

HOW THE MOON MIGHT THROW SOME OF HER LIGHT UPON THE TWO WAYS OF PARMENIDES*

INTRODUCTION

I first met Parmenides – together with Xenophanes, Heraclitus, and the other great Presocratics – in a German translation by Wilhelm Nestle, famous as the editor of the later editions of Zeller's *magnum opus*. I was 15 or 16 years old, and I was overwhelmed by the meeting. The verses that I liked best were Parmenides' story of Selene's love for radiant Helios (DKB 14–15). But I did not like it that the translation made the moon male and the sun female (these being their genders in German), and it occurred to me to give the couplet in German a title like 'Moongoddess and Sungod', or perhaps 'Selene and Helios', in order to rectify the genders. So I began fiddling about with the translations. The volume, which I still possess, shows many traces of this.

In those days I was an enthusiastic Newtonian and, of course, aware of the theory of the moon. But before reading Parmenides' story it had not occurred to me to watch how Selene always looks at Helios' rays.

νυκτιφαῆς περὶ γαίαν ἀλώμενον ἀλλότριον φῶς,
αἰεὶ παπταίνουσα πρὸς αὐγὰς ἡελίοιο.

Bright in the night with the gift of his light,
Round the earth she is erring,
Evermore letting her gaze
Turn towards Helios' rays.

Since the day when I first read these lines (in a different translation),¹ 74 or 75 years ago, I have never looked at Selene without working out that her gaze does indeed turn towards Helios' rays (though he is often below the horizon). And I remember Parmenides with gratitude.

I. THE STRUCTURE OF PARMENIDES' EPOS

Parmenides' Epos consists of an introductory Proem, followed by The Way of Truth, and by The Way of Human Conjectures (if I may so call the second main part).

In the Proem, Parmenides describes his own journey to the goddess² – an

* All the translations in this paper are the author's, except where otherwise attributed.

¹ It was Wilhelm Nestle, *Die Presokratiker, in Auswahl übersetzt*. Eugen Diederichs, Jena 1908. I have since translated B 14–15 (*Mondgöttin und Sonnengott*): Leuchtend bei Nacht von dem Licht, das er schenkt, / so umirrt sie die Erde. // Immerzu blickt sie gebannt / hin auf den strahlenden Gott.

² I do not see why the goddess is usually regarded as anonymous. It must be Δίκη (Justice), although Parmenides could have made this clearer. But why should Δίκη, if she is merely a turn-key for a higher goddess, have so much fuss made about her by the Heliads, and be described by a fear-inspiring epithet? I cannot believe that it was Parmenides' intention to inform us that he passed her without exchanging a word with her, the divine turn-key, in order to be taken by

experience of enrapture – and her welcome. It ends with a brief but invaluable abstract (in five lines) of her impending revelation. We possess the Proem complete. Then comes the first part of her revelation, The Way of Truth. This we possess almost complete, and its two main messages are perfectly clear, though very startling. They are a theory of knowledge, and a theory of the real world, as known to the gods. Both are delivered by the goddess with divine authority, but not in the spirit of dogmatism. The listener, Parmenides, is treated as a critical thinker. The appeal is to his intellect, and perhaps to his intellectual pride.

The Way of Human Conjectures is a shambles. It consists of a dozen highly interesting and poetic fragments belonging to cosmogony, astronomy, and human biology. One of them (DK B 10) is a programme of what is to come, and this is supported by a very interesting report due to Plutarch.³ From these we can guess how much must be missing of this part. Plutarch also makes it clear that he regards Parmenides' work as highly original.

II. THE REVELATION OF THE GODDESS

But it is The Way of Truth – the Truth revealed by the goddess – that created a sensation. Here the goddess reveals to Parmenides two things that are so monstrous that they cannot be accepted unless they are given a logical proof.

The first is that we must not trust our senses, but only reason and logical proof (or disproof).⁴

The second is that the real world is full: it is a spherical block of continuous matter. (Parmenides is a materialist who believes in the power of pure thought.) And this has the consequence that, in this world, there can be no movement. Nothing ever happens.

To any normal person this teaching must have been not merely false but outrageous. What is shocking in Parmenides' poem (and constitutes a complete break with the tradition that distinguishes between divine knowledge and human fallible conjecture), is not that the goddess declares our human world of experience to be false, but that she reveals, and claims to be true – and even proves! – a theory of reality that to every sane person must seem impossible and indeed insane. (We get an echo of this almost a century later in Plato's *Parmenides*, 128d.)

