no conceptual constraint on the velocity of a signal, since it is not contradictory for the first signal to be a signal and at the same time to be the limit of all other signals. Perhaps what is in Reichenbach's mind is the concept of the largest natural number which does not have its extension. But unlike the concept of natural number, the concept of first signal can allow that signal to be infinite, and thereby naturally the limit of all other signals. Moreover, it is worth noting that the dispute of whether ε could be equal to 0 or 1 is conceptual. Empirically, we only know the average velocity of light, namely c. As to whether the velocity of incoming (leaving)

light is *actually* c, it is not a matter of fact at all. Then why cannot ε=0, i.e., the velocity of incoming light be infinite? So, Ben-Yami's revision is a reasonable extension of Reichenbach's restricted condition.

To sum up, the concept of simultaneity of distant events is a matter of stipulation or a definition rather than a matter of fact. Besides, temporal order is determined by causality—a cause is no later than its effect. Moreover, simultaneity should be restricted by the formulation of $t=t_1+\varepsilon(t_2-t_1)$ $(0\leq \varepsilon \leq 1)$.

2.3 Simultaneity and the time-lag argument

Now I turn to demonstrate why the time-lag argument is inconsistent with SR. The time-lag argument appeals to an claimed *undisputed fact* that in some case perception takes place *after* that the perceived object has ceased to exist (Robinson, 1994, pp. 80–81). Indeed, whether in some case perception takes place after the perceived event relies on the definition of simultaneity. So, it is not a matter of fact at all, let alone an undisputed fact.

Admittedly, on Reichenbach's account, temporal order is determined by causal structure: a cause must be earlier than its effect. Given the causal connection between the perceived event and its perceiving, perception would take place after the perceived event. This is also an empirical fact since Reichenbach admits that causal structure is the fundamental fact about reality, and it determines the temporal order.

However, as I argued, Reichenbach's restricted condition on the velocity of light is flawed. It is not contradictory to allow ε to be equal to 0 or 1. This means that the velocity of the incoming (leaving) light can be infinite. Suppose ε=0. This means that the perceived event and its perceiving are causally connected by a signal with infinite velocity. In other words, they are simultaneous. This stipulation of simultaneity is not the standard one, which Einstein adopted

for pragmatic reasons. Yet ε=0 is not contradictory to any observable fact, since the measured average velocity of light is still c. Recall the round-trip experiment. Given the stipulation of ε=0, the incoming velocity of light—from O_1 to O_2—becomes infinite. Hence, the emitting light immediately arrives at O_2. In other words, $t=t_1$, namely e is simultaneous with e_1.

The above stipulation can be generalized as follows: for any two distant events E_1 and E_2, they are simultaneous iff the velocity of the incoming light signal from E_1 to E_2 is infinite. I call this definition of simultaneity *perceptual simultaneity*, since this definition can apply to our vision, in which we conceive the velocity of the light signal emitted from the physical object to the perceiver to be infinite. In short, the most salient feature of simultaneity that Einstein proposed is its conventionality; stipulation is unavoidable in arriving the definition of simultaneity. The proponents of the time-lag argument wrongly take it as an *undisputed fact* that in some cases perception takes place *after* the perceived event.

I will use an example to illustrate the above point. Suppose there is a star which is 4 light-years away from me, and I am observing its explosion right now. The proponents of the argument claim that the explosion happened 4 years ago, while my observation occurs right now. Because perception must be simultaneous with the content of the perception, what I am observing must not be the explosion itself. Therefore, naïve realism is false.

I do not deny that the explosion causes my perceiving of it. Nevertheless, the fact that there is a causal connection between the explosion and my observation of it does not imply that the explosion precedes my observation of the explosion. It only implies that the explosion is *not after* my observation of it. As I argued, simultaneity of distant events is not an undisputed fact; it is not even a fact at all. It is true that if we stipulate ε≠0, the explosion precedes my observation of it. But ε *could* be stipulated to be 0 when perceptual simultaneity is adopted.

To sum up, the insight from SR reveals the confusion involved in the time-lag argument. It is not an *undisputed fact* that in some case perception takes place after the existence of the perceived event, which is *not even a fact* at all. For according to one stipulation of simultaneity—perceptual simultaneity—the perceived event is simultaneous with its perceiving. Moreover, if perceptual simultaneity is adopted, the causation involved in seeing will not be temporally extended; this means that the proponents cannot generalize the argument based on specific cases to all perceptions. Hence, the time-lag argument would not get off the ground if the proponents understood simultaneity correctly.

2.4 More about perceptual simultaneity

So far, I have argued that the concept of simultaneity of distant events in SR is conventional, and accordingly a perceptual concept of simultaneity is in principle possible. In this section, I shall examine the concept of perceptual simultaneity from perspective of daily life.

What do we mean by terms like "a is simultaneous with b", "a happens at the same time with b", or "a happened after (before) b" in daily life? It seems that there is an objective and factual order among events, and perception provides evidence for judgements about temporal order. Imagine an ancient Greek 100-metre dash. The referee stood at the terminal point, staring at the finishing line. He judged who won, who was second, third, etc. by looking, because at that time the timer was not invented. In our daily life, we get used to judging temporal order by perception. For instance, I saw my parents stepping into the house at the same time; I heard people screaming immediately after the gunshots; etc. These examples indicate that the concept of temporal order is closely related to perception, or even established by our perception.

The invention of timers, clocks and other time measuring devices only enriches and refines our ways of measuring time. An improved technology can tell us that Usain Bolt was one-tenth of

a second ahead over Justin Gatlin in a 100-metre dash, which we cannot tell only by looking. But these time-measuring devices do not change our concepts of simultaneity and temporal order. Note I do not claim that the concepts of simultaneity and temporal order are subjective. They are objective, or at least we perceive them as objective.

The time-lag argument presupposes that perceiving must be simultaneous with the perceived event. This presupposition indicates that the proponents of the argument hold that the concept of simultaneity is built into the concept of perception, namely that the latter depends on the former. However, as I demonstrated, our concepts of simultaneity and temporal order are established by perception, not *vice versa*; the proponents of the time-lag argument put the cart before the horse.

One might contend that the concept of simultaneity has nothing to do with perception, and simultaneity is purely objective. Newtonian physics tells us time is absolute and objective. We can perceive the world in the way as I described above because the order of those events happens in this way. I do not deny this. My point is that the concept of simultaneity that we have depends on perception. Perception is so fundamental that, without it or with a different perceptual system, our concepts of temporal order (if we would still have them) would become very different. Imagine a possible wild world that the laws of nature are different from ours. The creatures in that wild world think that time does not lapse but jumps. This is because they perceive everything as jumping. For example, everything movable jumps; information transmits by jumping. In that world, creatures might not have the concepts of simultaneity and temporal order, but they might have the similar naïve realist's concept of perception. This shows that the concept of time need not be built into the concept of perception.

I do not mean to argue that perceptual simultaneity should be adopted in scientific practices because it will bring about impractical complexity. But perceptual simultaneity is conceptually

consistent with our ordinary understanding of simultaneity and temporal order; and our daily life also suggests that the concept of perception is more fundamental than the concepts of simultaneity and temporal order, which means that the latter should not be built into the former as the time-lag argument implies.

2.5 One suspicion

The proponents of the time-lag argument might protest that SR is only concerned with the light signal, so the objection based on the concept of simultaneity is only relevant to sight, and the argument still stands against naïve realism about other senses.

This doubt is legitimate. SR does not support that hearing is simultaneous with the event heard; we do not have perceptual simultaneity with respect to hearing or other senses except sight. For instance, we cannot claim that my hearing of the thunder is simultaneous with the occurrence of the thunder; the thunder occurs *before* my hearing of it, which is a fact. Therefore, there is still room for a restricted time-lag argument which is only concerned with hearing and smell, concluding that naïve realism about hearing and smell is false.

Naïve realists may concede that the heard event and its hearing are not simultaneous but deny that mental representation or other mental mediators are involved in hearing and smell. For example, naïve realists can argue that we do smell or hear the object by smelling the scents or hearing the voices generated by the object. It looks like that hearing object and smelling object become *indirect* not as seeing things, because we do not see things by seeing anything else. This difference consists in the following fact. The colour or any other qualities of a seen object is in the object or a part of it. In contrast to visual qualities, voices or scents are not in the object or parts of it; they are produced by the object instead. In this sense, I indirectly hear and smell an object, but directly see an object. However, the indirectness involved in the talk of hearing

and smelling is not the one associated with mental mediators, since scents and voices are not mental.

The proponents of the time-lag argument may not be convinced by the above response and may continue to contend that naïve realism is no better than representationalism in holding that a flower and an explosion can be the content of smell and hearing, respectively. Nevertheless, scents and voices are not mental representations or mental mediators as representationalists suppose. For how could we smell a flower which has already been crushed and hear an explosion which has already been over? The presupposition behind this contention is that perception is a relation, and the perceived thing as a *relatum* must exist simultaneously with its perceiving.

To rebut this presupposition, the further objection against the time-lag argument should go beyond the concept of simultaneity. I shall argue in the next section that the generalized version of the time-lag argument involving conceptual idealizations which does not fit with many actual perceptions.

2.6 Conceptual idealizations in the generalized version

The present section covers several related arguments and will proceed as follows. First, I point out that there are conceptual idealizations assumed by the generalized version of the time-lag argument. These conceptual idealizations conflict with the perceiving and the perceived event discussed in daily life contexts since they have intervals, and in many cases they temporally overlap. This means that the perceiving does not always take place *after* the perceived.

Let's start with the conceptual idealizations. The generalized version of the time-lag argument claims that all perceptions take place after the event perceived because all perceptions involve a temporally extended causal process. I argue the generalized version presupposes that the

perceived event and its perceiving are idealized in the sense that they are not intervals but extensionless moments. Otherwise it would be false to claim that the perceived event is always before the perceiving of it because many perceived events and their perceiving temporally overlap.

The argument involves an event E which is usually conceived to have a duration. It begins and ends at some moments, say t_1 and t_2. For example, the explosion of a star takes a period of time. Maybe it happens very fast yet still takes time. A subject's perceiving of E (P for short) also has a duration. She sees the beginning of E at t_3 and the end of E at t_4. The generalized version states that P always happens after the existence of E, which implies that $t_3>t_2$. This is implausible. There are indefinitely many examples in everyday life in which t_3 is before or simultaneous with t_2.

Take vision for example. The velocity of light is very fast and the distance between the subject and the object may not be huge. Because of this, in many cases, E does not cease to exist when P happens. Thus, at least we have $t_1<t_3\leq t_2$. For example, I was watching a live football match Argentina vs. France. I saw Messi stopping the ball in the corner area, observing the defender and seeking to pass him in the next moment. In such a scenario, we may say that Messi's series of activities happened 'in a moment'. When I stared at Messi, he was holding the ball and observing the defender without moving an inch. What I saw and my seeing temporally overlap in this example, because Messi's series of activities (stopping the ball, holding the ball and observing the defender) take time, so does my perceiving of them. It is not the case that Messi had already passed the defender, but my seeing of his activities still stayed at his stopping the ball and observing the defender. Instead, my seeing of his holding the ball temporally overlaps with his holding the ball. Hence, my seeing of his activities does not happen after his activities. This shows that the generalized version is inconsistent with many actual perceptions in which

the perceiving and the perceived event have intervals. To avoid this inconsistency, the proponents of the generalized version must assume that the perceiving and the perceived event are extensionless moments, connected by finite light signal, to avoid the temporally overlap between the perceiving and the perceived.

Moreover, the vagueness of event of affairs also conflicts with the generalized version. Both events and states are vague in the sense that they do not have a precise beginning or ending moment; the temporal border of events and states is not precisely determined. Because of this, when we assume that E begins at t_1 and ends at t_2, and P begins at t_3 and ends at t_4, we are assuming an ideal notion. In reality, the beginning and ending time of E and P are always *around* t_1, t_2, t_3 and t_4. When Messi stopped the ball and held it at t_1, did it begin at the time when he touched the ball or when the ball stopped moving on the ground? When did his touch happen precisely? If you watch the touch through a high-speed camera, you will see that the touch is also a process, and you cannot pick out a precise moment when it started or ended. If vagueness of states and events is granted, then the following situation is possible: an event begins around t_1 and the perceiver begins to perceive it around t_3, but t_1 and t_3 are quite proximate. For example, if an event happens 10 meters away from the perceiver, then the temporal distance between the perceiving and the beginning of the event is around $1/3*10^7$ seconds. Because both the event and the perceiving are vague, the temporal difference between them will be 'absorbed' into the vague area. That is to say, the area of 'around t_1' can coincide with the area of 'around t_3'. Hence, it is reasonable to say that in such cases the perceiving and the perceived are simultaneous. In other words, the generalized version is false unless both the event and the perceiving are assumed to be momentary.

So far, I have demonstrated that without the assumption of idealization the generalized version of the time-lag argument cannot conclude that in general perceiving happens *after* the perceived

event. In many cases, the perceiving and the perceived are simultaneous, especially those in which the objects seen are nearby.

Paradoxically, our ordinary concept of perception has nothing to do with these idealizations, since perception only concerns non-idealized events, states and objects. Consider the following example. I am witnessing a traffic accident on Nador Street right now. Suppose that I am standing 10 meters away from the accident and pinpointing the clashing moment as an idealized event. Because of the 'time-lag', I should not tell my friend on the phone "I am witnessing a traffic accident on Nador Street right now". Instead, I should say "I am witnessing a traffic accident on Nador Street which happened $1/3*10^{7}$ seconds ago given the speed of light." In real life, I will not mention this tiny interval. Otherwise I would be accused of lacking common sense since our ordinary concept "now" is not idealized. 'Now' has an indeterminate interval, and its length depends on particular contexts. In the above example, $1/3*10^{7}$ seconds would not make 'now' into the past. What I witness is simultaneous with my witnessing; both are happening right now. In other words, perception is not what the proponents of the generalized time-lag argument suppose: that a temporally extensionless event (the perceived) causes another temporally extensioonless event (the perceiving), and the latter follows the former. Therefore, their argument does not discuss the perception which interests naïve realism, let alone rebut naïve realism.

I have demonstrated that idealizations are assumed by the generalized version of the time-lag argument. However, idealizations conflict with our ordinary use of concepts such as event, state, now, simultaneity, etc. If our everyday discourses were paraphrased by idealized concepts, those discourses would become clumsy and even ridiculous. More important, naïve realism is concerned with actual perception rather than idealized perception.

2.7 Can we see things as they were?

The above objection to the generalized version does not apply to the specific time-lag argument based on cases such as seeing a remote star. Indeed, temporal order only puts a constraint on perception in the sense that we cannot perceive future things unless the implausible backward causation is possible.[4] That is, we can see a thing as it was.

Le Morvan writes, "the claim 'if something no longer exists, we cannot now perceive it' can be at least interpreted in two ways: (a) if something no longer exists, we cannot now perceive it as it presently is, or (b) if something no longer exists, we cannot now perceive it as it used to be" (Le Morvan, 2004). (a) is true, while (b) is not true. For why couldn't we now see something as it was which no longer exists? Le Morvan thinks that if we take the (b) interpretation, then there is no problem holding that we can perceive a thing as it was.

Sense-datum theorists (or representationalists) might challenge Le Morvan's view as follows. It is a fact that a perceptual experience occurs *now*; if a seen event constitutes the perceptual experience as naïve realists claim, then the seen event must also happen *now*.[5] Thus, the seen event must happen now. This argument relies on a presupposition that the constituent and the constituted must temporally overlap. That is, given an event e happening during an interval Δt and an event f happening during an interval Δt_1, if e is constituted by f, then necessarily $t_1 \subseteq t$. For example, the Anglo-Chinese War happened in 1840 and last for 3 years. The war was comprised of many battles. A battle that happened between Great Britain and the Qing Dynasty

[4] The discussion of the impossibility of the backward causation can be seen in Ben-Yami (2007, 2010).
[5] In the introduction, I suggested that naïve realism need not be formulated in terms of a constitutive relation, which is too metaphysical and an overreaction to its opposed views. My argument here is a ladder to naïve realism which later can be thrown away.

in 1856 cannot be a constituent of the Anglo-Chinese War. To be a constituent of the war, the event must have happened between 1840 and 1842. Sense-datum theorists want to apply this notion of constitution to perception. If the seen event is a constituent of the seeing of it, then they must also temporally overlap as a battle of a war constituting the war.[6]

I think that there are at least two notions of constitutive relation, and sense-datum theorists hold one while naïve realists hold the other. The first notion of constitutive relation (of an event) refers to a temporal part-and-whole relation. The constituent and the constituted temporally overlap, and their relationship is contingent. Specifically, a constituent is a stage of the whole event; or it is an event among a series of events, where the series constitutes the whole event (e.g. the Anglo-Chinese War is made up of a series of military events and political events). Moreover, the constituent is contingent to the whole event. It means that even if the constitutive event did not happen the whole event would still happen. For example, if the battle of Humen had not happened, the course of the Anglo-Chinese war would have slightly differed, but it would still have been the Anglo-Chinese War.

The second notion of constitutive relation refers to a relation in which the constituent is a necessary component of the constituted. In particular, the constituents as *relata* constitute the corresponding event. If the constituent differs, necessarily the constituted differs. For example, a father-and-son relationship is such a constitutive relation. Any actual pair of a father and his son constitute a particular father-and-son relationship. If a father or his son were replaced by another person, that particular relationship would not hold. Moreover, the constituents need not be simultaneous with each other or with the constituted. In some cases, the relation between

[6] I'm indebted to Howard Robinson who put forward this objection in a private conversation. Sean Enda Power (2010) mentioned a similar objection.

them is even atemporal. For example, Peter Strawson is Galen Strawson's father. Their relationship holds despite the fact that Peter Strawson has passed away.

Naïve realists hold the second notion of constitutive relation: in seeing the event seen as a necessary component constitutes the seeing of it, but they *need not be* simultaneous. Why is a subject's seeing an event not of the first notion of constitutive relation? Because in a particular visual perception if the seen thing became another thing this particular visual perception would not happen. For example, I am seeing a narcissus outside my window. If the narcissus were a tulip, I of course would not see a narcissus. The first notion of constitutive relation only requires the seen event and the seeing of it to temporally overlap with each other; their relationship is contingent.

The proponents of the argument might further contend that even though the constitutive relation is the one that I argued for, the distant event in question still fails to be the *relatum*. For a subject's seeing an event is essentially a visual experience, which is a pure subjective episode and occurs where the subject is, while a distant event (e.g. a star's explosion) does not occur where the subject is. Thus, the distant event cannot constitute the visual experience.

This contention goes even further than the original assumption that what is seen must be simultaneous with the subject's seeing it. For the original assumption does not directly exclude the logical possibility that a distant event can be seen without a representation or any mental mediator, while the new contention straightforwardly rules out this possibility since it asserts that a visual experience is essentially subjective and occurs where the subject is.

I shall discuss two problematic assumptions involved in this response. First, the proponents assume that seeing can be reduced to a subjective visual experience with a proper causal

process.[7] Second, a visual experience cannot reach a distant event without a mental representation or other mental mediators.[8]

The first assumption would be innocuous if we understand a visual experience correctly. It becomes implausible only if a visual experience is understood in a way leading to the second assumption. Namely, a visual experience is supposed to be completely subjective, and no distant event or object constitutes it.

In everyday life we usually use transitive perceptual verbs (e.g. 'see', 'hear' etc.) to report what we perceive (or the perceptual experience). For example, I see a bald man sitting in the corner; I hear the screaming of my mom; etc. Sometimes we also use perceptual verbs with that-clause. For instance, I see that a bald man sits in the corner; I hear that my mon is screaming; etc. The term "perceptual experience" rarely appears in the daily discourse; it is indeed a philosophical idiom. Similar philosophical idioms include "be (visually) aware of", "have a (visual) experience of".

It is not clear why these philosophical idioms prevail in the philosophical literature. One explanation is related to the empiricist tradition. Empiricists propose that what a subject is directly aware of are impressions, ideas, sense-data, etc. These perceptual objects are not the usual objects for seeing, hearing, smelling, etc. Accordingly, these philosophical idioms enter the picture when the new perceptual objects were invented.

In addition, philosophers may mean to emphasize the subjective aspect of perception. In the philosophy of perception, philosophers think that there is a common factor among subjective

[7] See Grice (1961).
[8] C.D. Broad (1952) describes vision as 'saltatory': it seems to leap the spatial gap between the perceiver and the perceived.

indistinguishable perception, illusion and hallucination. Thus, to consolidate the notion of common factor, it seems that a new category other than seeing, hearing, etc. is needed (e.g. awareness or experience). If this is the case, to reduce seeing to a subjective visual experience in a non-relational sense is not only a terminological problem, rather, it leads to a substantive view about perception. If so, the assumption may beg the question against the time-lag argument. For the aim of the argument is to argue for a sense-datum view or a representational view, namely a visual experience will be treated as a new category other than seeing. Now the assumption that a visual experience is totally subjective presupposes the conclusion of the argument.

The second assumption—that a visual experience cannot reach to a *spatially* distant event—seems parallel to the original assumption that one's visual experience cannot reach out to a *temporally* distant event (e.g. a past event). However, this new assumption is more implausible since it conceptually excludes the possibility of naïve realism. The requirement of the simultaneity between what is seen and a subject's seeing does not conceptually rule out the possibility of naïve realism, because it only claims that distant events or objects cannot be seen directly due to some empirical reason. In this sense, the new assumption is stronger because it *conceptually* rules out the possibility that distant events or objects could constitute one's visual experience. To assume that visual experience cannot reach a distant event stipulates a special conception of visual experience, namely it is totally subjective. This is what the time-lag argument is initially meant to establish. The proponents now appeal to the new assumption involved a new conception of visual experience to demonstrate the initial aim of the time-lag argument. This is again begging the question. Therefore, a distance event is not conceptually ruled out to constitute a visual experience.

In conclusion, temporal order only sets a constraint on perception in the sense that a subject cannot perceive a thing in the future. We can perceive a thing as it was. The objection to this claim is based on a contingent notion of constitutive relation which is not the one which naïve realists hold. The notion of constitutive relation in perception refers to a relation that the perceived event necessarily constitutes its perceiving; the contingent feature of the constituent—ceasing to exist—does not affect its constitutive role.

2.8 Houts' argument

Houts argues that if philosophers attempt to avoid the time-lag argument by insisting that "we see really physical things, properties, and events…but we see them late" (Houts, 1980, p. 155), three more unacceptable consequences follow:

> (a) At time t, we are not at any spatial distance from events and stages we perceive at t.
>
> (b) It is not the case that all the spatially non-contiguous events and stages we perceive at a time are or were at some spatial distance from one another.
>
> (c) We never perceive at a time events and stages which are or were in a three-dimensional array. (1980, ibid)

(a) is unacceptable because we usually think that when one sees an event at t, one stands in spatial relation to the event seen at t. For instance, when I witness a traffic accident at 15:00, I am standing around 10 meters away from the accident. (b) seems also to be at odds with our common knowledge, since it seems obvious that if I see three events at the same time, then those events must be at some spatial distance from one another. (c) can be inferred from (b) because if those events at t are not at any spatial distance from one another, then they are not in a three-dimensional array at t.

I have argued that the concept of temporal order is not involved in the naïve realist concept of perception. Usually we see things as they are, but we might also see things as they were.

Temporal order only sets a physical constraint on perception in the sense that we cannot perceive future things. In this section, I criticize Houts' argument by showing why it is not objectionable to concede what a subject now sees happened in the past, or what a subject now sees existed but does not exist anymore.

