Abstract

Ennead IV 5 has been poorly served by translators and commentators, misreporting what Plotinus wrote and, with these mangled results, asserting that this part of his treatise on the “Problems about the Soul” is merely a disjointed series of doxographical fragments with little compelling contribution to make. More careful translation and analysis reveal something strikingly different and original. First, he gives a cogent critique of the theories of Plato and Aristotle concerning the body between and the role of daylight. Second, he substitutes his own account in terms of both sympathy and the principle of two acts, explaining vision both during the day as well as at night, notably deficient in previous accounts. Third, he derives some surprisingly original corollaries about the nature of light and the source of color.

Keywords

Plotinus – light – vision – two acts – sympathy – transparent body

1 Nothing Between, neither Daylight nor Affection

Plotinus begins with a discussion of Aristotle’s account of the role of the body between the eye and the color (IV.5[29].1) and Plato’s account of the visual ray reaching out to the object (IV.5[29].2). He mentions neither philosopher by name, but discusses those aspects of their accounts of vision that are central, the role of the body between for Aristotle and of the visual ray going out from the eye in Plato. Examining Aristotle’s theory first, Plotinus questions whether the transparent body (such as air, water, glass), plays a necessary role in sight in the ways indicated by Aristotle. In De Anima 2.7.418b4, 419a17-21, Aristotle argues that the transparent body needs to be moved by light from its
potential state to actuality for sight to occur. The color of the object affects this actualized transparent body and then the eye, producing vision as the actuality of the colored object in the eye as the organ of sight. In a series of replies to objections, Plotinus eliminates the role of the transparent body from the account of sight. He replies first that a body between the eye and its proper object “might impinge accidentally, but contributes nothing to the sight of those who see (IV.5[29].1, 17-19, Gurtler 2015, 96),” arguing instead that the transparent body is not affected at all and thus allows the object to act on the eye directly. Next, the objector admits that dense bodies do interfere with sight but suggests that transparent bodies as less dense could still play an active role. He replies simply that as bodies they necessarily hinder.

The third objection goes to the core of Aristotle’s position, that the transparent body receives the affection first, the color in this instance, and transmits it so that someone between us and the object would also see it, presumably seeing it first, and finally the affection reaches us. Plotinus responds “that it is not necessary for the body between to be affected, if what is naturally affected, the eye, is affected. Or, if it were affected, it is affected differently (IV.5[29].1, 27-29, Gurtler 2015, 96).” His assumptions about sight are very much in play here, so we need to make them more explicit. The fact that two viewers see the same object does not depend on the impression of the color on the air, but on the nature of their eyes. The transparency of the air, moreover, does not have an active role in vision, but indicates only that air is not the kind of body that impedes vision. This means that vision does not depend on daylight activating the transparent body for it to take place. Instead sympathy establishes a similar affection between eye and object that does not affect the body between which is dissimilar. The advantage of this disjunction is that Plotinus will be able to explain how we see at night, which neither Plato nor Aristotle were able to explain adequately, given their respective assumptions.

Before exploring this more fully, however, he turns first to a critique of Plato’s theory of vision from the *Timaeus*.

If then seeing is such that the light of the visual ray combines1 with the light2 between [and reaches] as far as the sense object, this light must be between. The hypothesis itself actually requires this [light] to be between.

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1 Cf. Alexander of Aphrodisias *De an*, Suppl. Aristot 11.1.130, 15; =SVF 11.864. References to the sources are taken from HS2.
2 Cf. Plato *Tim* 45b4-d3; 67c-68d; Aristotle *De an* 2.7.418a19-b2; *De sensu* 438a25-b2.
If, moreover, the colored body underlying [sight] effects a change, what hinders the change from going immediately to the eye, since there is no body between, especially if now from necessity, while [seeing] is active, what lies before the eyes is somehow changed? Those who stream visual rays out would, therefore, not have to hold that there is any [body] at all between supporting [them], unless they feared that the beam would fall. But it is light, and light flows straight. (IV.5[29].2, 1-11, Gurtler 2015, 97)

As the notes indicate, this text has been seen as merely a doxographical collection from diverse sources, but actually is a rather clear summary of Timaeus 45bd and 67c-68d, with Plotinus’ own reactions interwoven; as such it continues his analysis of the deficiencies of previous accounts of vision, concerned primarily with the Aristotelian and Platonic traditions.

