Appearance and Reality

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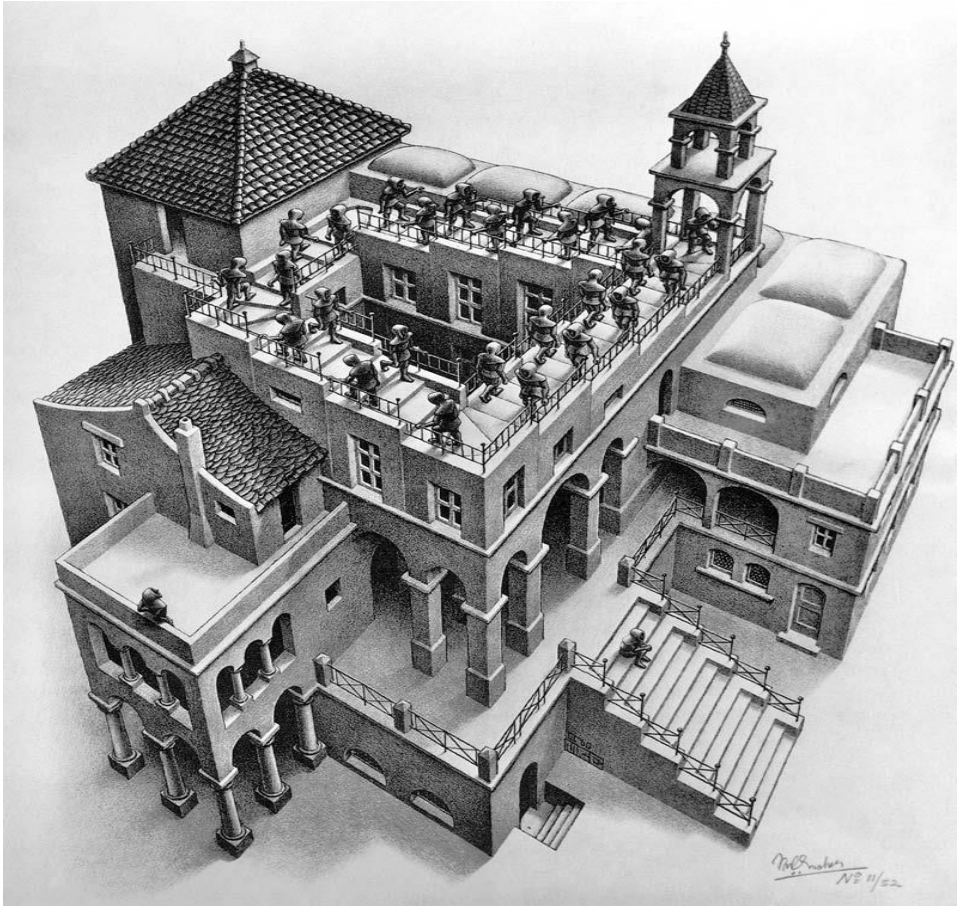

"Ascending and Descending," by M.C. Escher, 1960 (Totally History, 2020)

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APP Editor's Note

It's not uncommon for professional academic philosophy journals, psychology journals, other humanities/Arts or social science journals, and other professional academic organizations, to run essay contests. Usually the winner takes all, getting a secure publication, perhaps some money for a few burgers and French fries, and always a loving pat on their pointy little head. But other organizations sometimes offer much more, including worthwhile prize money, and a wider readership than merely other professional academics.

APP is very pleased to publish a *losing* entry from the 2022 Dennis Balson Essay Prize for Psychology, a worthwhile prize indeed. Except in the relatively unusual case of awarding several rank-ordered prizes, or ties, of course only one essay can win *the*

prize, which leaves n-1 losers, where n = the total number of essays submitted for the prize, In turn, a losing entry can be interesting for any one of several reasons: (i) it might actually be a better essay than the winning essay, but simply lost "the referee lottery," (ii) it might be brilliantly insightful, yet also have some flaws because the author was courageously willing to take a few risks and make some corresponding mistakes, (iii) it might have been off-topic, or (iv) it might have been just not good enough, a downright failure.