Here is my reconstruction of Houts' argument:

> 1.If two physical things have a spatial distance from each other, then they must coexist.
>
> 2.If naïve realists concede that events or stages that a perceiver perceives were only in the past, then they do not exist now.
>
> 3.Given that the event of a perceiver's perceiving happens at present, this event does not coexist with what the perceiver perceives.
>
> 4.Therefore, if naïve realists concede that what a perceiver perceives was only in the past, then a perceiver's perceiving and the perceived have no spatial distance, that is to say, at t, the perceiver is never at any spatial distance from the physical things she perceives at t.

The argument creates a tension that if naïve realism is true the unpleasant consequence (a) follows. That is, at a time t, we are not at any spatial distance from events and stages we perceive at t.

Worse still, (b) will also follow if this argument stands. It is a fact that we sometimes see different events or stages at time t. For example, on a clear night, I raise my hand and see a bright star, the moon and my raised hand. Namely, I simultaneously see a particular stage of those three objects. But it seems also true that the event or stage at a larger distance (e.g. the star) is temporally more distant than those at a lesser distance (e.g. my raised hand) because light takes longer to get to the perceiver if the thing that the event happened to is at a larger distance. So the stages of the star, the moon and my raised hand that I see at t happened at different times (past). Therefore, those temporally distant stages are not coexistent. According to (1), those stages do not have spatial distance from each other when I see them. So (b) follows.

(c) is easily derived from (b), since if the bright star, the moon and my raised hand are or were not at any spatial distance when I see them at t, then I certainly never perceive them in a three-dimensional array.

Note that when we talk about a spatial distance between two events, we are actually talking about a spatial distance between two physical things to which the two events happen. And it also seems true that the spatial distance between two physical things is identical to the spatial distance between the locations that these two physical things occupy. If this is admitted, then Hout's first premise is not as solid as it appears to be. For a location that a physical thing occupied is still there no matter whether the physical thing exists or not. So it seems still sensible to talk about the spatial distance between two physical things, even though one or both of them do not exist but existed. For instance, Epang Palace was 15km west of Xi'an. It makes sense to talk in this way even though Epang Palace was destroyed by XiangYu about 2000 years ago. We also talk about the spatial distance between a star and the earth, though we know the star does not exist anymore. Therefore, the concept of spatial distance is not as narrow as the argument assumes. It can be applied to physical objects which do not exist but existed.

If my response makes sense, then all the unacceptable consequences that Houts argued for are not as objectionable as they appear to be. (a) does not hold because at any time t, we are at some spatial distance from events and stages we perceive at t. The distance is only determined by the locations the perceiver and the events or stages occupy (an event or a stage occupies a location in virtue of the location the physical thing involved occupies). (b) does not hold either. All the spatially non-contiguous events and stages we perceive at a time are or were at some spatial distance from one another. When I look at my raised hand, the moon, and that bright star at a night, they have or had a distance from one another. (c) is also false, since my raised hand, the moon and that bright star, at least their locations, do form a three-dimensional array.

Conclusion

I began the chapter by pointing out that the success of Russell's argument relies on two claims: (1) naïve realists hold that perception must happen simultaneously with what is perceived; (2) It is an "empirical fact" that light takes time to be transmitted from perceived thing to the subject.

Based on the insight from SR, I refute (2); I criticized the proponents' confused use of the concepts of simultaneity and temporal order. The concept of simultaneity of distant events is a matter of convention or stipulation, not a matter of fact. A seen state and its seeing are simultaneous given perceptual simultaneity. Therefore, (2) is false.

However, the objection from SR cannot apply to hearing and smell because the velocity of sound and propagation of scent is far smaller than the velocity of light. Temporal order of hearing and the heard state is matter of fact.

To deal with this limitation, I further argued against (1). The proponents of the time-lag argument wrongly ascribed (1) to naïve realism. I deployed two arguments to defend the view that temporal order only sets a constraint on perception in the sense that a subject cannot perceive future things. In other words, a subject can perceive things as they are or as they were. I first demonstrated that the idealizations assumed by the time-lag argument conflict with our ordinary language practice and are even irrelevant to understanding actual perception. Second, I argued that perception is a relation in which what is perceived necessarily constitutes the perception. The proponents' reason for why perception must be simultaneous with what is perceived is untenable, since their reason is based on a contingent constitutive relation.

I hope that my objections against the time-lag argument are convincing. In the next chapter, I will turn to the argument from illusion.

3. The invalidity of the argument from illusion and the phenomenal principle

3.1 Introduction

A necessary condition for an illusion is that the perceived object appears different than it is. For example, the Müller-Lyer illusion exhibits two equal-length straight arrow-like segments that look unequal. The grey strawberries illusion presents a bowl of strawberries which look red but are not red. The checker shadow illusion is also an optical illusion which depicts a checker with light and dark squares, shadowed by a green cylinder, but the light and dark squares are actually of identical brightness. In the philosophical literature, many examples of illusions are not like these, but are still supposed to fall into the category of illusion. For example, a straight stick looks bent when half of it is submerged into a tank of water, a white table appears yellowish when it is bathed in yellow light, everything looks blurred when a short-sighted person takes off her glasses, and so on. I believe that the mechanisms responsible for different illusions vary a lot, and it is therefore implausible to give a general account. On the other hand, a philosophical account of illusions does not focus on their mechanisms. So, we also do not need to bother with the complexity of various mechanisms.

The advocates of the argument from illusion (Ayer, 1967; Price, 1932; Robinson, 1994) exploit various illusory phenomena and argue that even in perception the subject does not perceive the ordinary objects, sensible qualities and the relevant events (directly)[9] but only perceives (or

[9] "Directly" means 'without any mental mediator'. I add the blanket because some advocates argue for idealism, according to which the subject does not perceive the ordinary objects in any sense.

aware of) some mind-dependent entities such as sense-data.[10] I do not think that the argument from illusion works for two main reasons. First, the advocates cannot defend the Uniqueness Assumption which is needed to make the argument valid. Second, the advocates' favourite reading of the Phenomenal Principle will render the argument inconsistent. I shall explain the Uniqueness Assumption and the Phenomenal Principle in §3.2 .

The chapter proceeds as follows. In section 3.2, I state Howard Robinson's version of the argument and settle some terminological preliminaries. In section 3.3, I argue that the argument from illusion is invalid. To make the argument valid, one approach is to add the so-called the Uniqueness Assumption (Uniqueness for short): in a particular direction of attention, the subject is only aware of a single kind of object.[11] I shall show that the Uniqueness is indefensible. Given the subject is aware of a sense-datum in an illusion, she may still be aware of ordinary object and sensible qualities; the object of perception can be a combination of a sense-datum and an ordinary object. Note that I only argue for the claim that the subject is possibly aware of a combination rather than that she is actually aware of it. In section 3.4, I demonstrate that the sense-datum theorists' preferred reading of the Phenomenal Principle makes the whole argument either inconsistent or trivial. This stems from the different readings of appearance words such as "appear", "look", "sound", etc.

3.2 The argument from illusion stated

Here is Robinson's (1994, pp. 57–58) argument:

[10] The target of this chapter is confined to the sense-datum theory. Representationalism is conceived as a solution to the argument from illusion and is the mainstream theory of perception. I shall criticise it in the later chapters. In this chapter, if I successfully argue that the argument from illusion is unmotivated, then we do not need the representationalist solution.

[11] Also see Paul Snowdon (1992) and French and Walters (2018).

1. In some cases of perception, physical objects appear other than they actually are—that is, they appear to possess sensible qualities that they do not actually possess.

2. Whenever something appears to a subject to possess a sensible quality, there is something of which the subject is aware which does possess that quality.

Therefore

3. In some cases of perception there is something of which the subject is aware which possesses sensible qualities which the physical object the subject is purportedly perceiving does not possess.

4. If *a* possesses a sensible quality that *b* lacks, then *a* is not identical to *b*.

Therefore

5. In some cases of perception that of which the subject is aware is something other than the physical object the subject is purportedly perceiving.

6. There is such continuity between those cases in which objects appear other than they actually are and cases of veridical perception that the same analysis of perception must apply to both.

Therefore

7. In all cases of perception that of which the subject is aware is other than the physical object the subject is purportedly perceiving.[12]

First, I shall use the term "the perceived item" to replace the term "physical object", because many perceived items, such as rainbows, shadows, hologram, etc., are not physical objects but are a set of sensible qualities. Michael Martin (2012, p. 334) calls them pure *visibilia.* Although this terminology correctly draws our attention to some perceived items which are not physical or material objects, it is also misleading in another sense. For rainbows, shadows, etc. are *objective* existences and have causal effects, for example, a shadow can make a certain area cooler, and they are thereby not pure *visibilia*.[13]

Second, in Robinson's view, illusions belong to perception; this is why he begins with "in some cases of perception". He also takes a wider notion of illusion which covers those atypical

[12] Similar arguments can be seen, for instance in A.D. Smith (2002, pp. 21–28).
[13] I owe to Hanoch Ben-Yami who reminded me of the misleading terminology.

illusory phenomena as I mentioned at the outset. By contrast, some philosophers will not regard those examples as illusions. For example, J.L. Austin accuses philosophers of abusing the term "illusion". He writes, "[t]hat a round coin should 'look elliptical' (in one sense) from some points of view is exactly what we expect and what we normally find; indeed, we should be badly put out if we ever found this not to be so" (Austin, 1962, p. 26). Austin's point is that an object may look different if the subject observes it from different perspectives, at different distances and under different light conditions, etc. Appearance variations do not necessarily involve illusions. The subject usually does not expect that the appearance should remain the same when her observing conditions change. So, Austin does not accept the wider notion of illusion, namely that illusions are equivalent to the claim that the perceived object appears different than it is. As I claimed at the outset, the claim is only a necessary condition for illusion.

Naïve realists can accept that the perceived objects sometimes appear to be other than they are.[14] It is compatible with the central claim of naïve realism about perception, namely that the subject perceives the object, its sensible qualities, the event it partakes in, etc. without any mental mediator (Allen, 2015; Campbell, 2002; M.G.F. Martin, 2004). The advocates of the argument think that the supposed divergence between appearances and reality is incompatible with the central claim of naïve realism. For if the perceived item (e.g. a red thing) constitutes my visual experience, then how can the red thing look orange to me sometimes? Naïve realists need to give a more elaborate answer to the question. After all, even if Austin and Hicks are right about the abuse of the notion of illusion, this is still inadequate to respond to the challenge from those real illusions.

[14] Naïve realists can also hold that the appearance of an ordinary object is also a quality of the object, see Maarten Steenhagen (2019).

Third, the positive conclusion of the argument from illusion, which is not exhibited in Robinson's version, is that the subject is aware of a mind-dependent entity such as a sense-datum. A sense-datum is commonly characterized as the direct object of perception (Robinson, 1994, p. 187; Russell, 1912, p. 45); it is also non-physical (Broad, 1923; Huemer, 2005; Jackson, 1977; Robinson, 1994, p. 187). Some philosophers also argue that a sense-datum is not intentional (Robinson, 1994, p. 187). All these characterizations are contentious but enough for my argument. In the next section, I shall show that the argument from illusion such as Robinson's version is invalid and the remedy—the Uniqueness Assumption—is untenable.

3.3 The invalidity of the argument from illusion

Paul Snowdon (1992) points out that the argument from illusion is invalid. Recall Robinson's argument. Premise 3 states that there is something of which the subject is aware which possesses sensible qualities which the physical object does not possess. And premise 4 asserts that if *a* possesses a sensible quality that *b* lacks, then *a* is not identical to *b*. From premise 3 and premise 4, it only follows (a) that the F object (F stands for the sensible quality and the F object is the one that the subject is aware of) is not the ordinary object, but not (b) that the subject is not aware of the ordinary object. (a) and (b) are not equivalent, since it is logically possible that the subject is aware of both the F object and the ordinarily perceived object. If so, at least one object of which the subject is aware is identical to the perceived object, which contradicts proposition 5. Therefore, proposition 5 does not follow from premises 3 and 4, and the argument is invalid.

To make the argument valid, an additional premise is needed to rule out the possibility that the subject is aware of both the F object and the ordinarily perceived object. Following Snowdon, the hidden assumption is the Uniqueness: in a particular direction of attention, the subject is only aware of a single kind of object, either ordinarily perceived items or sense-data, but not

both.[15] French and Walters propose different formulations, but the core idea is the same (2018). Note that the single kind here means either the mind-dependent kind such as a sense-datum, or the ordinary perceived item; it does not mean different types of ordinary objects such as tables, animals, etc.; it also does not mean different categories such as material objects, properties, events, etc. If the Uniqueness is added, then in our perceptual awareness there is only one kind of object. The supposed possibility will be ruled out. The question is whether sense-datum theorists can defend this assumption.

3.3.1 The sense-datum infection view and the Uniqueness defended

Admittedly, the Uniqueness appears natural, since it seems objectionable to suppose the opposite, namely, that when the subject looks at something, she is aware of both a mind-dependent object and an ordinary object, or a combination. For instance, imagine there is a tomato on a table. I direct my attention towards it and only see the tomato, an ordinary material object. I would not think that I see something other than an ordinary object unless I detect something unusual, for example, I may be hallucinating. In general, we rarely doubt that what we see are ordinary objects. So, the Uniqueness is implied by this common-sense conviction. This is why it appears natural and it is objectionable to suppose the opposite.

What if the common-sense conviction of perception or naïve realism is challenged? Does the Uniqueness still appear natural if naïve realism is not the default view anymore? It seems that the challenge to the common-sense view of perception (naïve realism) itself casts doubt on the

[15] Snowdon's formulation: "there is, in a particular direction of attention, as it were, a unique, single, d-perceivable thing." (1992, p. 74)The term 'd-perceivable" means directly perceivable.

Uniqueness. The argument from illusion exactly challenges the deep-rooted common-sense view of perception. So, the accompanying assumption presumably is challenged too.

In addition, not all qualities are subject to illusion in an illusory experience. Usually only one or several sensible qualities are "distorted" by the relevant circumstances. For example, if a red tomato is bathed in green light, it is presumably only the colour that is subject to illusion.[16] Other (sensible) qualities remain the same as they are under normal circumstances: the tomato's shape and size will look the same. I will call these qualities "surviving qualities", because they are not affected by the illusory circumstance. So, even if the distorted qualities are instantiated by some ordinary object, it seems still reasonable to hold that the subject perceives the ordinary object which has the surviving qualities. For illusions concerning items like rainbows, shadows, etc. the subject perceives these survivin qualities. Therefore, the Uniqueness is not as plausible as it appears given the existence of sense-datum.

Suppose that the Uniqueness is plausible. According to the sense-datum theory, in illusion the subject then is aware of only one kind of object, namely, the sense-datum. It further implies that the subject is not aware of anything objective in illusion. As a result, the distinction between hallucination and illusion disappears, because a hallucination also refers to the phenomenon that the content of hallucination is not in the subject's surroundings. So, if we want to retain our intuition that there are surviving qualities in illusions, and there is a conceptual distinction between hallucination and illusion, then the Uniqueness must not be assumed in the argument from illusion. If so, it opens the possibility that in illusion the subject perceives at least some real features of the ordinary surrounding object. That is to say, even though we concede that in illusion the subject is perceptually aware of a mind-dependent object

[16] Let's temporarily put Austin's criticism on the abuse of illusion aside and grant the wider notion of illusion.

(e.g. a sense-datum), it is still acceptable to claim that she perceives the ordinary object. She is possibly aware of two kinds of object in illusion.

So far, I have shown that the Uniqueness is not as plausible as it initially looks. Sense-datum theorists then must provide strong arguments for it rather than take it for granted. A.D. Smith, though not a sense-datum theorist, proposes the following argument for the Uniqueness:

> Now although in this situation the shape of the tomato is not, we may suppose, subject to illusion, we cannot maintain that we are directly aware visually of the tomato's shape, because, simply in virtue of one of the visible features of the tomato being subject to illusion, a sense-datum has replaced the tomato as the object of visual awareness as such. For the shape you see is the shape of something black, and the tomato is not black. (Smith, 2002, p. 26)

Smith refers to this phenomenon as "sense-datum infection". In particular, the colour illusion in question directly influences the subject's awareness of other visual qualities of the tomato such as the shape, size, and so on. The colour sense-datum will completely replace the tomato as the object of awareness. This phenomenon can be generalized: any illusory quality can infect other qualities. If the 'sense-datum infection' view is true, then the Uniqueness will be true, since in a particular direction of attention, the subject is only aware of one kind of object, namely the sense-datum. But why is that? Why are the supposedly surviving qualities not different from the quality which is directly subject to illusion?

In the above quote, Smith helps sense-datum theorists answer this question, "for the shape you see is the shape of something black, and the tomato is not black". This reply is not that convincing, since he seems to assume that the shape you see belongs to the sense-datum (i.e., something black), which is exactly what I am questioning. But Smith might not only assume this, what is in his mind might be the following apparent truism: whenever one is visually aware of a colour, one is aware of it as having a particular shape and size, because colour must be extended, and one cannot be aware of a colour *simpliciter*. In the tomato case, we are aware of something black, so we are aware of a shape of the black thing. The shape does not belong to

the tomato, since it is not black. Therefore, if the 'sense-datum infection' view is plausible, then the Uniqueness is plausible too.

3.3.2 Against the sense-datum infection view, part 1

I argue that the "sense-datum infection" view is false. It is true that one cannot be aware of a colour *simpliciter*, but this does not entail that the shape (or the size) of the colour must only belong to the coloured sense-datum. The shape might belong to the surface of the ordinary object, or it might be the shape shared by both the coloured sense-datum and the ordinary object. If we accept either possibility, then besides the sense-datum we also perceive the ordinary object. We can legitimately claim that the tomato is not black, but the shape we see is still the shape of the tomato. That is, we might be aware of two sensible qualities, colour and shape, which belong to different kinds of object, one belongs to the coloured sense-datum and the other belongs to the ordinary object. This possibility contradicts the Uniqueness.

French and Walters (2018) also propose a similar objection to the Uniqueness, namely that we might be aware of a composite. They think that if a coloured sense-datum is transparent as a pane of coloured glass or a hologram, then the subject can see the ordinary object through the sense-datum. More precisely, the subject sees the sense-datum as a transparent medium and sees the ordinary object as the one behind the medium. They believe that sense-datum theorists should additionally assume that the nature of a sense-datum is opaque. Only with the assumption of opacity can they secure the claim that the subject is unable to see the ordinary object, since the one cannot see an object which is behind an opaque object.

I agree with French and Walters that it is hard for sense-datum theorists to rule out the possibility that the subject can be aware of a composite. But their conception of composite is problematic. They write,

> Compare the Wall Case [similar to the tomato case] to a case where we see a white wall covered with a piece of yellow film. In this latter case, we see something yellow, the film, but this does not preclude us from seeing the wall as well…We see a yellow sense-datum, but we see the wall through this sense-datum. (French & Walters, 2018)

So, the composite is comprised of a transparent medium and an object behind the medium. Usually, there is a phenomenological difference between seeing a thing through a pane and seeing the wall through a sense-datum. In the former case, the subject sees two things, a pane and the object behind it. By contrast, in the latter case, the subject (seems to) see only one thing, namely, a yellow wall. The analogy is therefore problematic. For example, the subject is not supposed to see the edges of the pane. So, either the edges are out of the subject's visual field (imagine you look through a clean and large pane), or the pane exactly coincides with and sticks to the seen object. If the subject is actually aware of a composite, as French and Walters suggest, then the spatial relation between the coloured sense-datum and the ordinary object should be that of a clean pane sticking to the matching ordinary object.

To argue against this possibility, sense-datum theorists need to insist that a coloured sense-datum can independently explain why the object which the subject is aware of is opaque. They may contend that the coloured sense-datum itself is opaque so that the subject can see no other qualities through it. But this contention is based on the assumption of the opacity of a coloured sense-datum, which is as unjustifiable as the Uniqueness.

However, French and Walters' assumption of the transparency of a coloured sense-datum is equally unjustifiable. The visual phenomenon in the tomato case is silent on which assumption is more congenial to how things look. Therefore, the debate is moot if we only consider it from a phenomenological perspective.

Beyond phenomenology, the composite possibility is still preferable, while the composite is not as French and Walters conceive of. Think of a general question: why is something opaque? The answer is that light cannot get through it. Transparency is determined by the material

constitution of an object. If the object is made of wood, then no matter what colour it is, it is opaque. In contrast to wood, water is transparent under normal conditions. But when you gradually drop ink into a cup of water, the transparency of water gradually decreases. This is because the density of the ink increases, and it prevents light from getting through. The colour of the ink is irrelevant to the transparency, although the colour is also related to the constitution of the ink. Hence, it seems wrong to ascribe opacity to a colour or a coloured sense-datum, unless it is constituted by an appropriate material, which is incompatible with the immaterial nature of a sense-datum.

The above observation also falsifies French and Walters' initial assumption that a coloured sense-datum is transparent. For, if the property of transparency is essentially related to material constitution, it is inappropriate to ascribe transparency or opacity to an immaterial sense-datum. So, the whole debate of whether a coloured sense-datum is opaque or transparent is misguided.

Can't we define transparency of something in terms of whether the subject can see an object behind that thing without mentioning light? Such an operational definition cannot answer the question of why the subject can see the object behind the transparent medium; it leaves the nature of transparency unanswered. Regarding a colour sense datum, without an explanation of why it is transparent or opaque, to ascribe transparency or opacity to it is too *ad hoc*.

3.3.3 Against the sense-datum infection view, part 2

I think that sense-datum theorists have a reason for the Uniqueness which is independent of the assumption of opacity. They can argue that phenomenologically the subject is not aware of the shape of the ordinary object. If she were aware of it, she should have been aware of the colour of that shape. For it seems impossible to be aware of the shape of something without being aware of its colour; we cannot be aware of a shape *simpliciter*. In the tomato case, the subject

is aware of a shape, but the colour of which she is aware is not the colour of the tomato. Therefore, sense-datum theorists will conclude that the shape that the subject is aware of is also not the shape of the tomato. Hence, we should accept the sense-data infection view.

The above reason for the Uniqueness is still insufficient. I shall explain the insufficiency through an analogy. Suppose that there is a red round table covered by a green tablecloth. When we look at this table in normal circumstances, we will see something green which is not the colour of the table. Do we only see the shape of the green tablecloth but not the shape of the table? I incline to say no. When we look at the table, we know why the green tablecloth looks to be table shaped. Its shape is determined by the shape of the tabletop or is just identical to the shape of the tabletop. If we see one, we should see the other. Imagine that you punch a piece of soft clay. The shape of your fist leaves an impression on the clay. No one will deny in this case that part of the shape of the clay (the punched part) is just the shape of your fist. Likewise, the shape of the tablecloth is just the shape of the tabletop. Thus, if we see the shape of the tablecloth, we see the shape of the tabletop.

One might question that: with a tablecloth on the tabletop, I cannot see the top; how then can I see its shape? It is true that the tablecloth covers the tabletop, so I cannot see many qualities of the top such as its colour, texture, etc. But these hidden qualities do not include the top's size and shape.

In many cases we see an object by seeing its shape. Imagine that there are ten tables in a hall, and only one of them is covered by a tablecloth. Your friend, on the phone, asks you how many tables you can see in the hall. You will definitely answer "ten". But let us pretend that someone objects to your answer: "No, you literally only saw nine tables, since one *thing* is covered by a tablecloth, how could you say 'ten'?" You will find the objection strange, because a tablecloth

does not prevent you from seeing the table. Likewise, even though I cannot see many qualities of the tabletop in the original case, I still can see its shape, by which I see the table.