III. THE PROBLEM

And yet, for Parmenides the revelation of the goddess was true. It was a real revelation for him. This is what he wishes to tell us. It must have come to him as a great enlightenment; it must have solved for him a great problem. What is this problem?

the hand at once in friendly fashion by a higher goddess, and welcomed? Is it not more probable that he was not an experienced writer and did not realize that we would want an explicit identification (although there was not a syllable in his text to make us suspect that there could be more than one goddess on his stage)? Incidentally, I remember having written about this before, and I must apologize that I cannot remember the place (I am in my 90th year). But if any reader wishes to see older passages of mine about Parmenides, I can recommend my *Conjectures and Refutations*, 1963, 1989⁵; see there the Index of Names.

³ DK B 10 contains an extract, perhaps too brief, from Plutarch's *Moralia*, 1114a.

⁴ The old pre-Aristotelian formal proof was, it seems, mainly the indirect proof, the *ἐλέγχος*. Parmenides mentions it by name in B 7, 5. It is good that there can be no doubt about its meaning, as it derives from *ἐλέγχω* (to 'disgrace', 'scorn', 'dishonour'; in this case, to dishonour an assertion).

To discover Parmenides' problem and to understand his enraptured feeling of enlightenment: this is my problem here.

IV. A PROPOSED SOLUTION OF MY PROBLEM

Parmenides was an important philosopher of nature (in the sense of Newton's *philosophia naturalis*). A whole series of important astronomical discoveries is credited to him: that the morning star and the evening star are one and the same; that the earth has the shape of a sphere (rather than of a column, as Anaximander thought). About equally important is his discovery that the phases of the moon are due to the changing way in which the illuminated half-sphere of the moon is seen from the earth.⁵

The most ingenious theory of the phases of the moon before this was due to Heraclitus.⁶ According to him, the phases of the moon and the eclipses of moon and sun were all to be explained by the assumption that these were fires held in (metal?) bowls which circled round the earth: they could turn their black sides partly or fully towards us. According to this theory, the moon was no longer waxing and waning, but its phases were still the result of a real movement in the moon. But according to Parmenides' new discovery, the phases of the moon were nothing of the kind. They involved no real change or movement in the moon. They were the deceptive result of a play of light and shadow.

So our senses are misleading us. We must not trust them. They deceive us: we believe that the moon moves whilst, in truth, she does not; instead, light plays on her dark and unchanging body.

But what is light? No thing, no matter. Light does not resist – it has no body, just as heat and cold (though they can be sensed, say, by our face) have no body. It is mere appearance, only affecting our senses, our eyes. It has no reality, no real existence. We should never have given light a name: only real, existing things deserve names.

Our senses are to be rejected. They lead us to impossible conjectures. We see movement very clearly where there is none. And we can even prove that there is none: we can disprove, refute, the movement which we once saw in the phases of the moon (B 7):

Never shall it prevail that things that are not are existing.
Keep back your thought from this way of enquiry; don't let experience,
Much tried habit, constrain you. And do not let wander your blinded
Eye, or your deafened ear, or even your tongue along this way!
But by reason alone decide on the much contested
Argument that I have here expounded to you as a disproof!

This is the intellectualism or rationalism of the goddess, and her disproof of empiricism and, especially, of the acceptability of the senses as sources of knowledge.

But a great discoverer is bound to try to generalize his discovery. Selene does not truly possess those movements that she exhibits to us. Perhaps we can generalize this?

And then came the great intellectual illumination, the revelation: in one flash Parmenides saw not only that reality was a dark sphere of dense matter (like the moon), but that he could prove it! And that movement was, indeed, impossible.

⁵ Parmenides speaks therefore of the round-eyed (*κύκλωπος*) Selene B 10, 4. He clearly knew that she was always half lit up.

⁶ See DK 22 A 1, p. 142, 2–6. Diogenes Laertius 9.10: eclipses of the sun and of the moon occur when the bowls (that contain the burning fuel) are turned upwards; the phases of the moon occur when the bowl rotates, little by little, in its place.

The proof was (more or less simplified):

- (1) Only Being is (Only what is, is).
- (2) The Nothing, the Non-Being, cannot be.
- (3) The Non-Being would be Absence of Being, or Void.
- (4) There can be no Void.
- (5) The World is Full: a Block.
- (6) Movement is impossible.