In any case, at least where philosophy is concerned, *success* and *winning*, we think, are vastly over-rated, and correspondingly, *failure* and *losing* should be celebrated for having their own special merits and virtues. Bertrand Russell, for example, one of the greatest mathematical logicians in the history of that subject, was only seventh Wrangler in the Cambridge Mathematical Tripos. Russell's student Ludwig Wittgenstein, arguably the greatest philosopher of the 20th century, was consistently a "B" level student at school. Arthur Schopenhauer, Karl Marx, and Charles Sanders Peirce, no philosophical slouches, all failed to secure permanent professional academic positions. And Samuel Beckett, who received the 1969 Nobel Prize in Literature mainly for exploring the literature of failure, in his 1983 novella *Worstward Ho*, aptly observed: "Ever tried. Ever failed. No matter. Try again. Fail again. Fail better."

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1. Introduction

(T) "*What is real to one mind may not be true to another, <u>therefore</u> do our thoughts reflect what is actually real or are our minds interpreting what we think is real?"*

In this essay, I'll argue that argument (T) is *not* deductively valid, since from a premise about people disagreeing about the nature of reality, we cannot infer from that premise *alone*, either that our thoughts reflect what is actually real *or* alternatively, that our minds interpret what we think is real. However, the spirit of the question requires an answer to the long-standing question in philosophy and psychology: Are human thoughts are reflections of (or do they correspond to) reality, or are they mental interpretations of what is real? The position taken here is that while there are numerous metaphysical and epistemological problems raised by this question, such as begging an answer to the debates of realism vs anti-realism (Brock & Mares, 2014; MacArthur, 2020), and realism vs cognitive relativism/social construction (Edwards, Ashmore & Potter, 1995), there is a case that can be made in the limited space available here for *the interpretation view*, based upon considerations from the psychology of perception. Thus, that at least for part of our experience, our minds interpret "what

we think is real." Whether that in turns "corresponds" to reality in the realist sense, is another question.

2. Analysis of the Question

Let's begin by analyzing argument (T), focusing on the premise:

(P1) That which is taken to be real or true to one person may not be real or true to another.

This statement is true as a matter of direct experience and observation, whatever theory of truth is philosophically accepted, e.g., redundancy, correspondence, pragmatic, coherence, and so-on (Mosteller, 2014). Certainly, philosophers and psychologists have different opinions about what is real and true, and for metaphysicians, different opinions even about whether ordinary things such as people and macroscopic objects such as chairs, are real or exist at all (ontological nihilism, e.g., Unger, 1979; Grupp, 2006), or whether anything is known at all (epistemological scepticism, e.g., Comesaña, & Comesaña, 2022). There is even a lively debate in philosophical logic circles about the acceptability of the thesis of trivialism, that everything is true (and also false as well) (Kabay, 2010).

In any case, it is not a matter of debate, even philosophical debate, that people disagree about the nature of reality, though the significance of such disagreements in itself the subject of perennial debate (Rescher, 1985). In fact, it can be proved that people disagree about what is real. Suppose, by hypothesis, that someone disputed the claim that people disagreed about this. Then, assuming that the hypothetical doubter accepted that other people do exist, it follows that at least two people disagree, the doubter and the one she is doubting, whoever is proposing that disagreements exist, in the limit, the present writer. Therefore, disagreements about reality exist, hence proving the premise (P1) in argument (T) is true.

Next, we should ask what follows from the claim that people disagree about truth claims/the nature of reality, proposition (P1), since (T) is making an argument, having a proposition which is a premise, followed by "therefore":

(P1) That which is taken to be real or true to one person may not be real or true to another.

Therefore,

(C1) Our thoughts reflect what is actually real.

Or:

(C2) Our minds interpret what we think is real.

Neither (C1) nor (C2) follow deductively from (P1), so the argument (T) is invalid.

Consider the argument from (P1) to (C1) first. The mere fact of a disagreement about the nature of reality does not prove that thoughts reflect what is actually real, and historically, this was one argument for epistemological scepticism (Comesana & Comesana, 2022). People, especially philosophers, disagree about everything as a group, except maybe singular self-referential things such as "disagreements exist," as demonstrated above. If the mere act of having a worldview somehow resulted in "world-making" (Goodman, 1978; Sylvan, 1997), then reality would be logically trivial, and everything would indeed be true (Kabay, 2010). While that is an arguable position, perhaps, it definitely would show that "reality" does not exist as any sort of coherent whole, so why, by Occam's razor (do not multiple hypotheses unnecessarily) suppose that it exists at all? In any case, people may disagree about many aspects of reality, and simply be wrong about their beliefs in a common-sense realist sense, such as those who believe that they are dead or have rotting organs, while actually being alive and having non-rotting organs: Cotard's delusion (Young et al., 1992). Hence (C1) does not follow from (P1).