One might retort that I do not directly see the table or the shape of the tabletop; I at best *know* it through inference. However, if we knew it through an inference, we should have been aware of this inference. What is the inference? Perhaps we have the following two premises: (1) the shape of the tablecloth is such and such; (2) the shape of the tablecloth is identical to the shape of the tabletop; from these two premises, I infer that the shape of the tabletop is such and such. This response is perhaps too dependent on some specific conception of inference, namely that when a person makes an inference, she must be conscious of the inferring. Memory may not preserve the results and processes of previous similar inferences, so it may be not necessary for the subject to notice the inference. I cannot give a satisfactory account of inference here, but I shall use another analogy to show that in this particular example, I *see* rather than *infer* the shape of the tabletop.[17]

Replace the tablecloth with a layer of oil paint. If the above contention makes sense, then similarly, the contender can claim that I do not see the shape of the tabletop if it is painted with a layer of oil paint, and I only see the shape of the layer of the oil paint. It implies that a painted table cannot be seen—we only see the visual qualities of the oil paint. One might object that the oil paint is part of the table, but the tablecloth is not. So, I do see the shape of the table by seeing the shape of the layer of oil paint. But it is not obvious that there is this difference between a tablecloth and a layer of the oil paint. Why must we think the oil paint is part of the table while the tablecloth is not? Is it because the tablecloth can be easily removed? This difference seems insignificant because the tablecloth can also be permanently glued to the table.

[17] I thank the referee to let me notice my provincial conception of inference.

Therefore, the objection does not really work; the two cases are essentially the same. Both show that we do see the shape of the tabletop no matter whether it is painted or covered by a tablecloth, and that no inference is involved.

The relation between the shape of a coloured sense-datum and that of the corresponding ordinary object is analogous to the relation between the shape of the tablecloth (or the oil paint) and that of the tabletop. In the tomato case, the shape of the sense-datum is determined by the shape of the tomato or is identical to the shape of the tomato. If the above analogy makes sense, then when we are aware of the shape of a sense-datum, we are also aware of the shape of the tomato. This means that Smith's sense-datum infection view is not true, since we are aware of other visual qualities (shape) of the ordinary object. Hence, admitting the existence of sense-data does not exclude ordinary objects as the objects of perception; sense-datum theorists fail to defend the Uniqueness.

The success of the analogy has another consequence: it shows that even if a coloured sense-datum is opaque and separated from the ordinary object, the subject can still see the shape of the ordinary object. For we do see the shape of the table when it is covered by a tablecloth (or painted by oil paint), and the tablecloth is opaque. Analogously, we will be aware of the shape of the tomato, even if we are aware of a coloured and opaque sense-datum. This means that even if French and Walters' assumption of transparency were defeated and the assumption of opacity were in place, we still have reasons to reject the Uniqueness.

I have argued that the argument from illusion is invalid without the Uniqueness. The Uniqueness applies to our common-sense view of perception. Once it is challenged, the Uniqueness is challenged as well. As I argued, so far there is no satisfactory defence of it. The sense-data infection view cannot support the Uniqueness. Therefore, if the Uniqueness is problematic, the argument from illusion is problematic as well.

3.4 The Phenomenal Principle

I have discussed the invalidity of the argument from illusion and rejected the Uniqueness. Apart from this problem, the argument involves a controversial principle, namely the Phenomenal Principle:[18]

> If there sensibly appears to a subject to be something which possesses a particular sensible quality then there is something of which the subject is aware which does possess that sensible quality.(Robinson, 1994, p. 32)

This principle essentially enables one to infer existence from mere appearance, which many find objectionable. For example, the widely accepted representationalism rejects this inference, and suggests that the representational content can explain appearance without invoking dubious mental entities (Dretske, 1995; Tye, 1995). I postpone the discussion of representationalism to chapters 4 and 5. In this section, I present a criticism of the principle independent of representationalism. First, I show how sense-datum theorists defend the Phenomenal Principle. Second, I discuss the use of appearance words, such as "appears", "looks" etc., arguing that even if all concepts involved in the principle are used in sense-datum theorists' favourite sense, the argument is self-defeating.

3.4.1 The Phenomenal Principle defended

Robinson uses H. H. Price's well-known passage to defend the Phenomenal Principle:

> When I see a tomato there is much that I can doubt. I can doubt whether there is a tomato that I am seeing, and not a cleverly painted piece of wax. I can doubt whether there is any material thing there at all. Perhaps what I took for a tomato was really a reflection; perhaps I am even the victim of some hallucination. One thing however I cannot doubt: that there exists a red patch of a round and somewhat bulgy shape, standing out from a background of other colour-patches, and having a certain visual depth, and that this whole field of colour is directly present to my consciousness. What the red patch is, whether it is physical or psychical or neither, are questions that we

[18] The terminology comes from Robinson (1994). Chisholm (1957) calls the principle "the sense-datum inference".

> may doubt about. But that something is red and round then and there I cannot doubt. (Price, 1932, p. 41)

The scent of Cartesian philosophy pervades this passage. It reminds us of Descartes's general rule that "everything I very clearly and distinctly perceive is true" (Descartes, 1641). For Robinson and Price, what is clearly and distinctly perceived is something red and round, which is immune to doubt.

The question is why is this conviction immune to doubt? I suspect one reason might be that sensible qualities are conceived as they appear to be, so perception always reveals the nature of sensible qualities. This implies that the principle is only applicable to sensible qualities, which should not be surprising. When Price writes, "I can doubt whether there is a tomato that I am seeing, and not a cleverly painted piece of wax," he means that even if something looks like a tomato, it does not follow that it is a tomato. Thus, the principle does not apply to material objects.

On this account, some philosophers' counterexamples to the principle should be ruled out. For example, J.L. Austin invites readers to think of a cunningly decorated church which appears to be a barn. On his account of the principle, there then should be something which is a barn. But this is ridiculous. He concludes, "[w]e see, of course, a church that now looks like a barn. We do not see an immaterial barn, an immaterial church, or an immaterial anything else" (Austin, 1962, p. 30). Austin's counterexample is about a barn-like church, which is not a pure sensible quality, so it is not in the scope of the principle. Roderick Chisholm's counterexamples are equally problematic. He argues that that an animal looks centaurian does not imply that there is anything centaurian; that the pail feels empty does not imply that there is something which is empty; that the woods sound inhabited also does not imply one which is inhabited (Chisholm, 1957, p. 115). However, all these counterexamples are about nonpure sensible qualities, so they do not pose threats to the principle.

Some philosophers (Siegel, 2006, pp. 391–392; Smith, 2002, p. 50) even think that the Phenomenal Principle should only apply to the perceptually basic qualities such as red and round. This may be the reason why red and round frequently appeared in H. H. Price's and C. D. Broad's works. The idea is that a sensible quality F is perceptually basic iff it is not the case that a subject is aware of something as having F by being aware of it as having another quality G which belongs to a category that F does not belong to. For example, as Smith writes, "one does not typically see that an object is red, or spherical, in virtue of seeing anything other than its colour or its shape" (Smith, 2002, p. 50). The reason why F and G are required to belong to the same category is that in some cases a subject is aware of something red by being aware of it as being scarlet, but we do not want to say that redness is not a perceptually basic quality. The requirement of belonging to the same category rules out such cases.

I agree with Price that the subject is aware of a red patch in his example, but the problem is that whether we should infer the existence of something which has the sensible qualities. Ordinary objects are inappropriate candidates, so sense-datum theorists appeal to mind-dependent objects (e.g. sense-datum). This line of thought inevitably prompts the phenomenal use of appearance words. For example, Frank Jackson writes,

> The phenomenal use is characterised by being explicitly tied to terms for colour, shape, and/or distance: 'It looks *blue* to me', 'It looks triangular', The tree looks closer than the house', 'The top line looks longer than the bottom line', 'There looks to be a red square in the middle of the white wall', and so on. That is, instead of terms like 'cow', 'house', 'happy', we have, in the phenomenal use, terms like 'red', 'square', and 'longer than'…It is the analysis of this use which leads to sense-data. (Jackson, 1977, p. 33)

The phenomenal use suggests that the adjective following the appearance word refers to a phenomenal quality. In this sense, sensible qualities are phenomenal qualities which are attributed to a perceiver's inner experience. Notice that this phenomenal use of appearance

words is purely philosophical. In ordinary use, what follows "appear" always describes the ordinary objects, though it may sometimes fail to apply to them.

Some contemporary philosophers appeal to Chisholm's distinction between the comparative and non-comparative use of appearance words, identifying the phenomenal use with the non-comparative use (Byrne, 2009). If "appear" is used comparatively, then that "Something X appears F to someone" implies that "X appears like F-things to someone". By contrast, the non-comparative use does not have this implication (Chisholm, 1957, p. 45). The appeal to Chisholm's view is to defend the phenomenal use and thereby to justify the motivation of ascribing sensible qualities to one's experience. I shall discuss the consequence of the phenomenal use in the next subsection. And in the next chapter, I shall point out Byrne's misinterpretation on Chisholm, and that the non-comparative use does not amount to the phenomenal use.

3.4.2 Phenomenal qualities and inconsistency

Granted that there is a phenomenal use of appearance words and that, sensible qualities are phenomenal qualities, I argue that the argument from illusion is either inconsistent or trivial.

Recall the Phenomenal Principle: "If there sensibly appears to a subject to be something which possesses a particular sensible quality, then there is something of which the subject is aware which does possess that sensible quality". And also recall premise 1 of the argument: "In some cases of perception, physical objects appear other than they actually are—that is, they appear to possess sensible qualities that they do not actually possess." Both statements involve appearance words, which should be used in the same way.

However, premise 1 is supposed to be true from the naïve realist's point of view. This should be uncontroversial. If premise 1 is so understood, then the sensible quality that the ordinary

object appears to have cannot be a phenomenal quality, since naïve realists do not believe that an ordinary object can have phenomenal qualities which are supposedly ascribed to experiences. Instead, they believe that sensible qualities are possessed by ordinary objects. Thus, the use of appearance words in premise 1 cannot be the phenomenal use; it might mean that the subject is not sure whether the ordinary object indeed has the sensible quality, or she knows that the ordinary object is not as it appears to be. For example, suppose that a white wall is bathed in blue light. If the subject does not know the wall is white and does not notice the blue light, then she would not say "the wall appears blue to me" if someone asks her to describe what she sees. Instead, she will say "the wall is blue" although it is a wrong description. However, suppose that she finds that her right hand also looks blue. Then she might become suspicious and withdraw her previous description. She might then say, "the wall appears blue, but I'm not sure it really is." If she knows that the white wall is bathed in blue light, then she might say "the wall appears blue, but in fact it is white." This is how a naïve realist uses appearance words.

Sense-datum theorists might ask, "why cannot an ordinary object appear to have a phenomenal quality to a subject? Doesn't an ordinary object have that look (e.g. looks red and round)? Isn't a naïve realist aware of the same thing as a sense-datum theorist?"

No one denies that an ordinary object looks the same way to both sense-datum theorists and naïve realists in the same circumstance. Nonetheless, a naïve realist will say that what he is aware of is a sensible quality which an ordinary object has or exists by itself (e.g. a rainbow). The subject might be wrong about whether or not the ordinary object has that sensible quality—this is why he uses the word "appear"—but he is not wrong about the sensible quality not being a phenomenal quality, unless he has made a mistake about the object he perceived; namely, unless the object is not ordinarily perceived object.

Therefore, the right way of understanding premise 1 is this. First, sensible qualities are attributed to ordinary objects. Second, appearance words have the ordinary use I mentioned above; that is, only if the subject is suspicious or knows something is wrong with the appearance, is it right for her to say that something appears F to her. Thus, the use of appearance words is related to some epistemic state (e.g. suspicions, knowledge).

Admittedly, an ordinary object appears differently if it is presented to a subject in different perspectives or circumstances. It is harmless to say that an ordinary object has different appearances. We should stop here since a further claim that these appearances are subjective experiences or sense-data is metaphysically unnecessary.

To secure the validity of the argument, appearance words in the Phenomenal Principle should be used in the same way as they are used in premise 1. The principle then becomes unsound. For example, a tomato can appear black to me, since it is presented to me in this way, and that it has this appearance in these circumstances is an objective fact. From the above fact, the inference to the existence of subjective black thing is not guaranteed. As Austin described the submerged stick case,

> Well now: does the stick 'look bent' to begin with? I think we can agree that it does, we have no better way of describing it…it may be said to look rather like a bent stick partly immersed in water. After all, we can't help seeing the water the stick is partly immersed in…What is wrong, what is even faintly surprising, in the idea of a stick's being straight but looking bent sometimes? (Austin, 1962, p. 29)

Austin does not think that there is any problem to use an expression such as "looks bent" to describe how a straight stick appears to a subject. The problem of the Phenomenal Principle is that sense-datum theorists insist on the phenomenal use; that is, they have already presupposed that the term "appears F" attributes a phenomenal quality to a subject's experience. This use of appearance words is not consistent with the use of appearance words in premise 1. Therefore, if the term "appear" is used in the Phenomenal Principle in the same way as it is used in premise

1, then the principle is not sound; while if sense-datum theorists concede the epistemic use in premise 1 but retain a phenomenal use in the Phenomenal Principle, then the whole argument will become invalid, due to the ambiguity of the term "appear".

Moreover, conceding phenomenal qualities and the phenomenal use leads to another problem for the sense-datum theory. The purpose of the principle is to reach a conclusion that a sensible quality can be instantiated by something other than an ordinary object. However, it will be difficult to explain illusory cases like the Müller-Lyer or the checker shadow illusion.

Consider the Müller-Lyer illusion first. Because of the direction of the arrowheads, one line looks longer than the other. According to the sense-datum theory, this feature is instantiated by a sense-datum. Now let us remove the arrowheads. These two lines look equal in length. Again, a sense-datum theorist has to concede that the equality is also instantiated by a sense-datum. So if the object of perception were a sense-datum, how could it have a pair of contradictory qualities?

Likewise, in the checker shadow illusion, two separate squares look to have different colours—one looks white and one looks grey—because of a nearby cylinder. If a monochromatic background were superimposed, then you would see that they actually have the same colour. Sense-datum theorists need hold that the whiteness is instantiated by a sense-datum M and later is instantiated by another sense-datum N, although M and N are located at the same place and remain intact. They cannot claim that M and N are the same sense-datum since sense-data are supposed to be as they appear, while M and N have different appearances.[19]

[19] This object came from a delighted conversation with Hanoch Ben-Yami.

How can sense-datum theorists cope with this problem? They might bite the bullet: the subject is indeed aware of two sense-data in both the Müller-Lyer and the checker shadow illusions. This move conflicts with our intuition, since it is intuitive that only one object is perceived. Or she may contend that the subject is aware of one sense-datum and the different sensible qualities perceived should be explained by the environmental factors (the arrowheads and the cylinder, respectively). This move for one thing will generate a parallel argument for a second-order sense-datum; for another, if appealing to the environmental factors works, then there is no reason to reject naïve realism, because naïve realists can use the same strategy. Neither move is satisfactory for the sense-datum theory.

Conclusion

I have argued that the traditionally formulated argument from illusion is invalid. The Uniqueness can make the argument valid, but it is difficult to defend this assumption. For it is possible for a subject to be aware of a sense-datum as well as of the corresponding ordinary object in illusion. I discussed French and Walters's argument against the Uniqueness but object to their assumption of transparency of a sense-datum, which is as nonsensical as their opponents' assumption, namely that a colour sense-datum is opaque. Moreover, I argued with an analogy that even if the assumption of opacity is granted, it is still possible for a subject to perceive the ordinary object. In fact, if a sense-datum is viewed as an object of perception, the Uniqueness must be rejected because otherwise, in illusion there are no veridical elements left. This means that the distinction between illusion and hallucination disappears. Thus, if sense-data are objects of perception and sense-datum theorists want a coherent explanation of various phenomena of illusion, then the Uniqueness must be rejected. The consequence of it is that an ordinary object can also be the object of perception.

I also have argued that the crucial Phenomenal Principle is problematic. I clarified the use of appearance words. I criticized the popular view that there is a phenomenal use. However, as I argued, if the phenomenal use is adopted, the whole argument either becomes invalid, since it would be difficult to reconcile with a supposedly realist's reading of premise 1; or the whole argument would become trivial, since the phenomenal use of the appearance words in premise 1 would presuppose the falsity of naïve realism. Based on the above considerations, I conclude that the argument from illusion fails to reject naïve realism.

In the next chapter, I shall discuss the argument from accuracy for representationalism. I shall provide a counterargument based on the use of appearance words.

4. Propositional intentionalism and the argument from accuracy

4.1 Introduction

Propositional intentionalists (or representationalists)[20] claim that perceptual experience is a propositional attitude and that, like beliefs and thoughts, it has representational content (Byrne, 2009; Schellenberg, 2011; Searle, 1983; etc.). Its main positive motivation comes from the intuition that perceptual experience can be evaluated to be either accurate or inaccurate: if the perceived thing is the way it seems to be, then the experience is accurate; otherwise, it is inaccurate. Therefore, perceptual experience must be *contentful* so that it can be evaluated.

Some representationalists like comparing perceptual experience with beliefs. Beliefs have representational content which is the truth-bearer, with which a belief can be evaluated to be true or false. Consider the belief that Van Gogh was a Dutch painter. This belief can be made true by some facts, such as that Van Gogh was born in the Netherlands and became a famous painter, or simply that Van Gogh was a Dutch painter. According to representationalism, we can "read" the conditions of satisfaction off a belief in the sense that once we know what a belief is, we know its conditions of satisfaction. Similarly, they argue that we can read off the experience its conditions of accuracy, which gives it a representational content. In this sense, the argument from accuracy—reaching the conclusion of the existence of representational content based on the accuracy condition—is a transcendental argument for representationalism,

[20] This chapter mainly discusses propositional intentionalism. Other non-propositional intentionalisms are not the concern of this chapter. I interchangeably use the terms "representationalism" and "intentionalism".

namely the existence of representational content explains how the evaluation of accuracy is possible.

A closely related motivation is the response to the discrepancy between perceptual experience and other cognitive states related to perceptual illusion. In many illusory cases, perceptual experience persistently represents a thing in a certain way, but the subject's other cognitive states represent the thing in a different way. For example, one knows that the lines are equal in the Müller-Lyer illusion, but the lines persistently look to have different length. Representationalism can nicely explain such discrepancy: the subject visually experiences that the lines are unequal yet still believes that they are equal. A perceptual illusion thus is a case of inaccuracy of perceptual experience.

My aim, in this chapter, is to rebut the argument from accuracy so that undermine the main argument for propositional representationalism. I mainly focus on the claim that representational content can be 'read off' from a certain way that a thing *looks* to a subject, which I argue must fail.

The chapter proceeds as follows. In section 4.2, I criticize Schellenberg's version of the argument from accuracy and formulate a corrected version. In section 4.3, I lay out Charles Travis' objection to the argument from accuracy (2013, pp. 23–58). His basic idea is that representational content cannot be read off from the way a thing looks to the subject because looks either do not decide any particular representational content, or they do not make the content available to the subject. Section 4.4 is devoted to expounding Roderick Chisholm's conceptions of the comparative and noncomparative uses of appearance words (1957); I also show that the noncomparative use, which Alex Byrne (2009) and Susanna Schellenberg (2011) exploit to avoid Travis' objection, is problematic. In sections 4.5 and 4.6, I elaborate Byrne's argument and demonstrate how he misunderstands both Chisholm and Travis. In section 4.7, I

put aside Byrne's misinterpretations and raise a further objection to his response based on his own conception of distinctive visual characteristics.

4.2 The argument from accuracy stated and clarified

In this section, I shall first state and discuss Susanna Schellenberg's problematic formulation of the argument from accuracy. I shall then reconstruct the argument in a way which contrasts it with Schellenberg's version. I discuss her argument for two reasons. One is to make the argument from accuracy clearer through the criticism of Schellenberg's version and comparison with it; the other is simply to reveal her puzzling but influential formulation. Her argument is quoted as below,

> P1: If a subject is perceptually related to the world (and not suffering from blindsight etc.), then she is aware of the world.
>
> P2: If a subject is aware of the world, then the world seems a certain way to her.
>
> P3: If the world seems a certain way to her, then she has experience with content C, where C corresponds to the way the world seems to her.
>
> Conclusion 1: If a subject is perceptually related to the world (and not suffering from blindsight etc.), then she has experience with content C, where C corresponds to the way the world seems to her.
>
> P4: The world is either the way it seems to her or it is different from the way it seems to her.
>
> P5: If a subject has experience with content C, then C is either accurate (if the world is the way it seems to her) or inaccurate (if the world is not the way it seems to her)
>
> Conclusion 2: If a subject is perceptually related to the world (and not suffering from blindsight etc.), then the content of her experience is either accurate or inaccurate. (Schellenberg, 2011, pp. 718–719)

Schellenberg's argument is quite puzzling, since it has the feeling of having the dialectic backwards: the supposed conclusion should have been Conclusion 1, and the P4 should have been a premise for Conclusion 1. For usually the condition of accuracy (P4) is supposed to support the claim that perceptual experience has content. Yet in Schellenberg's argument, it goes in the opposite direction, namely the claim that perceptual experience has content is used

to support the claim that perceptual experience can be accurate or inaccurate rather than the other way around. In this sense, Schellenberg's argument does not fit well with the spirit of the argument from accuracy. I shall reconstruct the argument from accuracy in a way which contrasts it with her puzzling formulation:

> Q1: When a subject perceives a thing, the thing appears a certain way to the subject.
>
> Q2: A thing is either the way it appears to the subject or it is different from the way it appears to her.
>
> Q3: If the thing is the way it appears to her, then the perceptual experience is accurate. Otherwise, it is inaccurate.
>
> Q4: If perceptual experience has an accuracy condition, then it has content.
>
> Q5: Therefore, perceptual experience has content.

Through this reconstruction, the advocators can reach the desired conclusion from appearance via the accuracy condition. Note that the appearance statement—a thing appears a certain way to a subject—describes perceptual experience. Otherwise, this argument will be invalid.

4.3 Travis' criticism: 'visual look' and 'thinkable look'

Premises Q1 and Q4 together imply that representational content can be read off from a certain way that a thing *looks* to the subject. That is to say, if visual experience has content, the content must be formed according to the visual experience. In Travis' terms, "If such content is looks-indexed, then things looking as they do on a given occasion must fix what representational content experience then has" (2013, p. 36). For example, from the visual experience, 'the tomato looks red and bulgy', the content <The tomato is red and bulgy> can be read off. Travis denies this, based on his understanding of the term "look".

Travis considers two notions of *look*. The first he labels "visual looks" because the look which something has is determined merely by its visual effects, which are in turn determined by the environmental conditions, perspective, suitable visual equipment, etc. 'Visual looks' is

specified by the expression "something looks thus-and-so, or like such-and-such" (C. Travis, 2013, p. 36). For example, Pia looks like her sister (Travis' example); the tomato looks red and bulgy; the wax statue exhibited in the museum looks to be made of wood.

The second notion of *look* is labelled "thinkable looks" and this look is specified by the expression "it looks as if something is such-and-such". "[thinkable look] really speaks of a form of thought, or judgement". 'Looks like' takes a sentential object or a proposition which describes a thought, or a judgement, based on visual evidence (visual looks). In some cases, "thinkable looks" may only imply an uncertain thought, for example, it looks like that painting is a Vermeer (Travis' example). The subject who makes this statement may be an amateur painter; he finds the colour, light, and technique of painting alike to Vermeer, but is still not certain about it. In some other cases, the expression involved "thinkable looks" makes affirmative thought with a simile, for example, it looks as if the clouds are horses, in which the subject is certain about her judgement. In short, the central point is that the expression involved "thinkable looks" does not express a visual, or perceptual awareness but a form of thought, or judgement.

Since the following debate is centred around "visual looks", interpreted by Byrne (2009) and Schellenberg (2011) as comparative use of appearance words, I shall not explore 'thinkable looks'.