Or to quote Parmenides himself for his basic rationalist assumptions (1) and (2), formulated together in the first four lines of his Way of Truth, which contain what he calls his *Way One*:

Listen! And carry away my message when you have grasped it!
 Note the only two ways of enquiry that can be thought of:
 One is the way that *It Is*; and that *Non-Being* cannot be *Being*.
 That is the path of Persuasion, Truth's handmaid; now to the other!
 This way is that *It Is Not*; and that *It may Not be Being*.
 That path – take it from me! – is a path that just cannot be thought of.
 For you can't know what is *Not*: it can't be done; nor can you say it.⁷

The rejection of *Way Two*, on the grounds of both deduction and intuitive logical thought, destroys movement (except perhaps total rotation), and with it commonsense.

It must be admitted that, in his first formulations of The Way of Truth, which I have here quoted, Parmenides omits the subject '*It*'. But later he speaks more naturally. It seems that he was afraid that by naming his subject he would do something like begging the question of existence. But this omission is a question that does not in any way affect the main argument, with its astounding combination of offering an outrageous theory and a splendidly simple and convincing proof for it.

V. TRACES? OR EVIDENCE?

My proposed solution works with the well-established fact that a great discovery has often blinded its author like a powerful flash of light, making him believe that it explains far more than it actually does – perhaps everything.

Parmenides' discovery of the true explanation of the phases of the moon was a great one. It soon led to the explanation of the eclipses, and to Aristarchus' anticipation of Copernicus. But, of course, my proposed solution cannot be proved. It is an historical hypothesis about the thoughts of a person. The only thing one can do for it is to show that it has some explanatory power: there are certain traces in our fragments which otherwise are not explicable, but in the light of my theory might be fairly well understood. These might serve as something like evidence in its favour.

⁷ I have tried in my translation to be as close to the text as is compatible with the use of clear English. The deviations of Parmenides from ordinary Greek have been sufficiently discussed elsewhere, by many scholars, and I do not believe that his meaning is in any doubt. Concerning the proof in 6 steps (preceding the quotation which refers only to the first establishment of the premise(s)), these steps extend, very repetitively, over the whole Way of Truth – apart from the fact that Parmenides does not consider the possibility that his total cosmic sphere may rotate (a possibility which would not have impressed him since his sphere was 'immovable and unchangeable in the bounds of mighty chains': B 8, 26–7). At any rate, his intuitive proof seems to me (not valid but) intuitively in order: within his logic, which seems intuitively to work, there is no obviously invalid step; and the premise 'what exists, exists', or 'what is, is' seems to be a tautology; which would turn the valid derivation into a valid proof.

My theory explains the relation between the two main parts of the speech of the goddess. And it explains especially the fascinating story, told by the goddess, of the epistemological fall of man (*der Sündenfall der Erkenntnis*, as Karl Reinhardt calls it).⁸ According to Parmenides, as here interpreted, it consists in giving names to two things – light and night – instead of only one – night, the dark moon, the dark heavy matter. The forbidden move was to name ‘light’ – a no-thing. This is where ‘they’ – the intellectual sinners – have ‘gone astray’. It led them to believe in no-things, in the void, in empty space, and so in (the possibility of) motion. My hypothesis, incidentally, singles out ‘light’ as the forbidden name, whilst ‘night’ would be permitted: the thing in itself, on which no light plays, is dark, as is the moon in itself. In giving a name to a non-thing, to a non-being, we are deceiving ourselves, and upsetting our world-picture, our conjectures, our ‘opinions’. So the goddess promises at the end of the Proem (B 1, 31–2), referring to the story of the fall (B 8, 53–61):

But you also shall learn how it came that delusive conjecture,
Bound to be taken for real, was forcing its way through all things.

When she then really comes to the end of The Way of Truth, and to the story of our intellectual fall, she says (B 8, 50–3):

Here I am ending my discourse, so far as it can be relied on,
And my clear thoughts about truth. Now learn about human conjectures
When you will listen to my so beguilingly ordered verses.

But before she begins with these verses that treat of human conjectures about our cosmos, she tells the story of our intellectual fall; and this story seems to me important. It is certainly easier to understand in the light of my historical hypothesis than it was before (when perhaps the influence of Hesiod was appealed to for an explanation).

I shall quote the story; remember that ‘they’ are the intellectual culprits, responsible for the fall (B 53–5):

Two forms they made up their minds that they would give names to;
But of these two, one was not permitted to have a name given.
This is where they have gone astray...

The two named ‘forms’ are, as mentioned, light and night. They provide me with something that may almost be claimed to be a test of my hypothesis.

For most scholars so far (all those whom I have checked) have assumed on intuitive grounds that it was *light* which could be ‘named’, because it was existing, being, and that *night* was unreal, and the one that should not have been named; whilst my hypothesis suggests the opposite. Who is right?