Nor does (C2) follow from (P1), as the bare fact of disagreements about the nature of reality does not show that our minds interpret what we think to be real. While I believe that this is the case, and will argue for it in the rest of the paper, *mere disagreement alone* does not prove the interpretation thesis of cognition. It is consistent with the truth of (P1) for perception say, to be "direct" with no interpretation/cognitive aspect, as some psychologists of perception in the direct or naïve realism school, just as J. J. Gibson has proposed, rightly or wrongly (Gibson, 1979; Costall, 1984).

3. Perception as Interpretation

Perception does not map "truth" in the way of "ideal observer" theories of perception, based on a hypothetical observer who performs some specific tasks subject to optimality constrains, given available information (Geisler, 2003). For humans there is a closer match of practical utility regarding perceptual performance, linked to evolutionary fitness and survival, rather than acquiring so-called objective truths about "reality" (Koenderink, 2014). Organisms, including humans, do not exist in an objective perceptual environment, but perception is conditioned by what they are; perception is organism-specific and the nature of the organism determines what is

perceived, and what can be perceived (Hoffman & Prakash, 2014; Koenderink, 2014; Felin, Koenderink & Krueger, 2017).

Perception also does not involve a world-to-mind mapping in a camera-like fashion of representation of the "true" external world to "true" internal conceptions of the world, which is a common foundational assumption of the cognitive sciences (Koenderink et al., 2014).

Felin, Koenderink, and Krueger (2017) note that the visual illusions, such as the Ponzo illusion, have been interpreted by cognitive psychologists as showing the fallibility, limits, and biases of human perception (Gregory, 2005), and are

> an artefact of the problem of singularity and exhaustively representing objective reality in the first place. (Felin et al., 2017: p. 1046).

Indeed, some visual illusions show not merely bias in human perception, but present a "reality" which is scientifically false, if not impossible, thus refuting proposition (C1).

The so-called "moon illusion," supplies an example of an illusion which presently does not have an agreed upon explanation, and in its own right, is thus as puzzling as anything in the philosophy and psychology of perception. The problem, as Kroustallis says in a review essay, "has perplexed philosophers and scientists alike from antiquity onwards, and it still resists an uncontroversial explanation" (Kroustallis, 2004: p. 151). The moon illusion literature is characterized by proposed solutions and refutations; as Nanavati says: "[t]he question as to the moon illusion's cause remains unanswered, an ancient and puzzling riddle of natural philosophy whose solution has eluded our greatest geniuses" (Nanavati, 2009: p. 24). Ross and Plug conclude from examining proposed solutions to the moon illusion, that "[n]o single theory has emerged victorious" (Ross & Plug, 2002).

Briefly described, the moon illusion is that the moon on the horizon appears to be larger to human observers than when the moon is in its zenith counterpart position. The retinal image is the same in both cases, and the moon is not physically closer when it appears larger. Ptolemy in the 2nd century AD thought that the illusion was due to a magnifying effect of the Earth's atmosphere, as with the apparent enlargement of objects viewed when placed in water. The "refraction" account was accepted for 1,000 years, until alternative accounts were given by Descartes, Malebranche, and Berkeley. The "refraction" account is incorrect, as the Apollo astronauts on the moon observed an "Earth illusion," the rising Earth appeared larger than the zenith earth. The moon has no atmosphere, and even if the perception of the size of the moon was influenced by the atmosphere, the atmosphere cannot be the cause of the illusion (Egan, 1998). The horizontal moon viewed from a plane at an altitude of 30,000 feet (9,144 meters),

appears no bigger than the zenith moon normally appears (Wolbarsht & Lockhead, 1985).

The computational view proposes that the horizontal moon is perceived to be a greater distance than that perceived for the zenith moon, but then by a process of computation, the brain decides (somehow), that the horizontal moon has a greater perceived size (Egan, 1998: p, 615). Visible cues on the horizon indicate a greater distance (e.g., buildings and trees), while the zenith moon apparently lacks these cues. Thus, the horizontal moon appears to be larger than the zenith moon, and thus it looks further away. But Egan points out that the horizontal moon looks large even when there are no environmental cues to give a framing effect, cues that increase the moon's apparent distance. Indeed, the claim that the greater perceived size of the horizontal moon occurs through computation of its greater perceived distance, conflicts with what most people observe: namely, that the horizontal moon appears to be closer than the zenith moon, rather than appearing more distant (Egan, 1998: p. 615). This is the "size-distance paradox," which has been taken as a counterexample to the Kaufman-Rock explanation of the moon illusion (Kaufmann & Rock, 1962(a), 1962(b); McCready, 2004).