Why can representationalists not read off content from visual experience if "looks" in the statement means "visual looks"? Travis argues that the way a thing looks is sensitive to occasions. "For whether X looks like Y is very liable to depend on how comparisons are made…on some understanding or other, [Pia] looks (just) like any of indefinitely many different things" (2013, p. 36). His point is that because the way a thing looks depends on the comparison that the subject makes on a given occasion, there are various ways a thing can look

to the subject. Hence, no particular content could be read off from visual experience. It can be the case that "those various ways move in mutually exclusive directions" (C. Travis, 2013, p. 37). That is to say, if representational content could be read off from visual experience, then exclusive content could be read off. For example, the wax statue in the museum bathed in a warm light might at the same time look both wooden and waxy to the subject. Admittedly, it is not a problem that a wax statue *looks* both wooden and waxy. The problem lies in the fact that representational content, especially when it is understood as a proposition, cannot be both accurate (the statue is the way it seems to be) and inaccurate (the statue is not the way it seems to be). It is like a belief which cannot be both true and false.[21]

To sum up: visual experience, as Travis argues, cannot fix representational content due to the occasion-sensitivity related to visual looks. Mutually exclusive contents might be read off from various visual looks at the same time. So in mutually-exclusive-contents cases, experience would be both accurate and inaccurate at the same time; and if content is a proposition as many intentionalists hold, the proposition is both true and false, which is unacceptable. Therefore, Travis rejects the claim that representational content can be read off from a certain way that a thing *looks* to the subject, namely Q3 should be rejected.

4.4 Chisholm's noncomparative use of appearance words

Byrne (2009) and Schellenberg (2011) invoke Chisholm's noncomparative use of appearance words to reject Travis' challenge. They identify Travis' notion of "visual looks" with Chisholm's comparative use. According to Chisholm,

> When we use appear[ance] words comparatively, the locution

[21] Non-propositional intentionalism, say, Tim Crane's view (2009), may be immune to Travis' objection.

> x appears to S to be…
>
> and its variants may be interpreted as comparing x with those things which have the characteristic that x is said to appear to have. A more explicit rendering of such locutions, therefore, would be something like this:
>
> x appears to S in the way in which things that are…appear under conditions which are…(1957, p. 45)

The essential point is that if "appears" is used comparatively, the complex expression "x appears F" means that x appears like F-things appear under certain conditions. Take Chisholm's own example, "The mountainside looks red": this might mean that the mountainside looks the way red things look in daylight or that the mountainside looks the way red things are expected to look under present conditions, etc. The conditions can be variously described depending on the context. The point of the comparative use is to translate appearance statements taking the form "x appears so-and-so" into sentences referring to things which *are* so-and-so.

The non-comparative use of the appearance expression "appears F", by contrast, is understood independently of F-things' appearing under certain conditions. Given the non-comparative use, appearance statements cannot be translated into sentences referring to things which are so-and-so. As a result, the statement, "The mountainside looks red", does not entail the statement, say, "The mountainside looks the way red things look in daylight".

Besides the negative characterization, Chisholm also provides a positive criterion for the noncomparative use in the end of the chapter where he introduces different uses of appearance words:

> More generally, when we take the locution 'x appears so-and-so to S' noncomparatively, we can say that the subject S, referred to in such a statement, can know whether the statement is true even if he knows nothing about things which are so-and-so. (Chisholm, 1957, p. 53)

According to this criterion, knowing how an F-thing appears under certain conditions is no longer a necessary condition for understanding a sentence involving "appears F". Instead, noncomparative use implies that the subject's present experience suffices for her to know the truth of "x appears so-and-so".

Chisholm, in that chapter, also tries to persuade readers to charitably accept the noncomparative use on the basis of understanding traditional empiricism. He argues that this use is closely related to the empiricist tradition and it is even presupposed by empiricism, which according to him holds the following:

> If there is a predicate 'so-and-so', which is commonly applied, both to ways of appearing and to the properties of things, as 'red' is applied both to apples and to the way such apples generally look, then the property use of 'so-and-so' may be defined in terms of 'appears so-and-so'. (Chisholm, 1957, p. 50)

The quote indicates that 'appears so-and-so' is taken to be conceptually prior to 'so-and-so' by empiricists. 'Red', for instance, should be defined by 'appears red' rather than the other way around. Apparently, the empiricist view on the relationship between 'appears so-and-so' and 'so-and-so' is inconsistent with the comparative use which regards 'so-and-so' to be conceptually prior. For the comparative use implies the thought that we understand 'x appears F' in terms of how F-things appear under certain conditions.

Furthermore, Chisholm appeals to an analogy of two possible uses of the expression "speaks French" to illustrate the noncomparative use. We can either define "speaks French" as speaking the language spoken by the majority of people living in the geographic area that is France (i.e. Frenchmen), or we can define it in terms of particular vocabularies and grammars. If we define it in the former way, then the statement:

1. John speaks French

entails the statement

2. John speaks the language spoken by most Frenchmen.(Chisholm, 1957, p. 52)

By contrast, if we define it in the latter way, then (1) does not entail (2). In addition, a speaker could know (1) without knowing (2)—she may not know anything about the majority of people living in France or their linguistic activities. But as long as she knows that the language which John speaks has certain vocabularies and grammars, she knows that John speaks French.

The analogy is meant to carry over to the appearance words. If "appears F" is used comparatively, then a subject cannot claim "O appears F to me" without knowing how F-things look under certain conditions. But just like "speak French" can be defined without any reference to Frenchmen, Chisholm thinks that "appears F" can be defined or used without any reference to F-things. Imagine that you have an experience of a thing which you know it is red in daylight. The object looks a certain way and you ostensively define that way of looking as looking red. Chisholm thinks that you can then use the expression "looks red" to pick out that appearance without prior knowing anything about how red things look. All you know is a certain appearance of the object.

It is worth noting that Chisholm attributes appearances that "appears F" picks out to the object in question. He claims that "The animal looks centaurian" does not attribute anything to the "look of the animal". Instead, it attributes something to that animal (1957, pp. 115–116). That is to say, the complex expressions such as "looks red", "looks centaurian" and the like pick out appearances of objects. In fact, according to Chisholm, no matter whether an appearance expression is used comparatively or noncomparatively, the expression always attributes something to objects. Let us call this view *appearance objectivism*. The following text presents this view:

> Rather, the complex expressions consisting of the verb followed by its modifier—the expressions "looks centaurian" and "appear green"—attribute something to what the noun, or subject of the verb, refers to. These complex expressions, whether we take them *comparatively or noncomparatively*, might thus be replaced by single words—

> for example, by "lookscentaurian" and "appearsgreen." (Chisholm, 1957, p. 116; italics added)

On this account, "looks red" in the statement "The mountainside looks red" picks out an appearance of the mountainside, though the mountainside may be yellow in daylight. Appearance objectivism has an interesting consequence. It seems inconsistent with traditional empiricism. For empiricists attribute appearances to the subject; they are what the subject has in mind. In this sense, these empiricists hold a view which can be called *appearance subjectivism*. For example, Hylas is persuaded by Philonous (backed by Bishop George Berkeley), "I must own, Philonous, those colours are not really in the clouds as they seem to be at this distance. They are only apparent colours" (Berkeley, 1713, p. 23); Hume also writes in support of appearance subjectivism, "Many of the impressions of colour, sound, etc., are confest to be nothing but internal existences, and to arise from causes, which no way resemble them" (1739, 1.4.4.4). It is thus obvious that appearance objectivism is incompatible with traditional empiricism.

On appearance subjectivism, appearance statements attribute appearances to experiences. In the contemporary philosophical jargon, the attributed appearance is constituted or determined by qualia, some intrinsic properties of experience (Block, 2004; Jackson, 1982). Indeed, on this view, there is a particular use of appearance words corresponding to this subjective view, namely, the phenomenal use of appearance words. I have argued in 3.4 that the phenomenal use either makes the argument from illusion inconsistent or makes it trivial. Here I will show that appearance subjectivism is incoherent.

I provide two short arguments. First, suppose that appearance expressions completely or essentially describe inner experiences, for example, "Looks red" describes the phenomenal character of the subject's experience of something rather than the thing itself. In effect, 'S' in the locution "o looks F to S" can only refer to *me*—the speaker. That is, I cannot say that "o

looks F to Joe" (Supposing I am not Joe) or Joe cannot say that "o looks F to John". This is because others cannot know whether Joe or John has such an experience or not, given that the locution merely describes the inner experience. Or to put it another way, if the phenomenal use works, we will in principle not know what one means when one claims, "o looks F to me".

One may argue that human physiological configurations are alike, so are human minds. Because of this, I can "infer" that "o looks F to Joe" from "o looks F to me". This line of thought is not convincing. Ordinarily, appearance statements say how a thing strikes the subject. "The mountainside looks red to me" says that the mountain strikes me as red. Appearance statements always presuppose that appearances belong to objects. If I claim that Joe looks Scandinavian, I explain this by pointing to a Scandinavian and to specific characteristics she has and saying that these characteristics of Joe's captured my attention. I am using objectively visual characteristics to explain how Joe looks to me. Therefore, when I say "o looks F to me" I presuppose that o has an objective look F; the phenomenal use of appearance words cannot make sense without presupposing a non-phenomenal use. Accordingly, appearance subjectivism cannot make sense without presupposing appearance objectivism. But once appearance objectivism is in place it will be unnecessary and phenomenologically unjustified to suppose appearance subjectivism, since only one appearance is given to the subject.

As I understand representationalism, appearance subjectivism is not their problem because most representationalists do not believe that qualia are intrinsic to experience. But if any representationalists also believe in appearance subjectivism, they will face another difficulty. That is, how can the experience be inaccurate, given that the content would be about subjective appearances? For example, "the mountainside looks red". The content is <The mountainside is red>

Let us go back to Chisholm's argument for non-comparative use. I think that Chisholm's defence of noncomparative use is problematic. First, the analogy does not work. The French language is a complex concept and thus can be characterized in diverse ways such as the characterization without appealing to Frenchmen. By contrast, the concept of F conveyed by "appears F" is usually much simpler. We do need to appeal to F-things to understand "appears F". Take Chisholm's own example "looks centaurian". Centaurian is a complex concept; it can be characterized in terms of, for instance, having a half-man-half-horse appearance with wings. Now a question arises: Does this characterization appeals to the ordinary centaurian to characterize "looks centaurian"? On the one hand, it does not because the term "ordinary centaurian" does not appear in the above characterization; namely the characterization does not claim that "looks centaurian" means "having an ordinary centaurian look under certain conditions". On the other hand, the above characterization does appeal to the ordinary centaurian because, that having 'a half-man-half-horse appearance with wings' amounts to 'having an ordinary centaurian look'. Hence, defining what is "appears F" need appeal to what an F-thing appears under certain conditions.

Moreover, suppose that F is not as complex as "speaks French", or even less complex than "centaurian", and let F stand for "red". The analogy now does not apply at all. 'Looks red' is such a basic and simple concept that without invoking the comparative use, the only left option is the ostensive definition. However, it is obvious that defining "speaks French" in terms of vocabularies and grammars is not an ostensive definition.

A more general question is whether Chisholm's noncomparative use involves any ostensive definition. He thinks that when the appearance word is used noncomparatively the subject can know the truth of the appearance statement "x appears F" without knowing how an ordinary F-thing appears. This line of thought seems to imply that the subject ostensively defines "appears

F" in the appearance statement. Let us consider the consequence if the noncomparative use implies an ostensive definition. Imagine a scenario where you ostensively define "looks red" of an object. You then use the expression "looks red" to pick out that appearance without knowing anything about how red things look. All you know is that this thing has a certain look and you use the expression to refer to that way of looking. It is dubious whether in such a scenario the subject is defining "appears F" since we also ostensively define the concept of red in this way. Let us add something new to the previous scenario. Suppose that Jackson's poor Mary is just released and stands by you. When you point at the mountainside and assert "this looks red", does she know from then on what "looks red" means? Wait! She actually begins to know what "red" means, because she already knew that red things normally look red and other coloured things can look red under certain conditions. It means that to understand the meaning of "appears F" one must have already understood the meaning of "F".

Imagine a more extreme scenario: you and Mary look at the mountainside under a very strange light condition. You and Mary never saw this colour before. You randomly pick up a three-letter word 'sed' and assert "this looks sed". Your ostensive definition is unfortunately inappropriate. For if the colour is so peculiar the new concept—sed—presumably describes the colour under such peculiar light condition, namely this peculiar light is essentially connected to the concept sed. Therefore, your assertion— "this looks sed"—is inappropriate; what you should have asserted is that "this *is* sed".

Now I turn to my criticism of Chisholm's non-ostensive definition of the noncomparative use. He writes, "if the term 'appears' in the locution 'x appears so-and-so to S' is used noncomparatively, then S, referred to in such a statement, can know whether the statement is true even if he knows nothing about ordinarily so-and-so things in general" (Chisholm, 1957, p. 53). This definition is indeed problematic. I cannot know whether the statement "o looks F

to me" is true or false, if I know nothing about the way an F ordinarily looks. This is because without knowing how an F ordinarily looks, I cannot form a proper concept of what an F is. And without grasping the concept, I cannot know whether a statement involving this concept is true or false. Suppose that I have never seen a Scandinavian woman and have also never come across any description of how they are typically portrayed in movies, books or elsewhere. As such, I would not know the stereotypical features of Scandinavian women. Suppose that Joe has a Scandinavian look: she has straight blond hair, a small nose, pale skin, etc. One day I meet her at a philosophy of perception class. Certainly, she looks Scandinavian. But I do not know whether the statement "Joe looks Scandinavian" is true or false, precisely because I do not possess the concept of Scandinavian look. I cannot conceptually relate the term 'Scandinavian' to Joe's look. Only after someone tells me (e.g. while pointing to Joe) "this is a Scandinavian look", would I begin to know the truth-value of "Joe looks Scandinavian". Grasping certain concepts is necessary for acquiring knowledge involving the relevant concepts. And knowing what an F ordinarily looks like is necessary for grasping the concept of an F. Therefore, it seems impossible to know the truth-value of a statement involving 'F' without knowing how an F ordinarily looks. Thus, Chisholm's definition is problematic.

Again, the failure of this definition is independent of Chisholm's appearance objectivism. Although I do not know the truth of the statement "Joe looks Scandinavian", the statement itself is true, since looksScandinavian is Joe's objective appearance.

A brief summary of Chisholm's view on the comparative and noncomparative uses: most importantly, "appears F", no matter whether it is used comparatively or noncomparatively, attributes something to the object referred to in the appearance statement. In this sense, I labelled Chisholm's view *appearance objectivism*. Second, Chisholm tries to motivate the noncomparative use of appearance words by appealing to charitably understanding traditional

empiricism and the analogy of two ways of defining "speaks French". As I argued, both arguments face difficulties.

4.5 Byrne's conception of noncomparative use

Following Chisholm, Byrne also thinks that appearance words have a noncomparative use: "Plausibly, sometimes this phrase is used to convey a thing's distinctive visual appearance, not to make an epistemic or comparative claim." For example, "there is a distinctive centaurian 'visual Gestalt': centaurs have a certain kind of body hair, torso, colouring, gait, and so forth" (Byrne, 2009, p. 443). On Byrne's account, the noncomparative use tends to be associated with an object's distinctive visual features: the centaurian look is associated with a certain kind of body hair, colouring, gait, etc.; and a Scandinavian women's look is associated with straight blond hair, a small nose, pale skin, etc. Appealing to these distinctive "visual Gestalts", a definite representational content can be "read off" from the way a thing looks to the subject because the object in question is *always* presenting its distinctive feature to the subject. In Byrne's words, if o looks$_{nc}$ (the subscript expresses the noncomparative use) F to S then S exes, of o, that it is F*, where F* is either identical to F or the distinctive features related to F ('exes' stands for the perceptual attitude) (Byrne, 2009, p. 443). Introducing F* allows representationalists to claim that the read-off content possibly does not include Fness. For example, from the appearance statement "Joe looks Scandinavian" the read-off content can be formulated without the predicate "Scandinavian" but only with "straight blond hair", "a small nose", etc.

How can this noncomparative use help avoid Travis's objection as intended? Travis's objection, based on the notion of 'visual look', accuses representationalists of being unable to read off the representational content from visual looks. Byrne interprets the notion of visual look as Chisholm's comparative use. Now that there is supposed to be a noncomparative use available,

which is overlooked by Travis, Travis's objection is at least incomplete, leaving a possibility for representationalists to claim that representational content can be read off experience where the appearance word is used noncomparatively. Particularly, the noncomparative use can convey a distinctive appearance of the object in question, from which the content can be read off. Therefore, Travis' objection is problematic.

Schellenberg's (2011, p. 722) view is very similar to Byrne's: she thinks that appearance words, used noncomparatively, pick out or refer to particulars, such as objects or property-instances, and no comparison to other particulars is made. Therefore, the way a thing looks fixes the content of experience.

I first criticize Byrne's misunderstanding of Chisholm's definition of the noncomparative use of appearance words. I then move in the following one to completely reject Byrne's response.

4.6 Some comments on Byrne's response

From the above exposition, following Chisholm, Byrne also claims that the noncomparative use attributes something (e.g., a distinctive visual appearance) to objects. This is the key to his response to Travis' objection, because he thinks that the distinctive visual appearance can fix a particular representational content. By contrast, Travis' visual look, which is interpreted as expressed by Chisholm's comparative use, is unable to fix a particular representational content. However, Byrne does not explain why the comparative use of appearance words cannot refer to a distinctive visual appearance. He seems to assume that the difference between the comparative use and the noncomparative use lies in whether the appearance expression "appears F" picks out a distinctive visual feature. If so, he misunderstands Chisholm's point. As I interpreted Chisholm above, he holds *appearance objectivism* that appearances should be attributed to objects regardless of the use of appearance words; the distinction between

comparative use and noncomparative use is a semantic distinction, which concerns how we use appearance words in different contexts and what they mean in different contexts. For example, when I claim that Joe looks Scandinavian to me, I attribute a distinctive visual appearance to Joe, because she looks to me like a typical Scandinavian woman ordinarily looks to me. Thus, the comparative use is consistent with appearance objectivism, and is also consistent with Byrne's own suggestion that appearance expression conveys a thing's distinctive visual feature. Hence, Byrne's whole strategy goes wrong. First, he misunderstands Chisholm and mistakenly believes that only noncomparative use can convey a thing's distinctive visual feature from which a particular representational content is read off. Second, he also misconceives of the noncomparative use as an alternative to Travis' visual look, and the latter is interpreted as what is expressed by Chisholm's comparative use. In other words, appearance expression used comparatively, according to Byrne, cannot convey a thing's distinctive visual feature. Otherwise, the noncomparative use would not be unique in responding to Travis' objection.

Byrne's astray response is based on his misdiagnosis of Travis' objection and misinterpretation on Chisholm's account on appearance words. Byrne mistakenly relates visual look to the comparative use of appearance words and identifies the comparative use as the ultimate problem for being unable to fix representational content. Based on this misdiagnosis, he puts forward the solution by appealing to Chisholm's noncomparative use. The central idea of his argument is that the noncomparative use, as an alternative to the comparative use, picks out objects' distinctive appearance which is able to fix representational content. However, as I argued above, the comparative use also picks out objects' distinctive appearances according to a proper understanding of Chisholm. That is, if a distinctive appearance can fix representational content as Byrne suggests, then Travis' 'visual looks' interpreted as Chisholm's comparative use, should have also been able to fix representational content too. That is to say, the comparative use should not be blamed.

Does it mean that Travis' argument is dissolved—the appearance expression picks out the distinctive appearance which fixes representational content? Of course not. Travis' object does not rely on the comparative use. Byrne also misunderstands Travis' 'visual look'.

Travis characterizes 'visual looks' independently of Chisholm's distinction between the comparative use and the noncomparative use. Simply put, Travis focuses on the nature of visual looks, on how the look is produced and its relation to the given conditions, which is a metaphysical account. He writes,

> Whether something has the look is settled simply by its visual effect. It has the look, perhaps, only under given conditions for producing that effect—only when viewed *thus* (such as from a certain angle). The look may be detectable only by one which suitable visual equipment. But to have the look (viewed *thus*) is to have it *full stop*—independent of how its so looking bears on whether to take it to be any given thing it thus looks *like*. (C. Travis, 2013, p. 35)

In this passage, Travis describes 'visual looks' of an object as objective: it is determined by its visual effect under certain conditions; and having a visual look is independent of whether the look is taken to be compared to things that have the look. Travis' account on 'visual look' is thus metaphysical. Travis is misinterpreted by both Byrne and Schellenberg perhaps because he also writes, "For whether X looks *like* Y is very liable to depend on how *comparisons* are made…on some understanding or other, she looks (just) *like* any of indefinitely many different things" (2013; italics added). In this passage, the terms "looks like" and "comparisons" are used. But he only means that visual looks are occasion-sensitive, and an object may have different looks viewed differently. He does not refer to Chisholm's sense of comparative use, because the comparative use, according to Chisholm, is a way of understanding the meaning of appearance phrases such as "looks centeurian", "looks red" and so forth, where "looks F" is understood in terms of how an F thing looks under certain conditions. Indeed, both the comparative use and the noncomparative one are concerned with the meaning or the use of appearance words. Chisholm's appearance objectivism is an addition to his semantic discussion.

As I analysed in §4.4, both uses attribute sensible qualities to the perceived objects. If my interpretations on Travis and Chisholm are right, then Byrne's interpretations on both are wrong.

To sum up: First, Byrne thinks that the comparative use does not attribute perceptual characteristics to the perceived object, which is not Chisholm's view; second, Byrne interprets Travis' 'visual look' as corresponding to Chisholm's comparative use, which is also a mistake because 'visual look', on Travis' account, is independent of the (non)comparative use. Therefore, Byrne's solution, no matter whether it is true or false, is based on misinterpretations.

4.7 Does Byrne's solution work?

Putting Byrne's misinterpretations aside, let us consider whether his solution, based on "visual Gestalt", works. His central idea is that a distinctive visual gestalt conveyed by an appearance statement can fix representational content. For example, centaurs have a certain kind of body hair, torso, colouring, gait, and so forth. As such, if o looks F to S then S exes, of o, that it is F*, where F* is either F or the salient features related to F. Can this proposal, regardless of the noncomparative use, address Travis' objection? My answer is still no.

Byrne's proposal means to exclude various "read off" contents caused by occasion-sensitivity. He assumes that the seen object can only have one distinctive visual appearance and the distinctive visual appearance is only associated with one kind of thing. This assumption is false. Recall the wax statue exhibited in the museum bathed in a warm light. It looks both wooden and waxy to the subject at the same time. So the statue's distinctive appearance is associated with both wooden and waxy statues. It is not the case that the subject makes any comparison on a given occasion. Rather, the statue truly looks these ways, no matter who looks at it under

such viewing conditions. Hence, if the representational content is read off from a distinctive visual appearance, then in the statue's case a pair of mutually exclusive content arise. They are <The statue is wooden> and <The statue is waxy>. Given the definition of accuracy, one's visual experience of the statue would be both accurate and inaccurate. But it is unacceptable that visual experience is both accurate and inaccurate, just as it is unacceptable that a belief is both true and false. Therefore, the argument from accuracy fails.

One might contend that the wax statue might look$_{nc}$ waxy and wooden to the subject, but it does not follow that the subject exes of the statue, that it is both waxy and wooden. What registered into the content might not be mutually exclusive predicates. In the case of seeing the wax statue, what registered into the subject's representational content might be warmness, yellowness, smoothness, statue-shaped, etc. All those qualities are associated with both being waxy and being wooden. So, there is no exclusion in the representational content. The contention also seems to fit well with Byrne's view. He writes, "…perceptual content, if there is such a thing, goes with the ways things look when they look$_{nc}$F, which need not include Fness" (Byrne 2009, p. 443). In the wax statue case, Fness stands for waxiness and woodiness which need not be included in the perceptual content.

