

Locating the Screen: Mind, World and Dialethic Logic

Abstract: The question of where the screen is located in relation to the viewer is used to exemplify the larger problem of how the world relates to the perceiving mind. Citing a key moment in Powell & Pressburger's film A Matter of Life and Death, the analogy between mind, screen and camera obscura is explored. The argument is made that in addition to the two most prominent models of human perception — broadly described as internalism and externalism — there is a third that combines both without negating either. This third model, however, necessitates the use of a non-classical logical framework known as dialetheism, which recognises the inherent indeterminacy of the subjects under discussion. Several possible applications of dialetheism to the study of cinema are suggested.

There is a scene in the extraordinary occult romance *A Matter of Life and Death* (Powell & Pressburger, 1946) where a young American woman, June, visits an eminent neurologist, Dr Reeves, in his private camera obscura. She persuades him to take on the case of her lover, Peter Carter, a bomber crewman and aspiring poet whom she believes to be suffering a neurological disorder. Carter was notionally killed when his plane was shot down, but finds himself inexplicably alive, or at least suspended between life and death. A divine envoy tells him this is due to a clerical error in heaven, although to the mortal world it appears he is deluded. The film itself hovers between the physical and the spirit realms, presenting us with both materialist and numinous accounts of Carter's condition.

During the scene in question Reeves takes us on a guided tour, through the medium of his camera obscura, around the village where he works as a doctor, with its various local inhabitants and visitors. As he later says to June, it is from this elevated vantage point that he forms medical diagnoses and where the world can be seen "clearly and at once, as in a poet's eye." It is tempting of course to read the scene as simple metaphor, with the view from the camera obscura poetically mirroring the doctor's privileged insight into human minds and bodies through specialised apparatus. But the scene is also rich with analogy, particularly for those intrigued by the relationship between mind, body and world.

The analogy of 'mind as screen' recurs in the literature on consciousness, often as a flawed explanatory principle. It has long been understood that we do not perceive the world directly, in itself, but as a representation derived from sensory data. One of the leading figures in early experimental psychophysiology, Hermann von Helmholtz (1821-94), was instrumental in establishing the scientific basis of the distinction between external reality and internal representation, which had previously been maintained on philosophical grounds by figures such as John Locke and Immanuel Kant. Helmholtz (in Cahan 1995) argued that we are mistaken when we assume a veridical connection between quantitative physical stimuli, e.g. certain electromagnetic frequencies, and their qualitative apprehension in the mind, e.g. certain colours:

...the objects at hand in space seem to us clothed with the qualities of our sensations. They appear to us as red or green, cold or warm, to have smell or taste, etc., although these qualities of sensation belong to our nervous system alone and do not at all reach beyond into external space. Yet even when we know this, the appearance does not end, because this appearance is, in fact, the original truth... (p. 352)

For Helmholtz, we unconsciously infer a holistic representation of visual reality through fragmentary clues gathered from the external environment by our senses. Thus the world we see is not objective, but a subjective appearance constructed internally by the nervous system.

The image of the screen has been used as a way of depicting how disparate sensory impulses might be brought together into a coherent, singular experience of the world, and then represented to some internal agent in the mind. But as has been pointed out, the danger of such a conception is that it fails to account for the unified experience of the internal agent without resorting to an infinite series of further internal agents, so provoking an unproductive regress (see Pepperell 2003 for a discussion).

But while the analogy between mind and screen might lead us down an explanatory blind alley, it still provokes some fascinating metaphysical questions. One such question is *prima facie* rather mundane, yet I believe of central and vital importance to understanding our minds and how we relate to the world. As we watch Dr Reeves surveying his kingdom through the camera obscura, where would we say the screen we see is located? The obvious, and in some ways correct, answer is 'right there in front of our eyes', an answer that nevertheless overlooks certain complications. For instance, according to Helmholtz, although the screen might appear to be right there, this is an illusion since it is actually perceived 'in here', within the confines of the viewer's nervous system.

Simply put, there are two ways in which the perceptual relationship between mind and world are commonly theorised. Let's call them for the sake of convenience 'internalism' and 'externalism'. Internalism proceeds from the view, as explained by Helmholtz, that we perceive a representation of the external world inside our heads, a representation that is often quite distinct from the world from which it is derived. Take for example the familiar Necker cube, the wireframe object that while imprinted flat on the page can be read as a solid box, and can even appear to flip between different orientations. We know that in reality there is not a solid box flipping between orientations, but we also know that is what we see, and there are numerous other optical illusions to demonstrate the same distinction. For those disposed to internalism, the solid form, and by extension the screen, appears 'in here', i.e. inside the head, whatever may be 'out there' in the world. And so although a certain physical mass might exist in external space, it only becomes a screen when perceived internally by the human sensory apparatus.