Egan, after presenting his critical survey concludes that there are epistemological and methodological difficulties facing any attempt to solve the moon illusion:

> What are the prospects for a solution to the puzzle? There is no reason to think that a general theory of visual space perception would yield, in any straightforward way, an explanation of the mechanism underlying the moon illusion. Illusions typically arise from complex interactions among various levels of visual processing involving both fixed or structural features of the visual system as well as "higher-level" or "cognitive" processes …. Explaining an illusion requires disentangling and independently specifying each contributing factor. This will be especially difficult for the moon illusion, because we do not even have a clear specification of the explanandum. When observers judge that the horizon moon looks larger than the zenith moon, are they reporting that it appears to be a larger object, or that it fills more of one's visual field? It simply is not clear. Even more problematic, as we have seen, are distance judgments. We have no way of measuring or specifying the apparent distance of the moon. How far away does the zenith moon look? Of course, nothing can look 250,000 miles away. How much further does the zenith moon look than the horizon moon? The question has no sensible answer. Given these difficulties, the moon illusion's status as our longest-standing scientific puzzle seems to be secure. (Egan, 1998: p. 621)

The moon illusion is cited here as an illustrative example of a long-standing perceptual paradox that has defied a consensus answer. This is not to say that there may not be some solution to the moon illusion that may be generally accepted in the future.

However, some researchers feel that the moon illusion requires a radical revision of how we think about consciousness and perception. For example, Rudrauf (2017; Rudrauf et al., 2018; Williford et al., 2018), believe that it is necessary to view human consciousness within the framework of a non-Euclidean geometry, such as projective geometry, to present a mathematical account of consciousness, the Projective Consciousness Model (Rudrauf et al., 2018). The neural mechanics involved in a number of optical illusions, such as the "hypnotic vibes," various patterns that fool the brain into perceiving motion, are not yet known (Sarcone, 2013).

Likewise, for the even more philosophically and mathematically interesting perception of impossible objects, and the perception of motion as inconsistent (Mortensen, 2014). For example, impossible images were devised by Oscar Reutersvärd (1915-2002), M.C. Escher (1898-1972) and Roger Penrose (1931-). A famous example is Escher's lithograph print *Relativity* (1953), which depicts a world where not only does the law of gravity not hold, but the impossible situation of moving up the stairway, leads to moving down the stairway, simultaneously. This impossibility is also depicted in the lithographs, *Ascending and Descending* (1960)—as per the image at the top of this essay—and *Waterfall* (1961), where the latter depicts a perpetual motion machine, as water flowing down, also flows simultaneously up as well. These impossible pictures have been analyzed within a framework of a paraconsistent geometry (Mortensen, 2010). However, these objects of perception represent a reality that cannot exist, so our perceptions are not "corresponding" to reality, because reality is presumably consistent, being say, various lines in a certain configuration, not an existing an impossible object (Mortensen, 2010).

It is common enough for cognitive psychologists to conclude, from the study of illusions and the fallibility of the human perceptual system, that human perception does not operate as a video reproduction of reality, but rather is an interpretative process influenced by a range of factors such as prior beliefs and knowledge, experience and expectations, even with respect to simple perceptual properties such as colour, shape and size (Gregory & Heard, 1979; Pronin et al., 2002). However, the more interesting philosophical thesis has been made by Brian Rogers, namely, that we are deluded about the nature of illusions because there is no epistemologically satisfactory way of distinguishing between perceptual experiences regarded as veridical, and those regarded as illusions (Rogers, 2014). The problem is that illusions are widely regarded as "departures from reality" (Gregory, 2009: p. 9), but we do not know what reality is, outside of the working of our perceptual system. However, if there is no single objective reality "out there" by which perceptions can be compared in some pre-theoretical way, and hence no "All Seeing Eye" (Koenderink, 2014) as metaphysical realists suppose, and no way the world actually is, then how do we know that an external world exists at all (Slote, 1970; Rogers, 2014: p. 844)? But that is another, more difficult question.

4. Conclusion

I've argued in this essay that the argument (T), which seeks to draw a conclusion about whether our thoughts (cognition) reflect what is actually real, or instead constitute an interpretation of what is thought to be real, does not follow from the premise that what is real to one mind, may not be true to another. Mere disagreements about the nature of reality alone do not show either thesis to be correct. However as argued here, evidence from considerations about perception support the thesis that our perception, part of human cognition, is an interpretation of what is thought to be real.

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