Plato’s theory includes three lights: the visual ray, which moves out from the eye, daylight, which enables the visual ray to reach the object, and the light or color of the object, which modifies the visual ray and finally returns to the eye producing sight. The account applies the more general theory of Theaetetus 156de and 182ae to vision. As we move through IV.5[29], we will find Plotinus has several critiques of this theory, but initially he is concerned to show, as he had with Aristotle’s account, that there is no need for daylight between the light of the eye and the object, since those two are sufficient. He surmises, with a bit of humor, that daylight may have been included to keep the visual ray from falling. Later, he will replace the causal role of daylight by his account of the role of sympathy adumbrated in the next chapter and the nature of light as a second activity that explains both the illumination and color of an object. Daylight thus becomes one instance of light rather than the essential cause of vision.

This section concludes with Plotinus’ allusions to Stoic and Epicurean theories of vision, which provide contrasting views of the nature of the intervening body.

Those who allege an impact as the cause [of sight], however, would absolutely need a body between. The champions of images, who say that they pass through the void, require space so that [sight] is not hindered;

3 Cf. Strato Fr 113; =Stobaeus Anth 1.52.3.483, 16-17; =Dox Gr 403, 26-28.
4 Cf. Alex Aph De an, Suppl. Aristot 11.1.142, 19.
5 Cf. Plato Tim 45bc; Alex Aph De an, Suppl. Aristot 11.1.127, 28.
6 Cf. SVF 11.867; Ps-Plut De plac philos IV.13.901a; =Dox Gr 403, 2.
7 Cf. Epicurus Fr 319; Lucretius De Nat IV.29-238; Alex Aph De an, Suppl. Aristot 11.1.134, 30; Ps-Plut De plac philos IV.13.901a; =Dox Gr 403, 2.
thus, if it will hinder even less when nothing at all is between, they would not dispute the hypothesis. (IV.5[29].2, 11-15, Gurtler 2015, 98)

The Stoics, by definition, take seeing and any sensation as modes of touch, given the materialism at the center of their philosophy. The Epicureans are just the opposite, with the images of sight passing through the void without affecting it. Both of these alternatives do not merit much analysis, but will be used in the subsequent discussion to critique the Platonic and Aristotelian positions. Their mention here and their subsequent use indicate that this treatise is highly programmatic, directed to the elaboration of Plotinus’ account of vision and a theory of light to go with it. With the anonymity of his allusions, Plotinus continues his custom of not criticizing his predecessors directly, especially Plato. It is clear, however, that he finds the accounts of sight in Aristotle and Plato inadequate and targets first the roles each of them give to daylight in the account of sight. In the case of Aristotle, this entails eliminating the active role of the intervening body, the linchpin of the Aristotelian account. In the case of Plato, removing the role of daylight seems to leave the remainder of the theory intact, but further examination will indicate a more complete departure from the Platonic account, ironically in favor of Aristotle’s claim that the sensible object is active and the sense organs passive.

2 Sympathy, Night Vision and Touch

The first phase in his argument was designed to eliminate the need for change in the transparent body between the eye and the object and the supporting role of daylight. In this second phase, Plotinus establishes how his own theory for vision actually works, based on the sympathy of the cosmos as a single living thing, a pervasive theme in the final sections of Ennead IV 4-5[28-29].

But, if sympathy belongs to the living thing by being one and we are affected because we are in [this] one and belong to it, how is continuity not needed, when there is a sensation of something at a distance? I answer that continuity and the body between are needed because the living thing is essentially continuous, but the affection is continuous only accidentally, or we will be asserting that everything is affected by everything. But if this is affected by that, but something else by another, not the same, then one would have no need of a body in between anywhere. (IV.5[29].2, 26-33, Gurtler 2015, 98-99)
This text indicates his general premise that the sympathy of the cosmos as a whole is responsible for the possibility of vision, as well as the difficulty he needs to overcome to make it work. First, sympathy gives the sensible world its unity and corporeal continuity. All the parts, dense or fine, opaque or transparent, are essentially continuous and this continuity is precisely what allows for one part to affect another, even over vast distances. Second, sensation is an example of one part affecting another, but in this instance Plotinus argues that there is an accidental discontinuity, which allows the affection or form of one part, such as an illuminated object, to affect another, similar part, the eye, without affecting the parts in between. If all were equally open to affection, as is the case in the intelligible as incorporeal, there would be no body between and everything would be affected by everything else simultaneously. Sensible affection is thus possible because not all bodies are the same but differ, for example, in density. He contrasts a solid body set on fire, where the fire remains on the surface without penetrating to its depths, with seeing the form of a distant object, where the form does not affect the intervening air but goes through it since the air lacks density and thus does not block the form from reaching the eye. This similarity between the organ and the object sets up a relation between them when certain accidental conditions obtain: they are near one another and lined up directly, the body between is dissimilar and thus not affected, and so the form of the object passes through the interval to the organ without being impeded.