This response has two difficulties. First, in the statue's case, if only those associated predicates are registered into the subject's representational content, then the content would be like <the statue is warm, yellow, smooth>. It follows that the subject's visual experience at any rate will be evaluated to be true, since both being waxy and being wooden are associated with the same distinctive qualities expressed by predicates such as warm, yellow, smooth, statue-shaped, etc. However, if this is the case, the question—in which way the subject's experience represents the statue—has no answer or does not have a commonsensical answer, such as being waxy or being wooden, because the predicates 'waxy' and 'wooden' are not registered into the content.

We cannot even say "the subject's experience represents the statue to be waxy or to be wooden". Otherwise, such content could be read off according to representationalism. This consequence seems unacceptable for representationalists because they need to claim, "the subject's experience represents the statue to be waxy or to be wooden."

Second, Byrne's own reason for claiming that perceptual content need not include Fness seems inadequate. He writes,

> If a naked mole rat look$_{nc}$ old to S, then S exes, of the rat, that it is wrinkled, pink, etc. – not that it *is* old. In other words, naked mole rats can be as they look$_{nc}$ (wrinkled, pink, etc.) without *being* old (in principle, anyway). (Byrne, 2009, pp. 443–444)

It is true that a naked mole rat's looking$_{nc}$ old does not guarantee that it *is* old. This is one of the reasons for using appearance words. Namely, appearance words have the epistemic use: appearance provides evidence for believing or judging something is so-and-so. For example, one claims that the mountainside looks red. The appearance provides her with evidence to believe that is the case. But the claim does not imply that the mountainside is red or that one does believe that the mountainside is red. Appearance and reality may come apart. The mountainside might actually be golden. Hence, it is true that something can look some way but is not that way.

However, the possibility of the failure of the inference from 'looks' to 'be' does not explain why the subject's perceptual content does not (or need not) include Fness. Byrne seems to assume that whatever is included in the subject's perceptual content it is actualized. This assumption drives him to claim that the subject does not exes that the naked mole rat *is* old, though it looks$_{nc}$ old. But the assumption is false and also runs against representationalism, because representationalists allow the content to be inaccurate; if what is registered into the content always expresses something actual, then it would always be accurate. Therefore, the

reason why looking$_{nc}$ F does not entail being F does not support that the subject's perceptual content does (need) not include Fness.

To conclude this section, Travis' observation does not rely on a particular understanding of appearance words. If representational content can only be read off from a distinctive 'visual gestalt' as Byrne supposes, then for some cases the way things look still fails to fix the representational content. Therefore, Byrne's response does not work.

Conclusion

I have argued that Travis' objection or at least the revisionary Travisian objection to the argument from accuracy is convincing; namely, representational content cannot be read off from the way things look. I have rebutted a popular response from Byrne and Schellenberg who appeal to Chisholm's noncomparative use of appearance words to avoid Travis' objection. They not only misinterpret Chisholm's original conceptions of appearance words, but also misinterpret Travis' 'visual look'. I have also shown that apart from appearance objectivism, Chisholm's noncomparative use is also problematic. Moreover, as I argued in section §4.7, even putting aside Byrne's misinterpretations, his core argument based on distinctive visual feature of experience fails to convey fixed representational content. This is because some objects' distinctive visual features are associated with more than one kind of object; if representational content is read off from this distinctive visual feature, contrary contents can be read off. Therefore, the argument from accuracy should be rejected.

5. The phenomenological problem and intentionalism

5.1 Introduction

It is essential for any theory of perception to give an account of the sensory experience: why does something appear such and such? Adam Pautz calls it a phenomenological question: "what determines the phenomenology of [perceptual] experience?" (2007, p. 255). Naïve realists defend a commonsensical view on perception, namely, the subject perceives the object, its sensible qualities, the event it partakes in, etc. without any mental mediator (Allen, 2015; Brewer, 2011; Campbell, 2002, p. 38; M.G.F. Martin, 2004; Stoneham, 2008). Accordingly, the sensible qualities of the seen thing play an essential role in explaining the sensory experience.[22] For example, the sensory experience of seeing a banana on my desk—the banana looks yellow and crescent-shaped to me—is explained by the banana as well as its sensible qualities.

Intentionalists argue that a sensory experience is not explained by the seen thing and its sensible qualities but by a representational (intentional) content—how the experience represents the world to be (Byrne, 2001; Crane, 2009, 2013a; Dretske, 1995; Tye, 1995). They are partly motivated by abnormal perceptual experiences such as illusions and hallucinations. The main idea is that in illusion the subject has a sensory experience which do not fit with actual sensible qualities, and in hallucination there is no appropriate object and its qualities to explain the sensory experience. Representational content bestowed with the very notion of intentionality—

[22] Following the mainstream discussion, I also confine my discussion to vision.

directing at something which may not exist—can explain the sensory experience without appealing to the actual existence of the object and its qualities.

Intentionalists believe that the same account of abnormal cases should equally apply to perception because any perception can in principle has a subjectively indistinguishable hallucination, even its underlying neural activities can be reproduced in some way. Hence, if representational content is sufficient to explain the sensory experience accompanying a hallucination, it should be equally sufficient for perception. As a result, the seen thing and its sensible qualities become redundant in explaining the sensory experience accompanying perception. Therefore, naïve realism should be rejected.

In this chapter, I shall focus on two types of intentionalism, namely propositional intentionalism and phenomenological intentionalism, and explore the question: how does intentional content explain the sensory experience? My aim is to show that intentional content cannot explain the sensory experience. Intentionalism either slides back to the sense-datum theory, or fails to retain the so-called common kind assumption (Common Kind): whatever occurs when one is visually hallucinating something, it occurs also when one sees that thing.[23] I shall also show that both visual and hallucinatory experiences are not intentional.

The chapter proceeds as follows. In section 5.2, I discuss propositional intentionalism and its problems. In section 5.3, I turn to phenomenological intentionalism: §5.3.1 is devoted to Tim Crane's phenomenological intentionalism. In subsection 5.3.2, I explain why phenomenological intentionalists have difficulty in avoiding dubious ontological commitments, although they insist that intentional content represents the object in a certain way, which does

[23] See Michael Martin (2004).

not involve 'something'. In subsection 5.3.3, I explain why intentionalists provide an idle explanation for the phenomenological problem. In section 5.4, I argue that seeing are not intentional.

5.2 Propositional intentionalism and its problems

Just like the name 'propositional intentionalism' indicates, a representational content, according to this view, is a proposition, and a perceptual experience is a propositional attitude just like a belief or a thought (Byrne, 2001, 2009; J. R. Searle, 1983, p. 40). Related to the motivation of addressing abnormal cases, propositional intentionalism is also motivated by the conviction that a perceptual experience can be accurate or inaccurate. For example, a perceptual experience associated with illusion is inaccurate, because the representational content is different from the state of affairs of the representational object, while a perceptual experience associated with perception is accurate because the representational content conforms to the state of affairs of the representational object. Therefore, just like a belief needs a proposition to be the truth-bearer, something content-like is needed to be the accuracy-bearer of a perceptual experience. A proposition thereby becomes the natural candidate.[24]

Propositional intentionalism has difficulties in dealing with several issues. Suppose that a proposition is an abstract entity as it is usually thought of. It is thereby not a spatiotemporal entity. By contrast, a perceptual experience is a spatiotemporal event. How is it possible that a spatiotemporal event has a non-spatiotemporal content? Even if a spatiotemporal event has a non-spatiotemporal content, it is still difficult to understand how an abstract proposition explains a non-abstract sensory experience. For example, I see a yellow and crescent-shaped

[24] For the detailed discussion of the argument from accuracy see Chapter 4.

banana. A related proposition associated with my visual experience might be [the banana is yellow and crescent-shaped]. The proposition itself is neither yellow nor crescent-shaped; it at most *describes* my sensory experience rather than *explains* it. Therefore, propositional intentionalism fails to address the phenomenological problem.

One might contend that an occurrent thought is also a spatiotemporal event while its content is a proposition. There is no obvious difficulty in combining them, and to some extend the propositional content determines what the thought is. I do not want to dispute over propositional intentionalism about thought, but I want to point out that thought does not have the corresponding explanatory problem as perceptual experience does. Suppose that the content of an occurrent thought is a proposition. For example, I am thinking that [the banana on my desk is yellow and crescent-shaped]. The difference between this thought and the corresponding perceptual experience is that the former is not a sensory experience.[25] So there is no sensory feature of a thought to explain. It means that, unlike the case of perception, the lack of sensory features of a proposition does not pose any problem for explaining what a thought is.

Propositional intentionalists might advocate the Russellian conception of proposition to avoid this problem. A proposition in the Russellian sense is concrete; the components of a proposition are individuals and property-instances (Fitch, 2008). A proposition then is sufficient to explain the sensory experience in virtue of its components. This response may work for visual experience but not for visual hallucination. In seeing subjects see objects, property-instances, events, etc. These particulars, especially sensible qualities, as the components of a proposition can explain the sensory experience. By contrast, intentionalists deny the actual existence of

[25] Some argues that thought has cognitive phenomenology. See (Kriegel, 2011; Strawson, 2011).

these particular sensible qualities in hallucination, because an intentional object (property) does not *really* exist. Therefore, the Russellian conception of proposition cannot afford a unified explanation for sensory experiences accompanying seeing and visual hallucination as intentionalists promise.

Some intentionalists may advocate the Fregean sense of proposition, namely, a proposition is a complex of senses or abstract entities. The Fregean sense is usually understood as a concept or a function. I doubt that concepts or functions can explain the sensory experience in question, since they are also abstract. Arguably, when someone entertains the concept of red, she would not automatically experience anything red. This also reflects the difference between thought and perception; the latter involves sensory experience while the former does not.

The above brief objection can also apply to Susanna Schellenberg's gappy theory of perceptual experience. Schellenberg proposes that perceptual experience has the Fregean gappy *de re* modes of presentation. This philosophical jargon sounds intimidating. It means that perception takes the form of <MOP1(_o_), MOP2(_p_)> and hallucinations take the form of <MOP1(__), MOP2(__)> (o stands for an object and p stands for a property). In plain English, a visual experience presents both the object and its properties, while hallucinatory experience has the same presentational form but does not present any object or property. This is why the form of hallucination has empty brackets. This mode of presentation, according to her, can explain both the particularity of a perceptual experience and the subjective indistinguishability between perception and its counterpart hallucination. Specifically, the particularity is explained by the ordinary object and its properties (denoted by o and p), because they are particulars and distinguish the experience from the other experiences in terms of the very existence of themselves; and the subjective indistinguishability is explained by the same mode of presentation, namely the form (Schellenberg, 2010). However, it is not clear why the same

mode of presentation can explain the subjective indistinguishability.[26] Schellenberg seems to propose that entertaining the same concept (i.e. the same mode of presentation) suffices for the subjective indistinguishability (Schellenberg, 2010). This view is implausible because entertaining a sensory concept such as the concept of red cannot deliver a sensory experience. No matter how hard you think of a red tomato, your thought would be still disparate from your seeing of a red tomato. Therefore, Schellenberg's proposal fails. Indeed, other versions of propositional intentionalism which treat a proposition as an abstract entity or composed of abstract entities have the same problem as Schellenberg's.

There are other objections to propositional intentionalism. For example, Crane (2009) argues that we can negate a proposition, make a conjunction and a disjunction of two or more propositions, but we cannot do those operations to perceptual experiences. Moreover, a perceptual experience admits a degree of accuracy, but a proposition does not.

The problem of propositional intentionalism seems to boil down to the issue of how to characterise a proper conception of proposition to explain the sensory experience. But as David Lewis writes, "the conception we associate with the word 'proposition' may be something of a jumble of conflicting *desiderata*" (1986, p. 54). Propositional intentionalists are confronting this jumble.

Perhaps intentionalists should give up propositional intentionalism, and merely maintain that intentional content can be accurate or inaccurate. There are several merits to this minimal claim. My first objection can be avoided, since being accurate or inaccurate does not necessarily imply being abstract. To say that intentional content is accurate is only to say that it is like a

[26] It might be argued that the same mode of presentation is a sensory mode. The sensory experience is thus explained by the sensory mode (Pautz, 2010). The problem for this view is that it does not respect the phenomenology which ascribes sensory qualities to the object rather than to the mode of presentation.

proposition in that it can be compared with reality. Second, Crane's objections can be avoided since they are also based on the assumption that the intentional content is a proposition. He argues that a proposition can be negated, disjointed, conjoined, etc. but one cannot do those to the content of perceptual experience. But if intentionalists only claim that intentional content can be accurate or inaccurate, they can deny that intentional content is capable of being negated, disjointed, conjoined, etc. Third, perceptual experience can be accurate or inaccurate, which means that intentional content can be compared with reality. This comparison can also admit of degrees, as the concept of accuracy indicates.

This minimal characterisation of intentional content seems promising given that it can avoid these aforementioned difficulties. But it is still dubious since it leaves two most fundamental questions unanswered, namely, what is intentional content? Why is intentional content inevitable in explaining the sensory experience? The minimal characterisation almost amounts to taking intentional content to be primitive, and it seems to be specifically stipulated to answer propositional intentionalist's difficulties. In the next section, I shall discuss phenomenological intentionalism which answers to the fundamental questions but also combines the merits of the minimal characterisation. Unfortunately, it has other severe problems.

5.3 Phenomenological intentionalism and its problems

Phenomenological intentionalism is an alternative to propositional intentionalism. It retains the main feature of accuracy of intentional content and attempts to give a more concrete characterisation of intentional content. Therefore, if it works, it would be better than the minimal intentionalism which does not give positive answers to the questions of what intentional content is and why intentional content is inevitable in explaining the sensory experience. However, phenomenological intentionalism also fails because of its own problems:

it appeals to sense-datum-like entity to explain sensory experience; and intentional content is explanatorily idle.

5.3.1 Crane's phenomenological intentionalism

Tim Crane advocates that perceptual experience has intentional content in the phenomenological sense, contrasted with propositional content. He writes:

> The ideas involved in experiences—particular, conscious episodes—have content, since they are a case of something being given or conveyed to the subject…experiences have non-propositional content, in the sense that their fundamental way of representing the world is non-propositional. Non-propositional content ought not to be mysterious. Many pictures have non-propositional content: they have represent[ed] objects and their properties but are not the kind of thing you can use to 'say' things. Pictures can have correctness conditions, but there is a difference between a representation having a correctness condition expressed as a proposition and its having a proposition as its content. (Crane, 2013a, pp. 240–241)

> The content in the phenomenological sense is something spatiotemporal, concrete, particular, and specific to its subject. (Crane, 2013a, p. 245)

From the above passages, it is clear that Crane rejects propositional intentionalism. He maintains that the intentional content in question is non-propositional but phenomenological. The experience, as well as the associated phenomenological content, is a spatiotemporal and particular event, but still has correctness (accuracy) condition.

Prima facie, compared to a proposition, the phenomenological content seems better in answering the phenomenological question, since as many pictures do, pictorial representations are sensory in nature. Crane also describes the phenomenological content as a "manifold": "what is represented in experience are objects, properties and events, in what might loosely be called a 'manifold', but which does not have the structure of judgeable content" (Crane, 2009). A manifold, similar to a picture, is not a proposition. Both the manifold and the analogy of pictures are meant to characterise what phenomenological content is. I concede that Crane's

conception of phenomenological content can easily answer the phenomenological question. Yet it is unable to avoid the dubious ontological residue.

I begin my criticism with the pictorial metaphor. A realistic picture is only a metaphor; it does not express a clear conception of phenomenological content and thereby it is also not clear what on earth explains the sensory experience. Crane asserts that "[the] point [of the metaphor], then, is not that visual perception is essentially pictorial; it is rather that picturing is essentially visual" (ibid). It is uncontroversial that picturing is essentially visual. A painter draws what she sees and what she draws represents the visual features of the scene. However, the first part of the assertion is perplexing. Suppose that a visual experience is not essentially pictorial. Then what is the meaning of the pictorial metaphor? Isn't the metaphor meant to suggest that representation is the common nature of a visual experience and a realistic picture? Namely, a visual experience picturing reality is just like a realistic picture picturing reality. This understanding of the pictorial metaphor renders phenomenological intentionalism no difference from the sense-datum theory. The sensory qualities of a realistic picture are composed of paints, so it is the representing (e.g. the paints) rather than the represented reality that explains the sensory features. Correspondingly, the sensory experience should also be composed of something sensory and representational. The sense-datum theory basically theorises the metaphor, because according to it, a sense-datum is imagery, and it represents reality as paints picture reality. Therefore, the pictorial metaphor does not seem to fit with phenomenological intentionalism.

Crane of course wants to depart from the sense-datum theory. Perhaps this is why he claims that visual experience is not essentially pictorial. But this claim makes the pictorial metaphor confusing. For when visual experience "portrays" how things look, the phenomenological content is supposed to compare with how things really are. This is how the accuracy condition

makes sense, namely there are two sides: one is the representing side (the content); the other is the represented side (reality). Thus, the picture metaphor indicates that what determines the sensory experience is not environmental things but the representing object and properties—the 'paints' in a picture. As a result, the difference between a sense-datum and the manifold (the content) becomes only verbal.

Michael Huemer characterises sense data as follows:

a) "sense data are the kind of thing we are directly aware of in perception,
b) sense data are dependent on the mind, and
c) sense data have the properties that perceptually appear to us." (2005)

It is uncontroversial that (b) and (c) also fit phenomenological content. Namely, phenomenological content or a manifold also depends on the perceiver (the mind) and has or determines the properties that things perceptually appear to the perceiver. Maybe ascribing (a) to phenomenological content is controversial because usually intentionalists deny that phenomenological content is the kind of 'thing' we are directly aware of in perception. Instead, they hold that phenomenological content is the *way* that we are aware of the object in perception.

However, the talking of "the way" is quite artificial and inconsistent with other characterisation of content. For example, Crane accepts Susanna Siegel's definition of the contents of perception: "'the contents of perception'…means what is conveyed to the subject by her perceptual experience" (Crane, 2013a; Siegel, 2005). If phenomenological content is *what* is conveyed to the subject by perceptual experience, then it is something or some properties or the manifold. That is to say, the content is not a *certain way*. Intentionalists require the content to be not only the given but also the carrier (a certain way) of the given. On Siegel's definition, a sense-datum also conforms to the definition, because sense data are what is conveyed to the

subject. Therefore, although Crane explicitly denies the sense-datum implication of the pictorial metaphor, he still seems to slide back to the sense-datum theory. It means that the appeal to phenomenological content is unable to avoid the dubious ontological commitment.

Intentionalists might say that in my objection the properties of a represented object are confused with the properties of a representation. For example, the represented object of Rembrandt's self-portrait has a big nose, while Rembrandt's self-portrait—the painting—does not have a nose. Gilbert Harman (1990), for instance, accuses sense-datum theorists of failing to see this distinction. For if they made the distinction, then they would not think that the sensory experience is determined by the properties of a representation and thereby would not postulate a sense-datum as the possessor of these properties. For intentionalists such as Harman, the properties of a represented object do the explanation. Rembrandt's big nose explains the sensory feature of the big nose in the self-portrait.

Harman's accusation does not do justice to the sense-datum theory. According to the characterisation of a sense-datum quoted, a sense-datum is not *necessarily* a representation or a representational vehicle (e.g. a painting); rather, it is what the subject is directly aware of.[27] In this sense, if one paraphrases the sense-datum theory in intentionalists' terminology, a sense-datum is more like the represented object or the manifold, because they are what the subject is aware of. A sense-datum might also represent reality, depending on whether sense-datum theorists are also representationalists. If they are, a sense-datum functions as both the direct object of awareness and something representing. As such, the difference between phenomenological content and a sense-datum becomes obscure.

[27] Also see in Brian O'Shaughnessy (2003).

5.3.2 Is the way independent of 'something'?

Intentionalists do not commit themselves to the existence of the represented object as well as any mental mediator such as a sense-datum. They instead hold that intentional content expresses *a certain way* that perceptual experience represents the object. Here are some of their formulations,

> My experience of an object is the totality of ways that object appears to me, and the way an object appears to me is the way my senses represent it. (Dretske, 1995, p. 1)
>
> Visual experiences represent the world as being a certain way. (McGinn, 1997, p. 9)
>
> I define the content of a representation as: the way of the object of a representation is represented. (Crane, 2013b, p. 99)

According to these formulations, intentional content, specifically, "the way" that a perceptual experience represents the objects, is supposedly sufficient for the sensory experience.[28] *Prima facie*, no dubious entity is involved because the way is not an entity.

What is exactly "the way"? The term "the way" does not mean the adverbial modification, according to which, someone seeing a red patch means that she redly sees a patch. The term rather refers to a property-instance or a sensible quality or an appearance. Suppose that someone asks me how the banana on the desk looks. I answer, "it looks yellow and crescent-shaped." So "the way" here refers to looking-yellow-and-crescent-shaped, which are sensible qualities. I think intentionalists must admit that at least part of the sensory experience is determined by sensible qualities.

A particular sensible quality is not necessarily had by anything according to intentionalism, because a hallucinatory experience also represents an object in a certain way, but the

[28] Again, I put aside the version of intentionalism which proposes that sensory mode explains the sensory phenomenon.

hallucinated object usually doesn't exist in front of the subject. Dretske writes, "the quality of experience, how thing seems to us at the sensory level, is constituted by the properties things are represented as having" (Dretske, 1995, p. 1). This means that besides the sensible qualities the represented object also enters into perceptual experience or intentional content. Crane's description of manifold also confirms this point. He writes, "what is represented in experience are objects, properties and events, in what might loosely be called a 'manifold'…" (Crane, 2009). Phenomenologically speaking, perceptual experience is always about objects, so it is not surprising that objects enter experience. Then what is the relationship between the given quality-instances and the intentional object in experience?

In perception, intentional objects are environmental objects, so there is no problem with talking about an intentional object (e.g., the banana) instantiating intentional qualities (e.g., looking-yellow-and-crescent-shaped), since environmental objects have sensible qualities. Yet claiming that some intentional object has some intentional qualities in hallucination seems to again introduce dubious entities. For if an intentional object has some intentional sensible quality, doesn't this mean that it has some nature? After all, it cannot be this particular intentional object without this particular sensible quality. For instance, when I hallucinate a banana, my hallucinatory experience involves the quality 'looking-yellow-and-crescent-shaped'. The intentional banana cannot be the banana in my hallucinatory experience if it did not look yellow and crescent-shaped. We appeal to different sensible qualities to distinguish one hallucination from another. If what I hallucinated were not the banana but a tomato, the appearance or the intentional qualities of the intentional object would be different, e.g. it would look red and bulgy. As such, I would have a different hallucination. Hence, differentiating experiences via different intentional sensible qualities implies that intentional objects have nature. If intentional objects have nature, it is hard to deny their ontological status.

This consequence of course departs from what intentionalists would like to be committed to, because they deny that intentional objects have ontological status. Therefore, it seems that the appeal to intentional content or "the ways" cannot avoid talk about the instantiation relation between intentional objects and intentional sensible qualities, and accordingly it does not help intentionalists to get rid of ontological commitment. If they cannot avoid ontological commitment of intentional objects, then intentionalism is no better than the sense-datum theory.