Internalism is in many ways the predominant view in modern psychology and philosophy in contrast to externalism, a less widely held position in which the perception of the world is thought to occur outside our heads. In an important and

controversial paper, *A sensorimotor account of vision and visual consciousness* (2001), experimental psychologist Kevin O'Regan and philosopher Alva Noë argue that the world we see is really 'out there' and not 'in here', drawing on empirical evidence from perceptual phenomena like change blindness to support their case. Change blindness¹ is a remarkable phenomenon, discovered by O'Regan and colleagues, in which quite large changes between images will usually not be perceived if there is a brief interruption, like a flash between one image and the next. O'Regan claims that we do not hold a detailed representation of the visual world in our brain, but continually access the real detail 'out there' through active engagement with the world. One way of demonstrating what O'Regan and Noë call 'the world as an outside memory' is to look at any scene for a few seconds, then close your eyes, and try to visualise it in as much detail as you can. Unless you have a photographic memory, it is very likely you will have only the haziest picture of what was in front of your eyes but a few seconds ago.

Unlike the internalists, O'Regan and Noë's approach stresses the externality of perception as conditioned by the active engagement of the body and senses with the world.

... seeing is a way of acting. It is a particular way of exploring the environment. Activity in internal representations does not generate the experience of seeing. The outside world serves as its own, external, representation. The experience of seeing occurs when the organism masters what we call the governing laws of sensorimotor contingency. (p. 939)

For the so-called 'enactive theorist' the screen and the viewer's perception of it are (at least in part) 'out there', an external presence sustaining our memory and cognition. The world is yoked, as it were, to the sensory apparatus of the viewer in a way that extends the perceptual domain far beyond the immediate locality of the brain and its store of memories and experiences.

There are in fact several contemporary philosophers, biologists, anthropologists, and other theorists arguing that the mind is not confined to the inside of the head but extends beyond into the body, world, and even into the cosmos.² The purpose here is not to explore these arguments per se, but to note the opposition between internalism and externalism, each of which is supported by plausible evidence and theories.

Rather than choosing between internalism and externalism, I wish to propose a third possibility: that both views are not only credible but also correct. In other words, despite the inherent contradiction, the screen can be regarded as being both 'in here' and 'out there' *at the same time*, without one cancelling the other out. The immediate drawback of this position is obvious: according to the founding principles of rationalist logic, as expounded by Aristotle, there cannot be two contradictory statements that are both true. The 'Principle of Non-Contradiction' demands the statement 'The screen is located inside the head'

and the statement 'The screen is located outside the head' are logically inconsistent.

But there have been a number of recent thinkers willing to countenance contradictory states and construct plausible logical and philosophical systems to accommodate them. Prominent among these are Stéphane Lupasco (1987), George Melhuish (1973), and more recently, Graham Priest, whose book *Beyond the Limits of Thought* (2002) rigorously sets out arguments in favour of what he calls 'dialethic' logic (literally —'two truths') in which 'true contradictions' become unavoidable when we contemplate the ultimate limits of thought and reality.

I claim that reality is, in a certain sense, contradictory... What I mean is that there are certain contradictory statements (propositions, sentences — take your pick) about limits that are true. (p. 295)

For example, when we try to conceive the limits of thought and what might lie beyond, we encounter the following: The unknowable is precisely that which we can know nothing about, and in knowing we can know nothing about it we know something about it; which is contradictory, not to say paradoxical.

For Priest, such contradictions are not logical aberrations, nor the result of fundamental errors of conception; they are a part of the fabric of human experience. Even the doctrine of dialetheism itself is not immune to the same conclusion. He says: "... it may ... be rational to accept that dialetheism is both true and false. In a sense, this is what I do accept." (p. 275 n). Cases of dialethia turn out to be surprisingly common; one occurs in the shape of the Necker cube cited above, for which it is just as true to say it appears oriented upwards as downwards. Since, as Priest shows, certain aspects of our conception of reality and existence are inherently contradictory, there are valid logical precedents for making the claim that the screen is located both inside and outside the head.

According to the argument made here, the screen exists at some indeterminate location, both inside and outside the head, just as the famous cat in Erwin Schrödinger's thought experiment is both dead and alive³ — as for that matter is Peter Carter when we meet him in *A Matter of Life and Death*. Indeterminate states tend to be looked on as inherently unstable conditions requiring some kind of resolution, and Carter is finally returned to life to fulfil his destiny as a poet and partner to June. But in a dialethic model certain states are inherently irresolvable according to standard rational accounts, and the question of the location of the screen, I argue, is one such case that cannot be resolved according to classical logical principles.