With sympathy thus replacing the actualization of the transparent body by sunlight or the action of the light emerging from the eye and reaching the object and its light, Plotinus draws out some consequences that call those theories into question and provide evidence for sympathy. First, in IV.5[29]. 2-3, he indicates the inconveniences of the transparent body being affected prior to vision “through an affection of the air, as if by transmission (3, 4).” He argues that if the intervening body did indeed need to be affected, then we would not actually see the object, but only the affection of the air nearby and seeing would be like feeling the warmth in the air from a fire. Similarly, he reasons that the air is not potentially illuminated, as Aristotle would have it, but remains dark. This leads him to assert that stars and fires are seen at night through sympathy.

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8 Gurtler 2015, 100. Cf. Alex. Aphrod De an, Suppl. Aristot. 2.1.41, 5. “Transmission” is central to the difference between the accounts of heat and light. Heat is essentially a transmission through the intervening body, whether air or something solid. Light, on the contrary, travels from its source to the object without traversing the intervening body, provided it is the kind of body that does not block the light.
not because the air near the eye is illuminated, but, by the action of their own nature as composed of fire, they send their light to the eye without affecting the air or any other body between. That we see such distant objects depends on their presence in this cosmos in our direct line of vision, more comprehensively explained by sympathy than affected air. Finally, moving from distant objects to those nearby, he points out that if seeing were based on the air being affected, vision would be piecemeal, not of the whole object against its horizon, but only what fits the size of the pupil, as if it extended to the object like a tube of similar diameter. Seeing, and similarly hearing (cf., IV.5[29].5), he insists, is the reception of the whole form all at once.

In IV.5[29].4, Plotinus returns to the Platonic account: “But how is the light of the visual ray connected to the [day]light around the visual ray and [extended] right to the sensed object? (4,1-2, Gurtler 2015, 102).” The role of the daylight between has already been qualified as not needed, with the visual ray and object taken as sufficient. At this point, Plotinus shows how the visual ray (ὄψις) and the object cannot coherently perform the function Plato assigned them.

On the one hand, he understands the Timaeus to mean that the visual ray is an extension of the eye that is ensouled and thus its reaching to the object is akin to touch. He disagrees with this Platonic thesis for several reasons. First, it makes the object passive in the process of seeing. Plotinus prefers the Aristotelian account that the object is in fact the agent, affecting the eye through its activity. Second, and more interestingly, he elaborates on the difference between vision and touch, but in such a brief and unexpected way that translators and commentators have often missed his point. Touch, he begins, is more comprehensive than merely indicating the nearby presence of an object, but it does so differently from sight, specifically with the assistance of memory and reasoning. He again takes a fire as an example. We can see it directly, even before we are warmed by the air it heats. If, however, there were a solid body, a wall, between us and the fire, we could not see it, but because the wall can be heated by a fire more than air, by touching it we can infer the presence of a fire even though we cannot see it (IV.5[29].4, 25-30). Further, if vision were like touch, with the visual ray going out like a cane to the color, which in turn pushes back, sight would be a more violent or interactive affair, like the taps of a cane in the hand of a blindman. This, however, implies that vision, like
touch, operates in terms of memory and reasoning. As a blindman learns a particular route or object by being guided initially and by distinguishing different surfaces by touch, so seeing colors would entail a similar learning process by contact of the visual ray with the object at some prior point and then using memory and reasoning to infer a later experience of that color.\footnote{Similarly in this section, the ‘taps’ or touches (ἁπταί) are invariably made singular and the references to an ‘at first’ and a ‘later’ (IV.5[29].4, 43-44) are at best confused. Relating both to using a cane allows the text to make sense as is; Plotinus’ use of images is precise, but may need some imagination to reconstruct how their details fit together.}

On the other hand, Plotinus introduces his fundamental thesis that vision is not at all like touch, but the affection acts on the eye directly and as a whole. Memory and reasoning are not involved, since the whole form is apprehended immediately (4,38-49). The wholeness of the form apprehended in sight or hearing is an insight strikingly distinct from the accounts of Plato and Aristotle, for whom touch seems the more direct sense. Plotinus is not disputing the directness of touch, but points out the obvious that touch grasps the object part by part, needing inference to establish the shape of the whole object and memory for any subsequent grasp of the whole by contact with one of the parts. In vision, inference is not needed to grasp the shape of the object nor is memory needed in grasping that shape as a whole subsequently, but only to identify a particular object as previously seen. This reversal indicates his attention to the pattern received of color or sound rather than the monochromatic or monosonic assumption of his predecessors. Sight and hearing thus are uniquely open to apprehending the form, precisely the pattern of color or sound that signifies a visible object or an audible word or tune. From Plotinus’ point of view, it is touch that is limited to piecemeal interaction with an object.