Only years after I had formulated my hypothesis (including the hypothesis that light should not have been named) did it occur to me to develop a method of solving this problem. The method is easy enough. Draw up a table of opposites! This leads, I think unambiguously, to the result that *Light* is on the side of Non-Being, the Void, Unreality, Change, Movement, Youth, Love, Illusion, Desire (e.g. for Helios’ rays, B 15), Warmth; whilst *Night* is on the side of Darkness, Heaviness, Body (B 8, 59, *πυκνὸν δέμας* – the most crucial place), Matter, Cold, Old Age, Death, Non-Movement, The One Real Being, The Permanent, Unchanging, Timeless Truth.

Everybody can check this. It fuses the Way of Truth and the Way of Conjectures into one well-articulated – but pessimistic – whole work. Parmenides sees life in all its warmth and movement and beauty and poetry. But the icy truth is death.

⁸ Karl Reinhardt, *Parmenides und die Geschichte der griechischen Philosophie* (Frankfurt am Main, 1916,¹ 1959²), p. 26; see also my *Conjectures and Refutations*, pp. 11f.).

VI. A FEW SCATTERED COMMENTS

I am at the end of my story. I only wish to add a few more comments on what I regard as shocking mistranslations. (I think the mistranslations have become worse since Diels's Parmenides book of 1897.)

The worst of these translations are those of B 16. I have discussed its shockingly bad translations in my book *Conjectures and Refutations* (5th edn. 1989, first published 1963, whose criticism is partly complementary to my present criticism), but my old criticism was, it seems ignored: I have seen new and very bad translations years later. Famous scholars have simply not understood the (admittedly difficult) text. The best translation was, I believe, that of Hermann Diels. A sample translation, unfortunately representative of the texts transmitted by Aristotle *Metaphysics* 1009b22–5 – Theophrastus' text is better – was translated by Sir David Ross (in the 2nd edition, 1928, of his translation of the *Metaphysics* as follows:

For as at each time the much-bent limbs are composed,
So is the mind of men; for in each and all men
'Tis one thing thinks – the substance of their limbs:
For that of which there is more is thought.

I find that this is not English. The words are of course all English. But they are woven into an impenetrable fog – almost as if on purpose. The same holds for all the other translations known to me (except perhaps that by Diels; yet Diels–Kranz is one of the worst). But in the light of one of the two main truths revealed by the goddess – Parmenides' aggressive anti-empiricism or anti-sensualism – B 16 becomes perfectly clear and immensely interesting: when properly translated, it is a scathing and highly ironical attack on sensualistic empiricism – in fact, on the teaching that is best known in the famous (but somewhat weak) formulation *Nihil est in intellectu quod non antea fuerat in sensu*. (So far the earliest doctrine of this kind known was that of Protagoras; but it must have existed half a century earlier. Of course, it is mentioned and mildly criticized, but not dated, in Aristotle's *Metaphysics* 1009b13; see below.)

We must start from the sources of B 16, Aristotle's *Metaphysics*, 1009b21, and Theophrastus, *De Sensu* (DK A 46). The context in which both Aristotle and Theophrastus report and discuss their versions of Parmenides DK B 16 is sense perception.

Aristotle begins the paragraph in which the quotation occurs with an important reference to philosophers who 'suppose that thought is sense perception and that sense perception is physical change'; a crisp formulation of precisely that view which, as we shall see, Parmenides attacks in B 16 with scathing irony. Theophrastus, who transmits the better text, puts it into the middle of a passage that also discusses sense perception, yet mainly a problem that has nothing to do with our B 16, and that goes back to Empedocles (e.g. DK 31 B 90): whether or not we perceive cold with cold and sweet with sweet, or possibly with the opposite – cold with hot and sweet with bitter. (Theophrastus links this problem with still another one that also has nothing to do with our B 16.)

At any rate, Aristotle and Theophrastus agree in reporting B 16 in a context concerning sense perception. But nothing in the usual translations shows this. They translate *μελέων* (genitive plural of *μέλος*) by 'limbs'. But you can find the following in Aristotle's *De partibus animalium*, 645b36–646a1: 'Examples of parts are Nose, Eye, Face; each of these is named *μέλος*.' This the Loeb edition translates 'a "limb" or "member"'. But this is not English! Who would call the nose or the eye or the face a limb or a member? We would of course call the nose or the eye a sense organ; and

the face also, if we used it for perceiving, say, a cold wind. However, the dictionary says 'limb' or 'member', but not 'sense organ'; and that is it, even though it is not proper English (just as 'Glied' is in this context simply not correct German; as Hermann Diels realized, in using the right term).