The intrinsic indeterminacy we encounter when tracing the relationship between internal and external locations of experience finds a historical echo in early descriptions of the camera obscura. Couched in the discourse of alchemical and occultist knowledge, Giambattista's *Magia Naturalis* (1584) contains a passage that alludes to the very same uncertainty about the location of reality in relation to experience. Speaking of "How we may see in a Chamber things that are not", he writes:

...For what is without will seem to be within, and what is behind the spectator's back, he will think to be in the middle of the house, as far from the glass inward, as they stand from it outwardly, and so clearly and certainly, that he will think he sees nothing but truth. ...

For Giambattista, reality appears to be positioned both inside and outside the chamber, just as it is when an analogy is drawn between the chamber and the human head. For Dr Reeves, reality is revealed more clearly through the eye of the camera obscura, which grants the privilege of a poet's vision, seeing both the external (outside the chamber) and the internal (inside the mind and body of the patients) at the same time, or "all at once", as he puts it.

By allowing us to consider indeterminate and contradictory states without negation, the dialethic approach offered here might, I believe, have useful applications in certain areas of study relating to cinema. I will briefly mention three. First, the peculiarly compelling nature of the illusion of moving images and the oft-drawn analogies between film and mind, have tempted us to think of either 'the screen in the mind' or the 'mind on the screen'; that is to say, either phenomenal experience is played out through some internal projection — a Cartesian theatre of the kind critiqued by Dennett (1991) — or the screen stands as a prosthetic mind-extension which displaces our mental experience into the technological world. Given the present considerations, neither of these may be complete as a self-standing model, although a combination could prove viable, even if they are logically opposed.

Second, the dialethic logic applied here may help to account for the efficacy of the illusion in which we simultaneously believe in and do not believe in what the screen affords. For the characters, objects and events that appear neither in the mind nor on the screen alone are, being representations, *simultaneously* present and absent. Just as Peter Carter (played by the late David Niven) is both dead and alive in diegetic terms, while dead in reality and alive on the screen. As viewers we are trapped in a perceptual vice of opposing forces, transfixed (in the sense of both pierced and fastened) by multiple, contradictory beliefs, yet also able to make sense of these logically inconsistent states.

Finally, the possibility of a 'conscious cinema' — an enhanced cinema that deploys prospective artificially conscious technology — cannot be discounted. Given the increasingly proximity of artificial intelligence and interactive entertainment, we can expect a great deal of theorisation to emerge on the subject of mind-technology integration in the field of sentient entertainment systems, with an extension of current debates in AI about the degree to which cognition can be understood as an internalised or an externalised process⁴. It is precisely here that a dialethic model offers a way of managing these divergent tendencies, although clearly not to the satisfaction of those wedded to a purely classical logic.

Dialethic logic is of course not without its critics, and there are some who doubt it has any application at all⁵. I would suggest that it has many uses beyond the field of logic in which it was conceived, one being that it permits us to consider issues of great complexity, like the relationship between mind and

world, without having to discard plausible but conflicting approaches. Dialethic logic opens up a new world of descriptive possibilities to account for states of indeterminacy, which reflect the contradictory nature of the world itself, at least as it appears to us — something to which poets have testified. When June approaches his house, appearing through the camera obscura lens, Dr Reeves sighs, “She walks in beauty, like the night; only she’s cycling and the sun is out.” Byron went on, “And all that’s best of dark and bright, Meet in her aspect and her eyes.”

(This essay is based on a panel paper given to the *First International Conference on Consciousness, Theatre, Literature and the Arts*, and on a chapter in the collection *Transdisciplinary Connections: Cinema, Technoscience and Consciousness*, edited by Robert Pepperell and Michael Punt and published by Rodopi Press as part of the *Consciousness, Literature and the Arts* series.)

Notes

¹ See O’Regan et al. (1999) and numerous examples on line, e.g. <http://eyelab.msu.edu/VisualCognition/flicker.html>.

² For examples see Chalmers & Clark (1998), Sheldrake (2003), or Gell (1998).

³ Schrödinger’s hypothetical cat is both dead and alive until the observer collapses the indeterminate state by opening the box in which the cat is held. For an exposition and contextualisation see Gribbin (1992).

⁴ For a discussion on internal vs. external theories of mind in contemporary AI, see Clark (2004).

⁵ For a fuller discussion of dialethic logic and its detractors see Priest (2002).

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