5.3.3 Asymmetric explanans

Another problem of phenomenological content, or intentional content in general, is whether it can determine the sensory experiences accompanying both perception and hallucination *in the same way*. John Searle argues that perception and hallucination can have the type-identical content, yet the content is only satisfied in perception but not in hallucination because the intentional object only exists in the former. In hallucination, Searle denies that there is an intentional object. He writes, "what about the child's belief that Santa Claus comes on Christmas Eve? In such a case, there is no intentional object. The belief does indeed have a content, but no object" (J. Searle, 2015, pp. 76–77). Given Searle's view, the represented object in perception is the environmental object. As such, it seems natural to claim that the sensory experience is determined by the properties of the represented object, namely the properties of the environmental object. If so, then in perception environmental objects and their properties constitute the content. The counterpart hallucinatory experience cannot have a content like perceptual content because the intentional object, on Searle's view, does not exist. Hence, it becomes unclear why or in which sense perception and hallucination have type-identical content. Searle's solution indeed provides different answers to the phenomenological question regarding perception and hallucination.

Intentionalists can deny that ordinary objects play any role in determining the sensory experience. The appeal to intentional content is meant to do this. For example, Crane (2001) argues we should not assume that the intentional object is any kind of entity. Otherwise, intentionalists will have a dilemma: if intentional objects are ordinary ones as Searle holds, then intentionalists cannot make sense of the scenario where intentional objects do not exist; on the other hand, if they are some entities which sometimes do not exist, then intentionalists must hold the implausible view that there are non-existent entities. Crane therefore insists that "an intentional object is just the object (for some subject) of an intentional state or act" (2001). It implies that the question of what an intentional object is independently of an intentional state or act is a pseudo question. A. D. Smith also holds a similar view, "there is no truth at all as to the nature of the intentional object of which Macbeth was aware" (Smith, 2002, p. 260).

The conception of intentional object relates to what kind of answer intentionalists can give to the phenomenological question. For a hallucinatory experience, we know that the hallucinated object does not exist, and thereby it is nonsensical to ask what the intentional content or intentional objects *really* are. However, the question becomes meaningful if the subject is not undergoing hallucination. Consider again the banana example. I see it as well as its colours, shape, etc. According to the intentionalist's line of thought, the perceptual givens are still a banana, its colours, shape, etc. But unlike a hallucination, those intentional objects are real. If we ask the same question about what explains the sensory experience, the answer, on the intentionalist's account, is still the intentional content, or more precisely, the intentional objects. Yet it is not a "full stop" because now we can continue to question what the intentional objects are, and we will have a satisfactory answer, namely the intentional objects are the banana, its colours, shape, etc. They are what I am aware of right now.

Why are the answers to the phenomenological question not the same regarding perception and hallucination? I think that the reason is the idleness of the explanation of intentional content or intentional objects. The conception of intentional content or manifold is synonymous with the conception of sensory experience. As I argued before, intentional content is the way that an experience represents the object, which is mainly characterised by intentional sensible quality—looking-so-and-so, while sensible qualities are just the marks of sensory experience. So the answer to the question of what explains the sensory experience accompanying my hallucination of the banana should not be intentional content. For the conception of intentional content is no more basic or fundamental than the conception of sensory experience. Therefore, intentional content, as the explanans of sensory experience, is explanatorily idle. Or to put it another way, "intentional sensible quality" is just another name for "sensory experience". Changing a name is not a real explanation. It will not improve our understanding of the phenomenological question. If sensory experiences are mysterious, then introducing intentional objects is only introducing a bigger mystery. This is why in hallucination the intentionalist's answer is unsatisfactory, while in perception a further question of what intentional objects are could be raised and a satisfactory answer is available.

5.3.4 Summary

Intentionalism faces a dilemma. If the sensory experience accompanying a perception is explained by intentional content and the explanatory power comes from the perceived object and its properties, then the corresponding explanans is missing in its counterpart hallucination. If intentionalists deny that the perceived object and its properties explain the sensory experience accompanying a perception, then intentionalism needs to posit something dubious, e.g. intentional objects, to explain the sensory experience. Intentional objects are either another description of sensory experience or are some proxies for sensory experience. So, neither can

account for phenomenological question. To claim that it is not something but rather "the way" of representing objects that explains the sensory experience is also hopeless. For "the way" is usually some sensible qualities, which marks particular intentional object. So the dubious entity—the intentional object—is still unavoidable even if intentionalists try to use "the way" or intentional content to gloss over the problem.

Moreover, if intentionalists admit that the perceived object and its properties explain the sensory experience accompanying a perception, then it can retain the naïve realist's intuition. The price is that in hallucination no real object and its properties are available. Namely, if intentionalists admit the explanatory potential of the perceived object and its properties, intentionalists will hold an asymmetric explanans for perception and hallucination. Therefore, I conclude that intentionalism is struggled in giving a satisfactory explanation to sensory experience. In the next section, I shall argue that seeing is not intentional.

5.4 Seeing is not intentional

Seeing is not intentional because it does not have the crucial feature of intentionality: the possible non-existence of the intentional object. Other features, such as directness, the non-substitutability *salva veritate* of different descriptions of the intentional object and the possible indeterminacy of the intentional object, are either insufficient for intentionality or not satisfied by seeing. I shall examine these features and explain why seeing does not have these features one by one.

5.4.1 Seeing and the features of intentionality

Anscombe argues that intentionality is a grammatical feature of some transitive verbs such as "see", "think" and so on. Crane, as a Brentano follower, criticises Anscombe's view. First, he thinks that Anscombe is confused 'intention' with 'intension' (see also Searle, 2018).

Intentionality is the mark of mental phenomena as Brentano advocates, and it has nothing to do with any grammatical feature of transitive verbs. It is the term "intension" that expresses a grammatical feature of some transitive verbs. That is, such transitive verbs will create an intensional context where the substitution *salva veritate* fails. For example, I know that my neighbour is searching for her cat. She turns out to be a CIA agent. But it is not true that I know that a CIA agent is searching for her cat. Second, Crane claims that "X sees Y" expresses a fully extensional context (Crane, 2013b, p. 91). In other words, seeing is not intentional. I agree with Crane's criticism of Anscombe, yet I shall argue that Crane's view on seeing is inconsistent with his phenomenological intentionalism.

It is not difficult to see why "X sees Y" expresses a fully extensional context. The most important reason is that Y does not have the feature of the possible non-existence. Seeing is an accomplished action, and X's seeing Y implies the existence of Y; otherwise it does not count as <X sees Y>. One might argue that the term "see" has an intensional use, expressing an intentional state, though ordinarily it expresses an extensional context. For example, when I am unknowingly hallucinating that I see Donald Trump, I will believe that I *see* Donald Trump. In such a scenario, the seen object does not exist. So, it is argued that "see" does not necessary express an extensional context. Admittedly, in some scenarios the seemingly seen objects do not exist. But we must notice that the intentional context is not created by one's seeing something, but by other factors. The intentional context in the example is created by a hallucinatory scenario. If I knew that I am subject to a hallucination, I would say, "I am hallucinating that I see Trump" rather than "I see Trump". Thus, the example does not show that "see" has an intensional use, expressing an intentional state; it at most shows that hallucination is an intentional state. Otherwise, all transitive verbs would have an intensional use, because all verbs can appear in fictional scenarios, dreams, hallucinations, etc. where the

objects in question do not exist. Hence, "X sees Y" does not express an intentional context; seeing is not intentional.

Second, I admit that "X sees Y" does express directness or aboutness. Adopting Brentano's expression, in seeing, something is seen (Brentano, 1874, p. 68). But directness or aboutness is not exclusive for intentionalism. Both naïve realism and the sense-datum theory are compatible with the feature of directness or aboutness. For naïve realism, the seen object is a *relatum* at which the seeing directs. For the sense-datum theory, the sense-datum is what the awareness is about. Therefore, "X sees Y" can express the feature of directness or aboutness, but this feature does not suffice for the claim that seeing is intentional.

Third, "X sees Y" satisfies the substitution *salva veritate*. In other words, when substituting Y with other names or definite descriptions which is coreferential with "Y", the truth-value remains the same. For example, "I see Donald Trump" and "I see the current president of the United States" have the same truth-value, regardless of whether I know that Donald Trump is the current president of the United States. Suppose I do not know that Donald Trump was elected in 2016. Given this supposition, when I see Donald Trump, I do not know that I see the current president of the United States. But it is still true that I see the current president of the United States. i.e., if I see Donald Trump, then I see the current president of the United States, and vice versa, regardless of whether I know him. That is to say, the term "see" does not create an intentional context, and thereby one cannot appeal to the non-substitutability *salva veritate* of different descriptions of an object to argue that seeing is an intentional state.

Fourth, typical cases of seeing do not have the feature of the possible indeterminacy of the intentional object. Paradigmatic intentional states have this feature. Take Anscombe's example, one can think of a man without thinking of a man of any particular height. She points out that a verb purely expressing a relation does not have this feature. For example, one cannot hit a

man without hitting a man of some particular height, because there is no man of no particular height (Anscombe, 1965). The question is whether <X sees Y> involves some intentional object which is possibly indeterminate. Of course, if we have already accepted Crane's view that "X sees Y" expresses an extensional context, then there is certainly no intentional object involved. Accordingly, the discussion of the possible indeterminacy is unnecessary. Indeed, paradigmatic cases of seeing also support Crane's view. For example, one cannot see a patch of colour without seeing a particular colour. Nor can one see a shape without seeing a particular shape.

However, there are peculiar cases. Pautz argues that the object in peripheral vision is indeterminate. Consider Pautz's example. "Mabel views a pink object in the periphery of her visual field." She only vaguely sees its colour but not the specific shade of pink. Pautz thinks that there are no indeterminate objects, so the pink object in periphery can neither be a sense-datum nor an external object. So only intentionalism can accommodate this phenomenon because indeterminate content is innocuous (Pautz, 2007, pp. 510–511, 2010, p. 280).

I think everyone agrees that if one sees a thing through the periphery, that thing will look vague to her. Even in some normal cases objects can look vague. For example, imagine that a large truck is approaching in the evening. Because of the dim light, in the beginning I cannot clearly see what kind of a vehicle is approaching. Gradually, I realise that it is a truck, but I still cannot discern its colour because of the poor light. In such a case, many features of the truck look vague. We must note that it is not the pink object itself or the truck itself being indeterminate. They are determinate as all other ordinary objects.

Consider Anscombe's hitting example again: one cannot hit a man without hitting a man of some particular height. Seeing, no matter under what circumstance, is more like hitting. Let's paraphrase seeing as hitting. Mabel cannot see a pink object without seeing the object of a

particular shade. Notice that the phrase "of a particular shade" describes the object. So even though Mabel cannot discern the particular shade of the pink object, this fact is irrelevant to whether or not this pink object has this particular shade. In short, Anscombe's characterisation of hitting has a *de re* feature, so is Pautz's example. This is why Mabel cannot see a pink object without seeing it of a particular shade, though she sees a pink object without seeing a particular shade *that* the pink object has.

In addition, the possible indeterminacy, perhaps more precisely, the vague visual experience, is not an exclusive feature for intentionalism. Intentionalists think that indeterminacy can be explained by inaccurate content or the possible non-existence of the relevant property, while the competitive naïve realism is incapable of explaining the indeterminacy. This prejudice is based on a misunderstanding of naïve realism. They suppose naïve realists to hold that the environmental objects, their properties and relations must determine the phenomenal indeterminacy. However, given the determinacy of environmental objects, their properties and relations, naïve realism cannot explain the phenomenal indeterminacy. So naïve realism must be rejected. Naïve realism is indeed consistent with phenomena such as peripherical seeing and vague visual experience under a poor lighting condition. Environmental objects are expected to look vague in such scenarios, and naïve realists can appeal to visual capacity, environmental conditions, etc. to explain the 'indeterminacy'.

So far, I have argued that <X sees Y> does not have any feature which suffices for the intentionality of seeing. I thus agree with Crane that "X sees Y" expresses an extensional context. Crane's problem is that he holds that seeing is not intentional but visual experience is intentional, because a same visual experience can happen in hallucination. That is to say, according to Crane or intentionalism in general, <X sees Y> does not amount to that X has a visual experience of Y.

One way of cashing out this idea is to treat seeing and visual hallucination as subclasses of a more general category—visual experience—which is the common kind across seeing and hallucination. If this is the case, then X's seeing Y is not identical to X's having a visual experience of Y. Let us first assume this broader conception of visual experience. But given that seeing is a relation, intentionalists can at most conclude that some subclasses of visual experience other than seeing are intentional. In other words, intentionalism of perception in general is false.

Moreover, it is indeed odd to say that the conception of visual experience covers visual hallucination. Suppose X thinks that she is eating a hamburger. This is definitely not an eating experience but a thinking one. Analogously, X's visually hallucinating Y means that X hallucinates that she sees Y. So it is a hallucinatory experience rather than a visual one. Intentionalists may look for other terms such as "perceptual experience" to substitute for "visual experience". But the concept of perceptual experience is more general than the concept of visual experience. The formers cover other modalities, whereas the latter only covers the modality of sight. It is indeed difficult to find a proper concept to substitute for 'visual experience'. It indicates that the notion of common kind across vision and visual hallucination as intentionalists pursue is questionable.

The other way of cashing out the distinction between seeing/hallucination and visual experience is appealing to the causal theory of perception. According to the causal theory, visual experience is an effect of a causal process, while seeing is a combination of a visual

experience and an appropriate causal process starting from the seen object, and hallucination is a combination of a visual experience and a deviate causal process (Grice, 1961).[29]

Criticising the causal theory is a too big topic which goes beyond this chapter. I shall only raise two concerns. First, the causal theory still treats visual experience as a more general category, because both seeing and hallucination entail a visual experience. This proposal thus has the same problem as the previous proposal, namely, seeing and visual experience overlap, if seeing is not intentional, the overlapped visual experience should not be intentional. Second, the causal theory implies that the expression "having a visual experience of" describes a subjective episode (Hyman, 1992). For example, when I see a banana, I have a visual experience of a banana, which is purely subjective. Given that seeing is not intentional, I will stand an extensional relation to the banana and at the same time I will stand an intentional relation to it because my visual experience represents the banana in a certain way. Isn't the banana counted twice but I am only aware of one?

Given these considerations, I think that the assumption of the separation between visual experience and seeing/visual hallucination is baseless. Therefore, intentionalists should either maintain that visual experience is intentional and so is seeing/visual hallucination, or they need to completely give up intentionalism. But, as I have argued above, seeing is extensional, so it seems to me that intentionalism about perception is simply false.

Conclusion

I hope that I have provide cogent objections to intentionalism. To sum up, a proposition is too abstract to capture the sensory feature of perception, while phenomenological content easily

[29] For the criticism of the causal theory, see Snowdon (1981) and Hyman (1992).

slides back to the sense-datum theory. Moreover, intentional content is explanatorily idle. Worse still for intentionalists, it is even implausible to hold that seeing is intentional.

Are hallucinations then intentional? They might be. Before closing this chapter, I shall sketch a relational view of visual hallucinations. A hallucination is a relation between the hallucinator and the hallucinated object. A hallucinated object can be a particular, an event, a state of affairs, etc. Hallucinated objects usually do not exist, but not always. When it exists, it still does not have an actual causal effect on the relevant experience. For example, I may hallucinate that I see Messi. Messi exists, but he does not have a causal effect on me. What we must give up is the doctrine that a relation cannot hold without the existence of its *relata*.

Here are two counterexamples. Lee Harvey Oswald's shooting caused J. F. K. Kennedy's death in hospital. This is a common and proper description of that assassination. When Kennedy died in the hospital, the causal relation held. But the cause—Lee Harvey Oswald's shooting—had already passed or that causal event did not exist anymore. This is the case of a causal relation holding without the existence of its *relatum*. Another example is the parent-child relation. Peter Strawson was Gelen Strawson's father. But Peter Strawson died many years ago. Will we claim that they do not stand in the parent-child relation anymore after Peter Strawson's death? I do not think anyone will believe this. The parent-child relation was determined once the mother gave birth to their child. The biological relationship would not ever change no matter what will happen in the future. Because of this constancy, many memorials for dead ancestors in different cultures are meaningful. This is another example of a relation's holding without the existence of its relatum. Therefore, a relation can hold with the absence of its *relata*. Hallucination is such a relation. We do not need to invent a new quasi-relation 'intentionality' to make the question more complicated. Of course, such a sketchy description is not enough. I will leave it for another occasion.

Brentano/Husserl's traditional Phenomenology is indifferent to reality. It only means to describe the subjective experience or the phenomenology. Husserl, for example, 'brackets' reality. But in the contemporary debate in the philosophy of perception, one question is how to explain the phenomenon of subjective indistinguishability between perception and hallucination and how to explain the sensory experience accompanying perception and hallucination. These explanatory questions go beyond a pure description. This perhaps is why we always find that intentional objects are either some dubious entities or just another screen name of sensory qualities. Our anxiety from the lack of a solid explanation can be settled only by either a realist answer, that we perceive the real world and these real objects and properties explain the sensory phenomena, or by an idealist answer, that all we are aware of are sensory qualities or ideas. Both answers stop a further inquiry. By contrast, if the answer is intentional object or content, then a further inquiry is still needed, and our anxiety will still be there.

6. Anomalous Disjunctivism

6.1 Introduction: the causal argument from hallucination

Naïve realism about perception claims that the subject perceives the object, its sensible qualities, the event it partakes in, etc. without any mental mediator (e.g. a representation, a sense-datum, an idea, etc.). The causal argument from hallucination (hereafter, the Argument) is the major challenge for naïve realism. The Argument describes a type of visual hallucination which is not only subjectively indistinguishable from seeing but also neurally identical with seeing. Howard Robinson (2013, p. 313) calls such hallucinations "philosophers' hallucinations".[30] In particular, the advocates of the Argument believe that the neural activities underlying seeing (φ for short) can be reproduced in some way and it is sufficient to produce a sensory experience which is subjectively indistinguishable from the counterpart seeing. Thanks to the sufficiency of φ, the account of the sensory experience accompanying hallucination, namely the hallucinatory experience, which does not appeal to an ordinary thing and its sensible qualities, should equally apply to the sensory experience accompanying seeing, namely the visual experience.[31] Therefore, the seen thing and its sensible qualities become redundant in explaining the visual experience (Robinson, 1994, p. 151; Valberg, 1992, pp. 9–11).

Michael Martin (2004, p. 71) aptly describes the problem caused by philosophers' hallucination as the "problem of explanatory screening-off": any positive account of hallucination will screen off the naïve realist's account of visual experience. Suppose a representational account of hallucination is in place: having a hallucinatory experience of something is having some

[30] I confine my discussion to vision and visual hallucination. I also only focus on philosophers' hallucinations. So if I use the term "hallucination" without any qualification, I just mean philosophers' visual hallucination.
[31] I stipulate that the visual experience is only associated with seeing, which contrasts to the hallucinatory experience.

representation. For example, I am hallucinating a yellow and crescent-shaped banana on my desk. The hallucinatory experience, described by an appearance statement "the banana looks yellow and crescent-shaped to me", is explained by the representational content, namely that my hallucinatory experience represents the banana to be yellow and crescent-shaped. This representational account is supposed to apply to visual experience as well, because my visual experience is subjectively indistinguishable from the hallucinatory experience, and φ in both cases is sufficient for the sensory experience. As a result, the positive account screens off the naïve realist's account.

In this chapter, I propose a version of disjunctivism, which I shall call anomalous disjunctivism, as a solution to the screening-off problem or the Argument. I borrow the term "anomalous" from Donald Davidson's 'anomalous monism' (1970) but use it differently: I use it only for differentiating my version from the other versions of disjunctivism. Anomalous disjunctivism is comprised of the following claims:

1. Seeing should not be understood as a sensory experience plus an appropriate causal process starting from the seen thing.[32] Rather, it should be understood as a relational fact caused by the seen thing. The sensory experience is explained by seeing, specifically, by the seen thing and its sensible qualities.
2. Visual experience and hallucinatory experience have different overall causal conditions though they share common neural activity;[33] the seen thing is the additional causal condition necessary for seeing, so it is necessary for the accompanying visual experience; and the deviant causal condition is necessary for visual hallucination (or hallucinatory experience).
3. There is a common kind across visual experience and hallucinatory experience; both are sensory experience. In seeing the subject sees the thing

[32] The causal theory of perception understands perception in this way. See Grice (1961), and for the criticism see Snowdon (1981).

[33] I shall argue in §6.4 that philosophers' hallucination and perception may not have the identical neural activity but have a common neural activity. Indeed, to construct the Argument, one only needs to assume that the neural activity underlying seeing is reproduced in hallucination, which does not mean that the neural activity in both cases is completely identical. It may be the case that the reproduced neural activity generates further neural activity, and ultimately produces the hallucinatory experience.

> as well as sensible qualities, while in hallucinatory experience the subject hallucinates that she sees the thing as well as sensible qualities; the sensible qualities in both cases are instantiated, though in hallucination no actual object has them. The common kind thus is the subject's experiencing sensible qualities in both cases.

The chapter will proceed as follows. In section 6.2, I explain why the generative view is the rational the Argument and why the generative view is not easy to be defeated. Section 6.3 is devoted to Martin's solution to the screening-off problem, which I argue is inadequate because the modest account of sensory experience cannot accommodate intuitive sensory experiences. In section 6.4, I propose anomalous disjunctivism as the solution; the main idea is that the overall causal conditions necessary for seeing and hallucinating, and their accompanying sensory experiences are different, and these different causal conditions also convey different understandings of seeing and hallucination. The screening-off problem will be dissolved because the distinct external conditions play essential role in producing visual experience and hallucinatory experience, though φ is sufficient to produce sensory experience. In section 6.5, I offer a positive account of philosophers' hallucination: in hallucination the subject experiences sensible qualities which are instantiated but not had by anything.

6.2 The rationale of the generative view

There is an essential assumption involved in the Argument, which describes a nomological correlation between neural activities and sensory experiences. It asserts that the former is sufficient to produce the latter. This view is dubbed *the generative view*. Howard Robinson thinks that the generative view is "essentially the rationale" of the Argument: "[T]he brain state in which the causal process ends up is sufficient to produce the perceiving together with its subjective content" (1994, p. 66). A. D. Smith also accepts the generative view, though he does not embrace the sense-datum theory as Robinson does. He writes that it must be accepted "that the proximate causes of a hallucination suffice for the generation of a sensory state, a state

whose sensuous character is internal to that state" (2002, p. 208). For both Robinson and Smith, though they use different terminologies, they agree that the neural activities underlying seeing and hallucination are identical and seamlessly bring about a sensory experience.

The generative view also allows advocates to carry over the same account of hallucination to the counterpart perception. This is because the neural activities in question are essential to both hallucination and perception. By contrast, the mere subjective indistinguishability is insufficient to carry over the account of hallucination to perception, because actual hallucinations may be also subjective indistinguishable from counterpart perceptions, but they usually do not have the same aetiologies as the counterpart perceptions. Due to the aetiological difference, disjunctivists may reject that the account of hallucination should apply to perception.

This line of thought echoes Austin's lemon and soap example. Austin accuses Ayer and Price of relying on the assumption that "if two things are not 'generically the same', the same 'in nature', then they can't be alike, or even very nearly alike" (1962, p. 50). He then raises the example of a lemon and a piece of soap. They are generically different, but they can look alike. If you only rely on vision, then you may not distinguish one from the other. But this phenomenological similarity or even sameness is obviously not sufficient to the claim that two things are generically the same; the lemon and the piece of soap are obviously two different things. Applying Austin's argument to the seen thing and the hallucinated thing, they are generically different but subjectively indistinguishable. Disjunctivists can comfortably accept that seeing and visual hallucination are subjectively indistinguishable, while still resist the claim that the account of hallucination should apply to seeing.

The Argument needs the generative view to carry over the same account to seeing as the one for hallucination. That is to say, to establish the screening-off problem, the sensory experience must be the one caused by the same neural activity. The generative view confines the discussion

to philosophers' hallucinations; and it also means to rule out the essential role that the seen thing plays in producing the visual experience, since if φ is sufficient, the seen thing becomes evitable in producing the experience.