I now turn to translating the passage, remembering Aristotle's context (but *not* Theophrastus') and Parmenides' rationalism and his hatred and contempt of sensualism and, no doubt, of the doctrine he hates: that rational thought (intellect) is sense perception linked with physical change. And I assume that both Aristotle and Theophrastus knew well that μέλος meant: a nose for smelling or an eye for seeing, or an ear for hearing. As a result, the translation now looks like this:

What is, at any one time, in their much-erring sense organs' mixture,
That men use as a stop-gap for thinking. They treat, as if equal:
Reasoning powers of man, and his sense organs' nature or mixture.
What in this mixture prevails they call thought, in each man and all.

This is obviously a violently sarcastic presentation of the theory which Aristotle thinks that Parmenides seriously defends. (Aristotle misremembers the crucial word 'much-erring', replacing it by 'much-humbled', so that he might have thought that Parmenides wishes to defend the senses against being undervalued.)

Karl Reinhardt was well aware of Parmenides' scorn and contempt, but he nevertheless believed that B 16 was one of the false yet serious human conjectures.⁹ I admit that this is possible: it could have been a serious conjecture of the way minds work that belong to the blockheads (or doubleheads).¹⁰ But I cannot quite imagine the context. To me it is easier to think that B 16 was a straightforward ironical attack like B 6, and probably belonging with it.

My reason is that the goddess was, after all, making propaganda through Parmenides (B 2, 1) for rational, logical thought and against sensualism. This could not be combined with propagating amongst the best conjectures the view that humans cannot, in general, think, but can only perceive, and can only mistake their sense impressions for thought. However, I wish to stress that we just cannot know in which context B 16 occurred.

A sign, apart from B 7, that Parmenides also analysed his own way of logical thinking is, I believe, B 5:

...It's all the same to me where I begin:
Just to that very place I shall come back again.

I think B 5 shows that he saw that most of his intuitive logical steps were logical equivalences rather than one-sided entailments. (This does not hold for the last step, (6).)

VII. A BRIEF ASSESSMENT

I think that Parmenides was the first great theoretician, the first creator of a deductive theory: one of the very greatest thinkers ever. He built not only the first deductive system, but the most ambitious, the boldest and most staggering ever; and one whose logical validity was intuitively immaculate.¹¹

⁹ Karl Reinhardt, *op. cit.*, especially pp. 77f.

¹⁰ The 'doubleheads' (or the 'two-headed' ones) in B 6 create a problem. The expression is certainly used in anger, like 'blockhead'. But has it a special meaning, at least one like blockhead? And perhaps even a meaning that links it with the argument? Or are they just ordinary mortals looking Janus-faced towards being *and* towards not-being?

¹¹ See above, note 7. The problem of paradoxes – simple inferences which, it seems, cannot be intuitively shown to contain a mistake, but which lead to impossible conclusions – was known in antiquity and has not left us. The most famous one is the Epimenides (a form of the Liar).

It took far more than 2000 years before logicians learnt that there was no natural or intuitively fully satisfactory way of avoiding logically catastrophic conclusions, and that up to a point we had to choose our own logical conventions for avoiding them: an almost Parmenidean lesson (and one never learnt by most of the philosophers who made 'ontology' their business and got nowhere).

The next step, only made possible by Parmenides, was the recognition by Leucippus and Democritus that a deductive theory of the world, a theory of such power as that created by Parmenides, could only be *hypothetico*-deductive. So they accepted the existence of motion as an empirical refutation of Parmenides' hypothetical system and concluded from it that both the Full and the Empty existed: atoms and the void.

In this way, the greatest physical theory ever was born from the critically inspired discussion of Parmenides' thought.

But the war still continues, the war of observation and experiment against theory; of believers in sense perception against thinkers: both within science and within scholarship.*

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* This paper is dedicated in gratitude to Jaap Mansfield for his book *Die Offenbarung des Parmenides und die menschliche Welt*, Assen 1964. Mansfield has also encouraged me to add the following note on Parmenides' conventionalist attitude towards language, although the note is unconnected with my argument.

A child born blind may know very little about its being disabled (especially in a society in which no fuss is made about it). But it may exhibit an unusual attitude towards language, similar to that of Parmenides. For it will by example and convention learn to adopt, and to use, words that mean little or nothing to it (like 'blind', 'see'; 'green', 'red'; 'dark', 'light'...). Parmenides was clearly not blind: he was an astronomer! But he may have been brought up by (or with) someone who was. Or he may have been colour-blind, which may lead to a similar attitude (as Dr. Noel Bradley, a psychotherapist, informs me).