3 Light, Color, Action

While sympathy makes interaction between parts of the cosmos possible, the nature of light actually allows for the particular interaction that constitutes vision. Plotinus understands light as an activity of a certain kind, a second activity proceeding from a first. This principle of two acts is pervasive in his thought and light is one of the clearest examples that he uses to illustrate it, so that his discussion here has an importance that goes beyond the immediate context of explaining vision.\footnote{See C. Arruza, 2015, for a discussion of the two acts.} Plotinus continues with his critique of earlier theories of vision, where light seems mistaken for a quality of some kind, possessed by air
as transparent, by the body as colored, and by the eye as seeing color. In this section, Plotinus’ powers of observation are particularly apparent.

Two objections begin IV.5[29].6. They take light as an affection of air and thus as some kind of quality. In part, the objector is rejecting Plotinus’ comparison of the interval between with the Epicurean void.13 While the earlier discussion had shown that the transparent body is not affected in transmitting the affection of the object, its color in this instance, Plotinus now confronts the nature of light itself relative to the transparent body, identified here with air, and to the body illuminated. As he had shown that the body between has no role in vision, so he demonstrates that light cannot be a quality affecting any of the bodies involved in vision. Making light a quality raises the difficulty that qualities belong to a body as their substrate. If light is in the air as a substrate, how does air come to possess or lose this quality? The ambiguity of previous accounts is the source of the objection, as they could be interpreted as affirming that light is a quality of the air or other transparent body, and then in turn of the sensible body and the eye as colored. If this were the case, these bodies must possess light as a quality in the way other qualities are possessed by bodies. Plotinus points out that this does not correspond to the nature of light in air, since air does not in fact control the presence or absence of light, which is determined instead by the source of light, as even earlier theories implied.

Leaving the air unaffected by light, Plotinus next turns to the object illuminated. He continues to press that light is an activity of a source of light that happens to be present, not so much to the body or void between, but precisely to the body illuminated.

But if it is an activity from another [body], there being no adjacent body, but a kind of void between, if that is possible, why will it not be there [in that body] and jump over to the [body] beyond [the void]? For, since [light] is straight, why does it not pass right through without riding on anything? (IV.5[29].6.13-16, Gurtler 2015, 107)

This description of light as an activity from one body that has its appearance in another, without in any way affecting the ‘void’ between, is a controversial claim, at least in the context of Greek thought where such an activity seems strange, if not impossible. Aristotelian causality in terms of act and potency

13 The allusion to Epicurean void here, as with the prior Stoic assimilation of seeing to touch, both mentioned in the initial summary of the Platonic account of vision, is evidence of how carefully Plotinus has crafted this treatise in critiquing his predecessors and distinguishing his position from theirs.
assumes a continuity between the active and potential causes, so that light moves through and changes the intervening transparent body on its way to illuminating the particular body in its path. Plotinus has a different kind of causality in mind, with its roots in the simile of the sun in Plato’s *Republic*, in which a cause on one level produces an activity that comes from it on another level, without any change in the cause on which this second activity is essentially dependent. His description continues to delineate the nature of this activity:

> It is thus not something accidental, so that it would be completely in the other, nor is it an affection of the other, so that the affected object will need to be, nor does it have to stay once it has come: but at one instant it goes away, and comes back at another. (IV.5[29].6,20-23, Gurtler 2015, 107-108)

Light as an activity thus remains completely independent of the object it illuminates. Some strange consequences follow from this. It seems, for example, that if there is no object to reflect the light, it remains invisible, as when we see the moon illuminated at night, the areas around the moon remain dark even though the sun’s light is present there as well. Light as an activity always comes from its source, but only becomes visible when it hits some object, a consequence of it not affecting the intervening body. Plotinus then notes that this means color is not inherent in the object, but is latent within the light, which washes over the object. “But the affection needs to be of that of which it is the affection; [light] thus is also not the color of air, but is of itself [color]; air is merely present (IV.5[29].6,39-40, Gurtler 2015, 108).” For evidence, Plotinus could mention the difference in the color of objects illuminated by the rising sun with its rosy hue and the noon day sun with its stark white clarity. The parallel to modern optics and the refraction of white light by a prism are remarkable, all the more so given Plotinus’ historical context. This context, however, did not limit his powers of observation and his ability to draw consequences from that, even when the extant theories gave him no assistance.