The question becomes why we should accept the generative view. Both E. J. Lowe (1992, p. 80) and Robinson (1994, p. 152) use Wilder Penfield's research to argue that φ alone suffices to bring about the sensory experience. Penfield's research has long been regarded as the experimental evidence that supports the generative view. William Fish (2009, pp. 123–133) questions Penfield's experiments. First, he points out that the percentage of the reported "experiential response" is less than 10%, it means that the experimental evidence is not strong enough to support the generative view. Second, Fish refers to Alva Noë's (2005, pp. 210–211) objection: even if these experiments establish the claim that some experiences are produced by some neural activities, it does not follow that neural activities can produce all experiences, and it can be itself sufficient to bring about sensory experiences.

Noë and Fish are probably right that Penfield's experiments cannot establish the sufficiency of φ. Nevertheless, they cannot disprove the generative view. For inducing philosophers' hallucinations is very different from these actual experiments; the former is much more complicated and delicate than simply stimulating one's brain cortex and subthalamic nucleus as Penfield did. It is indeed hardly conceivable what will happen if the neural activities underlying seeing a banana is reproduced. Hence, the insufficiency of Penfield's experiments does not rule out the generative view. In short, Penfield's experiments are insufficient to support the generative view, whereas its insufficiency does not mean that the generative view is false.

It s eems to me that there is no convincing argument for the generative view, while there is also no knockdown argument against the generative view. But it does not matter for my solution

because I do not rely on whether the generative view is true or false. So even if someone takes a weak assumption, such as taking the generative view as only nomologically possible (Smith, 2002, p. 203), anomalous disjunctivism can still reject the Argument. Before presenting my solution, I shall explain in detail why the screening-off problem arises and discuss Martin's solution. I shall also show why Martin's negative and epistemological characterisation of hallucinations is counterintuitive, and a positive and sensory characterisation should be given to hallucinations.

6.3 Martin's solution to the screening-off problem

The generative view leads to the Common Kind Assumption (Common Kind for short), and the Common Kind leads to the screening-off problem. Martin formulates Common Kind as follows: "whatever kind of mental event occurs when one is veridically perceiving some scene, such as the street scene outside my window, that kind of event can occur whether or not one is perceiving" (2004, p. 40). It is not difficulty to understand why the generative view leads to the Common Kind. This is because φ is supposed to be sufficient to produce a sensory experience, namely, the common kind. Suppose otherwise that different experiences are produced by φ on different occasions. The Argument then is unable to proceed because naïve realists need not bother their account of perception if the counterpart hallucination does not have the same sensory experience. Thus, the generative view must lead to Common Kind.

The common kind—a sensory experience—is usually thought of as a non-relational event, because a hallucinatory experience is widely accepted as non-relational due to the lack of an appropriate external object.[34] Hence, the seen thing and its sensible qualities as relational

[34] I argued in the end of the last chapter that it is a dogma to hold that hallucination is not relational based on the nonexistence of an appropriate external object.

components are explanatorily redundant in explaining the sensory experience; and thereby Common Kind directly lead to the screening-off problem. As Martin writes,

> Now if the common element is sufficient to explain all the relevant phenomena in the various cases of illusion and hallucination, one may also worry that it must be sufficient in the case of perception as well. In that case, disjunctivism is threatened with viewing its favoured conception of perception as explanatorily redundant. (2004, p. 46)

"The common element" is "the common kind" in my term. To say that the common element is sufficient to explain all the relevant phenomena is just to say that the non-relational sensory experience is sufficient to explain the visual experience and why it is indistinguishable from the hallucinatory experience.

Martin blames the proponents of the Argument for holding an "immodest" account of sensory experience, which leads them to endorse Common Kind which, in turn, leads to the screening-off problem. In the immodest account:

> A perceptual experience is a kind of event which has certain distinctive features E1 … En. Not only is the possession of these features necessary and sufficient for an event to be an experience, but, in addition, an event's possession of them is introspectible by the subject of the experience. When I come to recognise the possibility of perfect hallucination just like my current perception, what I do is both recognise the presence of these characteristics, E1 … En, in virtue of which this event is such an experience, and also recognise that an event's possessing these characteristics is independent of whether the event is a perception or not. (M.G.F. Martin, 2004, p. 47)

E1 … En are sensible qualities which might be qualities of sense-data or representational properties. It depends on further theoretical commitments as to which sensory qualities should be attributed. There are two important components to the immodest account. First, for any event, if it is a sensory experience it must have a set of distinctive sensible qualities. Second, having distinctive sensible qualities is introspectible by the subject. It implies that two sensory experiences with different sensible qualities are always subjectively discriminable. Thus, the immodest account of sensory experience, applied to philosophers' hallucination, has the following model: φ generates a sensory experience marked by sensible qualities, and two

sensory experiences are subjectively indistinguishable only if they have the same sensible qualities.

Martin's solution to the explanatory screening-off problem relies on a modest account of sensory experience. He writes,

> We need not look for some further characteristics in virtue of which an event counts as an experience of a street scene, but rather take something to be such an experience simply in virtue of its being indiscriminable from a perception of a street scene…Rather than appealing to a substantive condition which an event must meet to be an experience, and in addition ascribing to us cognitive powers to recognise the presence of this substantive condition, it instead emphasises the limits of our powers of discrimination and the limits of self-awareness: some event is an experience of a street scene just in case it couldn't be told apart through introspection from a veridical perception of the street as the street. (Michael G. F. Martin, 2004, p. 48)

On the modest account, the substantive condition—having sensible qualities E1 … En—is not required for an event to be a sensory experience. Instead, an epistemological condition is in place: E is a sensory experience of something only if E is indistinguishable from the veridical perceiving of that thing. The modest account indeed reverses the explanandum and the explanans between sensory experience and the subjective indistinguishability. According to the immodest account, the subjective indistinguishability is explained in terms of having the same sensory experience which is characterised by sensible qualities. By contrast, the modest account regards the subjective indistinguishability as the explanans, and a sensory experience is characterised by the subjective indistinguishability. The modest account emphasises that the introspective aspect of our power of discrimination has limits: we are not always able to introspect all sensible qualities and discriminate one from another. It implies that even though a hallucination and a perception do not share the same sensible qualities, the subject may not be able to distinguish one from the other. Or we even cannot say that a hallucination and a perception do not share the same sensible qualities if the subject is unable to distinguish one from the other.

With the modest account of sensory experience, the screening-off problem can be solved as follows. A philosophers' hallucination is produced by φ and subjectively indistinguishable from the counterpart perception. The property of being indistinguishable from a perception explains the hallucinatory experience, because its explanatory potential is parasitic on the naïve realist's account of sensory experience. For example, seeing a snake explains my sensory experience, panic, running away and so forth, and having a hallucination of seeing a snake is indistinguishable from seeing a snake, so the property of being subjective indistinguishable from seeing a snake explains my hallucinatory experience of the snake, panic, running away, and so forth. Therefore, the screening-off problem is solved because the property of being indistinguishable from a perception inherits its explanatory potential from a naïve realist's account of perception, and its epistemological nature guarantees that it will not screen off the sensory nature of perception.

One may contend that the property of being indistinguishable from seeing a snake is the new common kind because, just like hallucinating a snake, the event of seeing a snake also has the property of being indistinguishable from seeing a snake. As such, wouldn't the property of being indistinguishable from seeing a snake screen off the property of seeing a snake as the explanatory potential? Martin's answer is no. For he thinks that the property of being indistinguishable from perception is "derivable *a priori* from the special property [of perception]" (2004, p. 70). The derivable property will not pre-empt the relational property of perception as the explanation.

However, I doubt that Martin's modest account can accommodate some sensory experiences. Suppose that you have a perfect matching hallucination of seeing a snake, but you know that you are hallucinating. Such a scenario is easy to conceive if philosophers' hallucinations are conceivable. For example, you have seen the stimulating machine working on other people,

and they describe the hallucinated scene to you. Now your scientist friend is going to apply it to you. In such a scenario, when the stimulating machine starts to work, you know that you are hallucinating, and you also know that the scene only seems real to you but is not real. Thus, you are not scared by the hallucinated snake, though you are probably surprised and a little uncomfortable because of the vividness. Denying such a lucid hallucination as a sensory experience is counter-intuitive because the difference between this hallucination and the philosophers' hallucination merely consists in the fact that the subject knew that she would have the hallucination in advance. So, if the philosophers' hallucination of seeing a snake counts as a sensory experience, then why shouldn't the lucid hallucination also count as a sensory experience? If the lucid hallucination does count as a sensory experience, then it runs against the modest account, because it is *distinguishable* from seeing a snake. Lucid hallucinations also show that "seeming to perceive something" and the conception of indistinguishability are distinct. This is because "seeming to perceive something" does not describe a common kind which accounts for the subjective indistinguishability; the subject can distinguish whether she is lucidly hallucinating something or not, but in either case she *seems* to perceive the snake.

Martin (2006, p. 364) himself emphasises the importance of the restriction—"through reflection"—in defining the subjective indistinguishability. On his definition, all information should come from the subject's reflection. So lucid hallucinations, though distinguishable, are not distinguishable through reflection. Thus, they are not the counterexamples to Martin's argument. But what about other background information which the subject may have through reflection? For example, Scott Sturgeon points out that "through reflection" actually stipulates that the "information involved in background beliefs cannot be generally available to reflection…Otherwise, the possibility of everyday knowledge of [hallucination] will slip through the net [and] count as knowledge obtainable by reflection" (2006, p. 209). He

illustrates this point through a real-life case in which, he repeatedly has an auditory hallucination of his daughter's crying over many nights. After his repeated checks, he found that his daughter slept very well. Eventually, Sturgeon came to believe that he had hallucinations. The point is that next time when he hears his daughter's cry, he will know or at least believe through reflection that he is perhaps hallucinating the cry. Thus, "through reflection" clause cannot rule out the possibility that the subject is able to figure out she is hallucinating something. We thus have cases which are distinguishable but still count as sensory experiences, which further indicates that a mere epistemological criterion cannot fully capture the concept of sensory experience.

Both lucid hallucinations and Sturgeon's real-life hallucination show that the epistemological conception—indistinguishability—fails to fully capture what a sensory experience is. One may contend on Martin's behalf that lucid hallucinations are not philosophers' hallucinations because they are distinguishable; whatever they indicate is irrelevant to Martin's argument. Of course, one can insist on this line of thought and ignore the importance of the sensible qualities involved in philosophers' hallucinations. Yet despite different epistemological effects, the subject has the same sensory experience of a snake in both the lucid hallucination and the philosopher's hallucination—the snake looks to have some sensory qualities in both cases. Since we are looking for some characterisation of a sensory experience, why not take sensible qualities into account? Lucid hallucinations and Sturgeon's real-life hallucination, I believe, have provided sufficient reasons for naïve realists to explore a solution which does not characterise hallucinations merely in negative and epistemological terms but in positive and sensory terms.

6.4 Anomalous disjunctivism: the solution

Following the analysis from the last section, I will depart from Martin's negative and epistemological account of hallucination but accept a positive one. Now the question is this. Given a positive account of hallucination, whether we should accept Common Kind? And can disjunctivism be compatible with Common Kind? I argue below that Common Kind is innocuous and as well as the generative view.

Anomalous disjunctivism does not rely on any particular positive account of hallucination but focuses on the nature of seeing and visual hallucination, as we as their relations to the sensory experience. Negatively speaking, seeing should not be understood as a sensory experience plus an appropriate causal process starting from the seen thing. According to anomalous disjunctivism, seeing is a relational fact caused by the seen thing, and the seen thing is a causal condition *necessary* for producing seeing. Because of the causal relation between the seen thing and the seeing, the seen thing becomes a necessary constituent of seeing. For otherwise, if what is caused by the seen thing is a sensory experience as the composite causal picture indicates, then the seen thing might not constitute the seeing but is only represented. Thus, according to anomalous disjunctivism, the seen thing plays a double role, namely, it is the seen thing (as a *relatum*) but also causes seeing. In addition, the sensory experience is explained by the seen thing and its sensible qualities. For example, some philosopher may ask himself, "why do I have a sensory experience that the banana looks yellow and crescent-shaped", the (anomalous) disjunctivist's answer should be "because you see such a banana".[35] Hence, the notion of seeing is conceptually prior to the notion of sensory experience.

[35] Normally, people will not ask themselves a question like this unless something suspicious happens. The answer may include other elements such as perceiving conditions, depending on the context.

Similarly, hallucination should not be understood as a sensory experience plus some deviant causal process; rather, it should be understood as mental activity caused by some deviant causal condition. Hence, the notion of hallucination is also conceptually prior to the notion of sensory experience.

The opponents may argue that everyone agrees that the seen thing is an essential causal condition necessary for seeing. According to the composite causal picture, without the seen thing, it would not be seeing; and without the deviant causal process, it would not be a hallucination. The opponents are right about this point. However, anomalous disjunctivists also hold that the seen thing is a necessary causal condition for the relevant *sensory experience* and also explains it. The opponents object to this claim, because they think that the sensory experience can be produced otherwise, and the seen thing does not have explanatory potential in explaining the sensory experience.

The opponents intend to use the generative view to rule out any external condition to play a role necessary for producing a sensory experience. This is half true and half false. It is true because no *particular* external condition is needed for a sensory experience, and φ itself is sufficient in producing a sensory experience. It is false because a sensory experience is always accompanying a *particular* seeing or a *particular* visual hallucination,[36] as some external condition is necessary for seeing or for visual hallucination, that external condition is naturally necessary for the accompanying sensory experience. The generative view indeed merely claims that some neural activities are sufficient to bring about some sensory experience, which is not equivalent to the claim that external conditions do not play necessary causal roles in producing

[36] For the current discussion, I only talk about seeing and visual hallucination. If the discussion is extended to other mental activities, then relevant revision need making.

some *particular* sensory experience. If this is case, then anomalous disjunctivism can be compatible with the generative view. This sounds inconsistent, but the apparent inconsistency is not substantial.

The sufficiency of the generative view only means that once φ occurs a sensory experience ψ will follow, which does not amount to the claim that φ and ψ are *seamlessly* connected, namely that there are no other processes or activities connecting them. It is conceivable that φ is the common causal condition necessary but not sufficient for either seeing or visual hallucination, though it is sufficient for ψ. That is, ψ can be realized in two ways: either in seeing or in hallucination. For example, in hallucination but not in seeing, φ may cause further neural activities and ψ follows. It happens in this way because the external conditions for seeing and hallucination are different, and they make distinct differences on the visual system. φ together with the seen thing cause seeing, φ and the seen thing are necessary causal conditions. In hallucination other inducing methods act as necessary causal conditions, φ causes the operation of a further mechanism, and the ψ follows thereafter. This model is consistent with the generative view because it is consistent with the claim that once φ occurs, ψ follows. However, this model implies that the neural activities underlying hallucination are not identical to the one underlying seeing, and φ is only common to seeing and hallucination. I shall explain below this model does not conflict with the construction of the Argument which assumes that the neural activities underlying seeing and hallucination needs to be identical.

Another possible model is that external conditions are necessary for seeing and hallucination as well as sensory experiences, but no further mechanism is activated in hallucination. This model is also consistent with the generative view, because the external conditions in question are always correlated to φ, no matter which external condition occurs, φ always occurs.

Anomalous disjunctivism can accept either model. I shall later use several analogies to elaborate these two models.

The screening-off problem is dissolved if anomalous disjunctivism is accepted. The essential reason is this: the overall causal conditions for seeing and visual hallucination, as well as the accompanying sensory experiences, are different. For example, in the first model, no further mechanism is activated in seeing because the subject does not fail to see the thing; the particular sensory experience accompanying hallucination thereby will not be produced when the subject sees the thing. Hence, whatever an account we give to visual hallucination, we are not forced to give it to seeing. Therefore, the screening-off problem will not arise.

I think that the successful defence of anomalous disjunctivism exactly responds to Robinson's objection to standard disjunctivism. He writes,

> If the mechanism or brain state is a sufficient causal condition for the production of an image…when the table and wall are not there, why is it not so sufficient when they are present? Does the brain state mysteriously know how it is being produced; does it, by some extra sense, discern whether the table is really there or not and act accordingly, or does the table, when present, inhibit the production of an image by some sort of action at a distance?" (Robinson, 1994, pp. 153–154)

Robinson's main point is that given the generative view, the common kind (e.g. an image) is unavoidably produced; the seen thing (or other inducing conditions) does not make a difference to the common kind. So disjunctivism which denies the existence of common kind is false. The defence of anomalous disjunctivism consists of explaining why the seen thing play an essential role in producing seeing and the accompanying sensory experience, and why the *failure* of seeing play a role in (activating the further mechanism and thereby) producing hallucination and the accompanying sensory experience. Unlike standard disjunctivism, I do not deny the existence of some common kind but only reject the common kind implied by the composite causal picture. I will elaborate the details of anomalous disjunctivism with several analogies.

The first response. Robinson mocks the view that the brain state (the neural activities φ in my term) can mysteriously know how it is being produced. I think if φ knows what will happen next it may mysteriously know how it is being produced. I mean that the visual system can detect the existence of the seen thing in the *later* process, because seeing and the failure of seeing have different effects on the visual system. It is easier to understand this through a dualist model: seeing as a mental state can have some effect on the brain, but the failure of seeing is not a mental state or not a state at all, meaning that it does not necessarily have a mental power as seeing does. It is not the case that I want my argument to rely on dualism, or any other theory of mind, rather, my point is this: seeing is a causal effect of some events involving the seen thing and some neural activities, which is different from the mere activation of the same neural activities. This difference may manifest in the consecutive neural activities. Note that the effect on the brain is not introspected. This is why on the personal level seeing and visual hallucination are indistinguishable, but we cannot assert that they indeed have the same overall causal conditions.

I shall use an analogy to show how this model works. Imagine that a programmer wants to write a program aiming at acquiring a particular document. There are two ways of achieving this goal: either the program finds the document in the hard disc, or it creates the document by itself. The program is written based on this idea. It has two components: the main program and the branching program. The main program, once run by the CPU, activates a searching action to search for the document based on the information about the document. If the searching action successfully locates the document, the program ends. But if the document is not in the hard disc, the main program surely will not find it. If this happens, the failure of the main program will make the CPU run the branching program, which creates the document based on the information encoded in the main program.

φ is analogous to the main program. It enables the subject to see things, just as the main program enables the computer to find the document. The main program would not find the document if the document does not exist in the hard disc. Similarly, the subject will not see anything if the thing does not exist. The further mechanism underlying hallucination is analogous to the branching program. The branching program will not be activated unless the main program fails to find the document. Similarly, unless the subject fails to see the thing, the brain will not activate the further mechanism which will produce the sensory experience by itself.

The analogy is not perfect. For example, in the case of seeing, φ encodes the information from the seen thing, which is a causal process. In the computer program, by contrast, the main program is written by the programmer, and the document in the hard disc does not play a (directly) causal role. But I hope that this or other potential dissimilarities will not undermine the main purpose of the analogy. The overall causal conditions of simply finding the document (seeing) is different from the ones of creating the document (visual hallucination), and thereby the overall causal conditions of producing the respective sensory experience are different. Therefore, the sensory experience accompanying hallucination will not be produced in seeing because the branching mechanism is activated only after the failure of seeing. When the thing exists and φ is activated, the whole visual process ends up immediately with the subject seeing the thing.

I claimed that the failure of seeing after φ will activate a branching mechanism. What exactly is this? Is there any real physiological process underlying this failure? I shall sketch my conjecture as follows. Visual system may work like this. When the perceiver sees a thing, other cognitive and behavioural effects ensue. For example, when I see a snake I will immediately be scared and run away. The failure of seeing the snake, though the activation of φ, does not

immediately have such cognitive and behavioural effects, simply because the perceiver does not see the snake. But the failure and φ will still have impact; they may activate a further mechanism φ_1, and the subjective indistinguishable sensory experience of the snake may follow φ_1. Other cognitive and behavioural effects ensue, once the hallucinatory experience is brought about.

The following analogy may be helpful in understanding how the failure and φ have impact on the visual system. Imagine that you pull a bow and hold it for a while. You can loosen the bowstring voluntarily, but you might also loosen it passively, because the pulled bow becomes so reactive that you cannot hold the arrow any longer. The failure of seeing is perhaps analogous to your passively loosening the bowstring. Some biochemical index may immediately reach its threshold after the subject saw things, as you voluntarily loosen the bowstring. The biochemical index may reach the threshold differently once the subject fails to see things with the activating φ, as you passively loosen the bowstring; for example, it may take a longer time. A hallucinatory experience will be created, and further cognitive and behavioural effects will ensue, once the biochemical index reaches a certain point. This way of understanding the branching mechanism relies on some particular biochemical mechanism. I have not found any relevant empirical research. It is thus a conjecture. In a philosophical jargon, "it is conceivable."

There are several consequences if the branching mechanism works in the described way. First, no extra information is needed from outside to "inform" the visual system of the failure, other inducing methods have causal impacts on the visual system but will not deliver the information such as "I'm not the perceived thing". The visual system "figures out" the different aetiologies through the branching mechanism (e.g. the biochemical index reaches the threshold passively). Second, the failure of seeing is in principle detectable, because there is perhaps a very small

period of time difference between seeing and visual hallucination due to how the biochemical index reaches the threshold.

There is an obvious discrepancy between the above model and the original assumption involved in the Argument. Namely, the above model implies that seeing and visual hallucination share common neural activities φ, but the overall neural activities underlying seeing and visual hallucination might not be identical, because the branching mechanism may involve further neural activities.[37] By contrast, the Argument assumes that the philosophers' hallucination has the *same* neural activities as the counterpart perception. Does it mean that the above model fails to rebut the Argument? On the contrary, I think it means that the advocates gloss over the process of producing philosophers' hallucination. I want to point out that the reproduced neural activities may not remain the same if the external conditions change. The starting point of the Argument is seeing, and a philosophers' hallucination is derivative in the sense that the neural activities φ underlying seeing are conceived to be reproduced, and the subjective indistinguishable hallucination will follow. The advocates assume that the reproduction of neural activities must entail the complete sameness in both cases, which indeed rules out the possibility that the reproduced neural activities with a different external condition can bring about additional changes. The model I offered provides this possibility, which is indeed compatible with the generative view, because the generative view only sets a constraint on the consequence, namely that the sensory experience will be sufficiently produced by φ; it says nothing on whether a further mechanism will be activated or not. The model I offered meets the requirement from the generative view: no matter what happens between φ and ψ, φ suffices

[37] What I offered only involves the delay of the change of some biochemical index.

to produce ψ. Therefore, the way of producing a philosophers' hallucination does not necessarily rule out the model I offered.

Relatedly, the principle "same proximate cause, same immediate effect" should not be regarded as the rationale for the Argument (Robinson, 1994, p. 154). As I analysed above, the Argument does not guarantee that the proximate neural activities involved in seeing and visual hallucination are completely identical. The principle assumes a particular model of causation, namely that causation is a process, and the 'remote' cause will pass the causal power to the 'closer' cause until causing the effect. I doubt that such a model must apply to the current issue concerning sensory experiences, since even according to the composite causal theory of perception, sensory experiences are not something or involving something which can be punched, hit, pushed, etc. A more detailed discussion about the principle goes beyond this chapter. I only want to say that the principle, regardless of whether it is true or false, cannot justify the generative view, because φ is not necessarily the proximate cause, and the generative view does not necessarily take the billiard model of causation.

The second response. Although the computer program analogy provides a possible model for the distinct causal conditions for seeing, hallucination, and the accompanying sensory experiences, it might be accused of depending on some empirical facts. I will provide a second response which is purely conceptual.

Consider a well-functioning self-driving car. You turn on its engine and driving program. The car will drive under normal conditions. But what if some normal condition is missing? Suppose that the surface of the road is extremely slippery. The wheels will then spin idly, and the car will stay right where it is. Nevertheless, the speedometer shows the speed as it normally does, so does other information. From the car's perspective, driving and idly spinning in general are very similar. Practically, there are maybe some differences. For example, when idling, the car

will reach the apparent speed much faster and with much less gas because of less resistance. Also, the driver can feel the accelerating by being pressed against the seat. These differences can be eliminated if the comparison is more carefully designed. For example, let the car be hung by a helicopter and accelerated to a certain speed in the air; it is then landed on the normal road and extremely slippery road, respectively. Because the helicopter and the car have the same speed, when landed, there is no accelerating effect. Hence, the mentioned differences can be eliminated. Moreover, the driver's experience is trifling because, in principle, she can be removed. The key point is that the car takes itself to be driving in both cases; driving and idly spinning is indistinguishable for the car.

I want readers to focus on three pairs of analogies: the car's driving is analogous to seeing; the wheels' idly spinning is analogous to hallucination; and the car's engine and other mechanisms are analogous to the visual system. The question becomes, will the explanation of idly spinning screen off the explanation of driving?

Spinning and all the information on the speedometer are mechanically connected with each other, and they can be explained by a set of mechanisms of the car. The car in this sense 'knows' that it is spinning which it takes to be driving, while it does not 'know' whether it is idly spinning. To explain what idly spinning is, besides a set of mechanisms, the explanans must involve some external conditions, e.g. the slippery road. That is, a mechanical and internal explanation of spinning is inadequate to explain what idly spinning is. The condition of slippery road or other external conditions are necessary.

Moreover, the mechanical and internal explanation of spinning is inadequate to explain what driving is. This is because when a car is driving, besides the well-functioning internal mechanism, other external conditions should be met. In short, the overall causal conditions for idly spinning and driving are different. Therefore, whatever an account of idly spinning is, it

need not apply to driving. Or, simply, the analogous screening-off problem does not arise. Similarly, a particular pattern of neural activities is at most a causal condition for sensory experience; it cannot explain what a hallucination is. To explain what a hallucination is, the explanans must contain an abnormal condition, for example, the sensory experience is not caused by an appropriate thing.

Does the explanation of the wheels' spinning (not idly spinning) screen off the explanation of a car's driving? It is also not true. A set of mechanisms causally explain the wheels' spinning and the information on the speedometer. And these mechanisms also occur when the car is driving. But these mechanisms themselves are insufficient to explain a car's driving, because a car's driving at least requires the car to pass a certain distance, which goes beyond these mechanisms. Similarly, a particular pattern of neural activities is insufficient to explain seeing because seeing requires the seen thing to be at least causally relevant.

One may accuse me of making a wrong analogy: a sensory experience should have been analogous to wheels' spinning. The internal mechanical explanation of wheels' spinning screens off the external components of driving; similarly, neural activities screen off the seen thing and its properties as the explanans. Even if the analogy is as the advocates think, the screening-off problem will also not arise. The external components of driving are also causally connected to the mechanisms of the car which explains the spinning. This means that they also causally explain the spinning. To be an external causal condition does not mean to be screened off by the internal causal condition. For example, suppose that a traffic accident killed someone, and the driver got drunk before the accident. Hitting the victim directly caused the death, but it is also true that this DUI caused the accident. So, in this case we would not claim that hitting the victim screens off the DUI as the explanans.

For those who are not satisfied with the self-driving car analogy. I offer an electric cooker analogy, which does not need any sophisticated design. Jerry owns a well-functioning electric cooker. Suppose rice will be well cooked after 20 minutes in a low altitude city, say, Paris. Now Jerry brings the electric cooker to Lhasa, the capital city of Tibet. He puts the same amount of rice with the same amount of water into the cooker. After 20 minutes cooking, the inner state of the cooker is roughly the same as it is in Paris: the cooker automatically turns off, the heating metal has a similar temperature, and so on. But the rice is not well cooked and not edible. This is because the boiling point of water decreases as the altitude increases, and rice is being cooked at a lower temperature. This example shows that the inner state of the cooker neither suffices for the proper cooking, nor for the improper cooking. Both explanations need to appeal to external conditions. I shall not elaborate the relevant analogous aspects which are similar to the driving car analogy.

The electric cooker is also helpful to illustrate the branching mechanism in the first model. But we need Jerry to improve the cooker. Imagine he plans to solve the problem caused by the low atmospheric pressure but still wants the cooker to function normally in low altitude places. He installs a device in the cooker which can detect the boiling point of water. If the device detects the temperature of the boiling water as lower than the boiling point of water at the sea-level pressure, it will increase the atmospheric pressure inside. The activation of the device will guarantee the main mechanism to reach its goal. The failure of seeing is analogous to the failure of normally cooking before the activation of the device. Our brain perhaps also has some "device" to detect the failure of seeing or its effect, and then fixes the following process just like the device of Jerry's cooker.

So far, I have provided two possible ways of understanding the different overall conditions for seeing and hallucination. The first possibility is not purely conceptual because it predicts some

empirically verifiable mechanism. The second possibility is purely conceptual, relating to how we understand seeing and hallucination. Either model works, the screening-off problem will be dissolved, because both models suggest that different external conditions play essential roles in producing seeing and hallucination, as well as the accompanying sensory experiences. The hallucinatory experience is produced differently from the visual experience. This means that whatever an account is given to hallucination and its accompanying sensory experience need not apply to perception. In the next section, I attempt to give a positive account of hallucination, which is not an essential component of anomalous disjunctivism.

6.5 A positive account of hallucination

I have shown that anomalous disjunctivism is consistent with the generative view. In this section, I shall offer a positive account of hallucination; relatedly, I shall show that anomalous disjunctivism is also consistent with Common Kind. The question is, what is the common kind according to anomalous disjunctivism? This question is not difficult to answer. It is like the question of what the common kind is between human beings and chimpanzees. Both are primates, and primate is the nature of these two species. Similarly, both seeing and visual hallucination are sensory experiences, and a sensory experience is not an additional event to seeing or to hallucination, as primate is not an additional existence to human beings and chimpanzees.

Standard disjunctivists deny Common Kind, because they believe that hallucination, unlike seeing, cannot be relational, the relational nature thereby cannot be shared by seeing and visual hallucination. By contrast, their opponents believe that both seeing and hallucination are not

relational (e.g. representational).[38] Both sides hold that being relational or non-relational is essential to the nature of sensory experience, which is false (see §1.1 and §5.4). I believe that in both seeing and visual hallucination, the seen thing and its sensible qualities partly explain the common sensory experience. The seen thing plays a double role: it causes and is also the object of the seeing. The same information of the seen thing is duplicated in producing philosophers' hallucination, so the seen thing indirectly causes the hallucination; unlike seeing, the object of hallucination is not the seen thing, though it is taken to be. But the sensory experience is actual as the one in seeing; the same sensible qualities are instantiated, but unlike in seeing they are not had by anything.

As I argued, according to anomalous disjunctivism, sensory experience is not a purely subjective episode caused by neural activities; it is rather explained by the particular seeing and hallucination. That is, what you see and what you hallucinate, as well as the relevant conditions, explain what kind of a sensory experience you will have. Thus, it is not difficult to understand why the seen thing partly explains the sensory experience. This explanation does not directly apply to hallucination because the hallucinated thing is not actually seen. But according to the Argument, φ is reproduced in the counterpart hallucination. Assuming the generative view, φ will produce the same sensory experience in both cases. Why should this be possible? Why should I not have a disparate sensory experience? The plausible answer is that the reproduced φ inherits the same information from the seen thing. This inheritance means

[38] Sense-datum theorists hold that there is common kind and sensory experience is relational. I put sense-datum theory aside here.

that even though the thing does not exist in the visual hallucination, φ still carries the thing's information. The seen thing thus indirectly causes the exact sensory experience.

So far, it appears that the explanans of the sensory experience associated with seeing and with visual hallucination still differ, because the seen thing, or more precisely its sensible qualities, explain the sensory experience associated with seeing by *constituting* it,[39] while the seen thing (through its duplicated information) explains the hallucinatory experience by causing it. One may object to naïve realism by claiming that if the hallucinatory experience is caused, the seen thing would be redundant in causing the experience in the veridical case and thereby it will screen off the seen thing and its sensible qualities as the explanans.

However, the constitutive relation is compatible with the causal one. The seen thing and its sensible qualities do not only constitute my visual experience, but also cause me to see them. Think about the question, why does a subject have a such-and-such visual experience? As to the banana case, I would answer, "because I see a banana". This answer conforms to the constitutive relation. But the questioner may intend his question to be about the ultimate cause of the visual experience. Then my answer would be like this: the banana is yellow and crescent-shaped, and the light is reflected from its surface and strikes my retina, etc.

There are also other examples showing the compatibility between the constitutive relation and the causal relation. For example, the parent-child relationship is constitutive but also involves

[39] In the introduction, I claim that the notion of constitution is too metaphorical and as well as too metaphysical. I compromise here for the sake of convenience. To say that sensible qualities constitute sensory experience is just to say that they are the objects or content of sensory experience. More precisely, sensible qualities do not constitute the sensory phenomenology but only partly determine it; other factors such as perceptual system, perceiving conditions, etc., are also determinants.

causality. It is determined once the parents begat their child, and begetting a child involves a causal process in which both parents participate.

Hallucination is slightly different from seeing. It is constituted by sensible qualities which are instantiated but not had by the seen thing; and the seen thing also does not directly but only indirectly cause the hallucination. Despite the difference, in hallucination it is still the sensible qualities explain the sensory experience by constituting it. Hence, the hallucinatory experience and visual experience share a constitutive component in common, namely the sensory experience.

Doubts about this view may come from the question of how to understand sensible qualities which is instantiated but not had by anything in visual hallucinations. We usually think that sensible qualities must be instantiated by something. The banana on the desk is yellow and crescent-shaped; my laptop is small and light; etc. These are paradigmatic examples. But the world is complex and not unified; not all instantiated sensible qualities are had by something.

I try to show that sensible qualities can exist by themselves without being had by material things. I start with a truism that a sensible quality can be instantiated for different reasons. For example, many things can be blue. My jeans are blue; the sunny sky is blue; the Mediterranean Sea is blue, etc. They are blue because of different reasons: my jeans are blue because of a specific pigment they are dyed. The sunny sky is blue not because there is something blue in the sky but because of Rayleigh scattering of sunlight in the Earth's atmosphere, which causes diffuse sky radiation. The Mediterranean Sea being blue is also an effect of the scattering of sunlight. Particularly, it is the effect of the scattering of sunlight of water molecules. These examples show that a sensible quality can be instantiated for different reasons; and a statement with the predicative form <o is F> does not necessarily attribute a sensible quality F to a

material object. The sky is not a material object but is blue. I am even not sure whether it is a thing in a more general sense.

Similarly, we also attribute sensible qualities to shadows, rainbows, etc. All these "things" are not something which has mass, volume, etc. Shadows are projected onto the surface of things. They are dark, have some shapes, can cool certain area, etc. For instance, my shadow is fractured when it is projected onto a joint of walls. It is true that the shape of my shadow is partially determined by the structure of the walls and partially determined by me, but we neither attribute the shape of my shadow to the walls nor to me. It is the shape of the shadow, but a shadow seems to be no more than a shaped darkness.

The inclination to postulate a subject for a sensible quality perhaps is only a linguistic habit. The predicative statement— "the rainbow is colourful"—posits a subject referred by the name "the rainbow". But a rainbow is no more than a set of sensible qualities located in the sky. In other words, these sensible qualities can exist independently of the rainbow which is supposed to have these qualities.

Similar linguistic phenomenon appears in predicative statements about other state of affairs. For example, in Mandarin, people say, "天在下雨", literally meaning that the sky (or the heaven) is raining. The subject-predicate sentence implies the existence of the sky or the heaven which is the subject of raining. I am not sure what the sky is. Metaphorically, people say that it is a dome. But it is not a real dome. I think that the sky, even if exists, does not exist like a stone or a chair. And the predicative statement only means to assert a state of affairs, namely raining. It thus seems reasonable to claim that raining can exist without assuming the existence of the subject—the sky. There is also linguistic evidence for ignoring the subject in a predicative statement. For example, in English, people use the statement "it is raining" to

translate "天在下雨"; "it" is a dummy subject whose reference is empty. In short, a predicative statement can assert an objective state of affairs without attributing a property, a relation, or a state of affairs to the subject referred to.

I think that in a hallucination the subject hallucinates a set of sensible qualities. The sensory experience is partly determined by the hallucinated sensible qualities. These hallucinated sensible qualities are caused in some way and exist independently of the apparent object which seem to have these qualities. In this respect, hallucinated sensible qualities are essentially not different from other sensible qualities aforementioned. They are actual and exist independently.

This actualism about hallucinated qualities echoes to H. H. Price's passages arguing for the sense-datum theory:

> When I say 'This table appears brown to me' it is quite plain that I am acquainted with an actual instance of brownness…But I am not acquainted with an actual instance of tableness, though of course it may be that there is one. Thus the natural way of restating the original sentence 'This table appears brown to me' is 'I am acquainted with something which actually is brown (viz. a sense-datum) and I believe there is a table to which this something is intimately related (viz. belongs to)'. (Price, 1932, p. 63)

I am not aiming to revive the sense-datum theory. But I do think that the brownness is actual as Price argues. Price's problem is that from the actuality of brownness he argues for the existence of something (a sense-datum) which has the actual brownness. This move is phenomenologically unnecessary and unjustified. For one thing, a set of sensible qualities are sufficient to explain the sensory experience, it is thus ontologically redundant to postulate a dubious entity, namely a sense-datum; for another, if a sense-datum other than an ordinary thing explains the sensory experience, then it seems that we can have a further hallucination of the sense-datum, which means that we can construct a further argument from hallucination to demonstrate the existence of a second-order (or even n-order) sense-datum. Therefore, the inference to the existence of a sense-datum is inpalatable. Price might think that instantiation

and actuality must go hand-in-hand. But as I argued, sensible qualities can exist independently. Of course, it is also innocent to call a set of sensible qualities a 'sense-datum', but merely as a 'dummy' name.

The sense-datum theory is usually accused of postulating something private, impossible to be known by others. A similar accusation may arise for hallucinated sensible qualities. But I think that this accusation does not apply to anomalous disjunctivism. Note that anomalous disjunctivism is consistent with the generative view, which implies that hallucination is a natural event, regularly relating to patterns of neural activity. If the neural activities underlying seeing a banana are reproduced again, I will hallucinate what I saw. If someone has a similar biological structure and the same pattern of neural activity is reproduced, she will also have the similar hallucination. We can tell others what we seem to see. No one has difficulty in understanding our hallucinatory scenes. Therefore, hallucinated sensible qualities are not private in the problematic sense that I cannot explain to anyone what I am experiencing.

However, hallucinated sensible qualities are still mind-dependent, or more precisely, subject-dependent. This is simply because in hallucination the subject is hallucinating a set of sensible qualities. Without the subject, there would be no neural activities, nor hallucinatory experience. Indeed, these sensible qualities are also object-dependent, though there are no real objects. They are object-dependent in the sense that all information that produces them comes from the seen thing. If the seen thing were not a banana but a ripe tomato, the hallucinated sensible qualities would be different.

Being object-dependent seems implausible, because it seems to imply that hallucinating non-actual things is impossible due to the lack of object to depend on. But actual hallucinations might be quite wild like dreams; the hallucinated objects can be not only unseen ones but also impossible ones. For example, you can hallucinate a slimy gigantic alien; you can also

hallucinate a talking banana; etc. But philosophers' hallucinations are not like actual ones. They are reproduced according to the counterpart perceptions as the Argument requires. For these wild hallucinations, they do not share the (initiate) neural activity underlying perceptions, so whatever account applies to them, it need not apply to perception.

One may further worry that hallucinated qualities are disparate from shadows, rainbows, and so on. For example, rainbows exist in the physical space, while hallucinated sensible qualities are not. Relatedly, rainbows exist independently of perceivers, while hallucinated qualities do not. These differences must be admitted. But they only show that different sensible qualities can be produced in different ways and in difference places, not that hallucinated sensible qualities are not sensible ones. Some sensible qualities are independent of perceivers, some are not, some depend on perceivers but still exist in physical space such as afterimages.

There are different types of afterimages such as negative afterimages, positive afterimages, phosphenes, etc. For the sake of my own argument, I only focus on negative afterimages. For example, when you look at a red spot on a white page for a while and then shift your gaze to a white wall, you will see a vague greenish-blue spot. Physiologically, the negative afterimage is caused by the loss of sensitivity of photoreceptors.

G.E. Moore uses afterimages as evidence to support the sense-datum theory. Phillips argues that "afterimages are illusory presentations of pure *visibilia*" (2013, p. 427). Pure *visibilia*, including rainbows, shadows, etc. are supposed to be opposed to material things (Also see M. G. F. Martin, 2010, p. 188). The term "pure *visibilia*" is not precise because it literally means 'things' that are *only* seen. But these *visibilia* are not only seen but also have other causal effects. For example, the shadow of a tree can cool a certain area; afterimages can make one feel dizzy

if constantly being shown.[40] These non-sensory effects show that they are objective. But objectivity does not conflict with my claim that sensible qualities can exist independently of the 'things' to which these qualities are attributed.

Return to Phillips' claim, I agree that afterimages are pure *visibilia* only in the sense that they are a set of sensible qualities. But I do not quite understand why Phillips thinks of his account involves 'illusory' presentations. Pure *visibilia* such as rainbows, shadows, holograms, etc. are not illusory. If afterimages, as he tries to argue, are "exhaustively characterised in terms of a subject's apparent perspective on external, public reality" (Phillips, 2013, p. 417), then they are not illusory presentations. The only reason that they might be characterized as illusory is that the relevant object does not look as it is, for example, the white wall looks to have greenish-blue spot. But the white wall is not what the afterimage is about.

Hanoch Ben-Yami, in his unpublished paper 'Afterimages and Related Phenomena', argues that afterimages are compatible with realism. For example, seeing cyan floating spot on a white wall is seeing the cyan part of the white wall but not its red part, because the red photoreceptors are bleached. That is, the way a white wall looks *does* have a cyan part. In this sense, having a negative afterimage still contains seeing; it does not involve any illusion.

Ben-Yami is right that there is no illusion involved in seeing an afterimage. But it is also odd to say that a white wall has a cyan part. It is true that white light can be split through a prism, and one of the split lights is indigo (similar to cyan). As such, it seems more natural to say that the cyan part is the part of white light, and the subject's red cones loses their sensitivity to receive other part of the light. Therefore, the cyan is not the sensible quality of the white wall;

[40] I am grateful to Hanoch Ben-Yami who shows me that pure *visibilia* are more than its name means.

it is rather a joint consequence of both white light and physiological changes. On this view, negative afterimages as Phillips argues are pure *visibilia* because it is some phenomena of light. The difference between negative afterimages and other *visibilia* such as rainbows lies in the fact that the subject's physiological construction plays a role in seeing negative afterimages. However, the change of physiological feature only makes a difference on which sensible quality will be experienced; it does not make sensible qualities non-sensory.

To reiterate, I incline to combine Phillips' and Ben-Yami's accounts, namely negative afterimages are veridical presentations of pure *visibilia*, which are caused by the malfunction of the subject's photoreceptors. This phenomenon depends not only on elements in the physical space (e.g. the reflective material and light), but also on the subject, viz. her malfunctioning photoreceptors.

Philosophers' hallucinations are like afterimages with respect to having the subjective element; unlike afterimages, the hallucinator's retinas function well. It is hard to say whether there are any elements in the physical space playing any role in producing a philosopher's hallucination, which depends on how the hallucination is induced. This is usually ignored in setting up the Argument. Imagine that the hallucinated sensible qualities of a banana on my desk are caused by reproducing the light information on the retinas. As such, there are elements in the physical space playing some role. No matter how a philosopher's hallucination is induced, the sensory experience is caused by the same information as seeing. In this sense, the sensory experience is at least objectively produced, though the hallucinated sensible qualities are not in the physical space.

Conclusion

I have described how anomalous disjunctivism can address the screening-off problem. To sum up the main points, the overall causal conditions for seeing and hallucination are different. The common neural activities φ suffices for sensory experience, but the sensory experience is not the one in the composite causal picture, it is rather accompanying seeing and hallucination. Seeing occurs only on the condition of the existence of a seen thing and visual hallucination occurs only on the condition of the failure of seeing. As I argued, the failure of seeing plays a substantial causal role in explaining visual hallucination; φ can at most causally explain the production of sensory experience rather than the hallucination itself. Additionally, the failure of seeing may induce a branching mechanism. If so, seeing and visual hallucinating will have some biochemical difference. Either case supports the claim that the essential conditions for hallucination differs from the ones for seeing. Hence, the screening-off problem will not arise.

The following are the main differences between anomalous disjunctivism and other versions of disjunctivism. First, I accept Common Kind but not the claim that the common kind is essentially representational or involves a sense-datum. As I proposed, the common kind is a sensory experience accompanying seeing and visual hallucination, and it involves instantiated sensible qualities which may not be had by objects. By contrast, standard disjunctivists reject Common Kind. They either give a negative and epistemic characterisation of hallucinations (Fish, 2009; M.G.F. Martin, 2004), or give a positive characterisation, e.g. Keith Allen treats hallucinations as a degenerate kind of imagination (2015).

Second, unlike standard disjunctivism, I accept the generative view. The common neural activities φ plays some causal role in producing seeing and visual hallucinating, and it is sufficient for the sensory experience in the sense that once is φ activated, the sensory

experience will follow. But φ is neither sufficient for seeing nor sufficient for hallucination. By contrast, standard disjunctivists reject the generative view. They reject it because they believe that the rationale behind the generative view is the principle "same proximate cause, same immediate effect" (Robinson, 1994, p. 154). I argued that the Argument does not rely on the principle but only on the generative view. Thus, philosophers' hallucination and perception may not have the identical neural activities but have common neural activities.

I want to make a brief comparison between my solution and Keith Allen's. He argues that the occurrence of a philosophers' hallucination requires the absence of an appropriate thing which is an additional necessary condition (2015, p. 300). Correspondingly, the seen thing and its properties are necessary conditions for seeing. He also follows Martin (2004) in thinking of these conditions as non-causal. I agree that the absence of an appropriate thing and the existence of the seen thing are necessary conditions for hallucination and seeing, respectively. But it is unclear to me what the meaning of a non-causal condition is. Allen (2016, pp. 102–103) later adopts Woodward's theory of causation, which asserts that causation is difference-making. Specifically, the nature of an effect depends on the nature of its cause, and causation does not necessarily need a spatiotemporally continuous process (Woodward, 2008, pp. 229–263). On this account of non-causal condition, the sensory experience accompanying hallucination seems to depend on the absence of the hallucinated object. But how is this possible? Though I agree that the absence of the appropriate thing is a necessary condition for hallucination, it is still mysterious to me how this condition can be non-causal.

My descriptions of the possible mechanisms clarify the role of the absence of an appropriate thing (I use my own terminology "the failure of seeing"). As I argued with the self-driving car analogy, the failure of seeing is a necessary causal condition for hallucination, and the seen thing is also a necessary causal condition for seeing; moreover, they also play a conceptual role

in understanding hallucination and seeing. The different causal conditions make the whole mechanisms of seeing and of visual hallucination different. This is why any account of hallucination need not apply to seeing. The sensory experience accompanying hallucination do not depend on the absence of the hallucinated thing but conceptually depends on the seen thing; It is caused by φ with a branching mechanism. In this sense, the failure of seeing also plays a standard causal role.

In the end, it is worth emphasising that anomalous disjunctivism is devised for addressing the possibility of philosophers' hallucinations. If they turn out to be impossible, then anomalous disjunctivism is redundant.

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