In IV.5[29].7, Plotinus presents one of his clearest accounts of the principle of two acts, the activity of a substance and the activity that necessarily flows from it.

> First, the activity within it, as it were the life of the luminous body, is greater and as it were the principle and source of the [outer] activity. Next, the second activity beyond the limits of the [luminous] body and reflection of its internal [activity], is inseparable from that superior
[activity]. Every real being has an activity, which is its likeness, so that while it is, that will be; but while the being remains [within itself], that activity will project far out, some quite fully, others less so. Indeed, some [activities] are so weak and dim that they are scarcely noticeable, but of those that are greater and do project far out, when one is far out, it is necessary to think that it is there, where the active and powerful body is, and also at the point to which it extends. (IV.5[29].7,13-23, Gurtler 2015, 109-110)

Plotinus begins in these lines with the nature of luminous bodies, but quickly includes every real being in this account of the nature of the two acts. While his account is clear enough, I have noticed some resistance when presenting it, as if somehow it should conform to Aristotle's notion of act and potency. Plotinus is not, however, talking about the kind of change that takes place when one body becomes another, or grows, or is corrupted, all taking place at the same terrestrial level. He is instead describing a different kind of cause that is more pervasive and is not about change but about the nature of any existing thing, from the One to something so weak as to be hardly noticeable. Any being by its own nature is a primary activity that necessarily produces a secondary act that comes from it and somehow manifests it. Light illustrates this secondary kind of activity well. First, it has its source in some body whose essence is fire, making this source luminous, and, second, this light comes from the luminous body, is dependent on it and is its outward expression. Relative to the sun, its light seems also, at least to the ancients, not to imply any change in the sun itself, which remains always as it was. This element of non-reciprocity is central for Plotinus' understanding of this kind of causality, with a more vertical sense of a higher activity producing something other and lower than itself without undergoing any kind of change itself.14

In further comments on the nature of light, Plotinus mentions its incorporeal nature, which has sometimes been misunderstood as implying that light is somehow in the intelligible world, but which actually underlines the nature of light as one of the purest of activities present in the sensible world.

It is necessary to hold that [light] is totally incorporeal, even though it belongs to a body. Therefore neither “it has gone away” nor “it is present”

14 The non-reciprocity of the relation of these two acts is articulated in the earlier treatise, On Virtues, 1.2[19].2,6-10, where he discusses the reciprocal likeness as reflecting the causal relation of a source to its product or image.
are proper, but these [phrases] have another mode [of signifying], since the substance of light is as an activity. For example, we need to say that the reflection in a mirror is the activity of what is seen in it, occurring on something receptive without flowing into it. Thus when it is present, that [reflection] also appears there and is there precisely as a reflection of patterned colors, and when it goes away, [the mirror] no longer has the appearance, which it had before when it held the object seen actively in it. (IV.5[29].7,41-49, Gurtler 2015, 111)

Light is incorporeal as an activity occurring between two bodies, the fiery body to which it belongs and the illuminated body to which it can be present and which it can illuminate. The image of the reflection in a mirror indicates how this twofold activity is present even in a simple body, where its reflection can be seen in the mirror as its second activity and for as long as the body remains what it is in front of the mirror. Neither light nor image are incorporeal in the sense of being independent of bodies, but precisely as activities that come from and go to bodies without being bodies themselves, but only their activities.

4 Conclusion

Plotinus' account of vision and light seems fairly straightforward, so one wonders why it has not been obvious to translators and commentators. Part, it seems, is the familiarity of Aristotle's account and its presumed cogency as well as its presumed dominance in ancient thought. Since Plotinus differs so radically, but remains so low key and understated in his expression, what he actually says has been modified to fit preconceived ideas of what he must have meant, given the historical philosophical context. What we find instead is a rather remarkable anticipation of some modern ideas of both optics and light. Optics revealed that white light can be refracted into the full spectrum of colors, and Plotinus' sense that color is latent in light captures this, although he would see the color of the object as reflecting the color in light rather than as absorbing all the colors but what is visible to the eye. Similarly, the understanding of light as energy and as a wave captures something of what Plotinus is attempting in describing light as an activity. It is precisely as an activity that light does not affect the transparent body and thus makes vision possible even at night. Not bad for someone whose observations were confined to the naked eye.
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