Plato’s Enlightenment: The Good as the Sun

In The Republic, Book VI, the Form of the Good is compared to the sun. The present essay explains and unpacks this crucial simile with unprecedented clarity and detail. The essay shows that, beneath an alien surface, Plato's thought (To simplify the complicated circumlocutions that result from constantly bearing in mind the rhetorical complexity of an author whose works are plays rather than treatises, the essay speaks of "Plato's views," meaning, roughly, the apparent upshot of the arguments the characters, especially Socrates, make. Discovering "the author's point of view" is sometimes no more difficult for Plato than for Upton Sinclair. You know who is right in some passages of the Phaedo just as clearly as you know what Sinclair thinks about the meat industry in The Jungle. On the other hand, Plato is often ironic toward Socrates, since Socrates gives arguments that are later exposed as fallacious, as is the case in the Phaedo. If the dialogues are sometimes supposed to provide subtly fallacious arguments for analysis in the Academy, then little strictly follows about Plato's opinions from a passage in a dialogue, any more than Romeo's words give Shakespeare's theory of love. It is reasonable and even possibly correct. The essay uses two strategies to reduce the text's appearance of strangeness:

First, the essay shows that some of the strange sound of Plato's text comes from residual effects of unsupportable distinctions which early twentieth century analytic philosophy endorsed but which Plato with good reason did not accept. Plato implicitly rejects (Plato "implicitly rejecting" a distinction means that Plato does not make the distinction and that his text is best understood on the assumption that he denies the distinction.) distinctions which became philosophical commonplaces, most importantly the distinctions between fact and value and between the analytic and the synthetic. But while many such commonplaces have been discredited, their observance still strikes us as "normal philosophy." Thus the alien feel of some of Plato's views is a trace left from old habits we no longer should accept.

Second, the essay diminishes the strangeness of some passages by showing connections between parts of Plato's fundamental ideas and things we take to be reasonable, and then showing that the very alien parts of Plato's thought are consequences of features of these basic, not-so-alien conceptions.

The passage in question, in Grube's translation, is the following: (Plato's Republic, translated by G.M.A. Grube,(Indianapolis: Hackett, 1974.)) (508e1-509a5)
"Say that what gives truth to the objects of knowledge, and to the knowing mind the power to know, is the Form of Good. As it is the cause of knowledge and truth, think of it also as being the object of knowledge. Both knowledge and truth are beautiful but you will be right to think of the Good as other and more beautiful than they. As in the visible world light and sight are rightly considered sun-like, but it is wrong to think of them as the sun, so here it is right to think
of knowledge and truth as Good-like, but wrong to think of either as the Good, for the Good
must be honoured even more than they" Continuing (509b2-10): "You will say, I think, that the
sun not only gives to the objects of sight the capacity to be seen, but also that it provides for
their generation, increase and nurture, though it is not itself the process of generation....And say
that as for the objects of knowledge, not only is their being known due to the Good, but also
their reality [and] being, though the Good is not being but superior to and beyond being in
dignity and power [surpassing being in dignity/age and exceeding power]."

In brief summary, the good is said to provide objects of thought with their truth, thus
making them intelligible just as the sun makes objects of sight visible. It is further said to be
responsible for the generation of the objects of thought just as the sun is responsible for the
generation of objects of sight. These two features of the Good are the focus of the present
interpretation.

The Good Itself is also said to surpass [epekeina] being in age/dignity and exceeding
[hyperechontos] power. This last feature, whose thorough discussion would involve adequate
treatment of the Parmenides, will be less completely dealt with.

Commentary on this passage has been voluminous, vague, and inadequate. None of the
commentators ( With the partial exception of Cross and Woozley's Plato's Republic A
Philosophical Commentary (Macmillan: London, 1964), which pairs, without explanation,
light and Truth, as the stuff which allows intelligibility. It is hard to imagine a less helpful
gloss.) have offered or defended what one would expect in the explication of a simile: A point
by point explication of the identification of Good= Sun; Light = Truth and how the Good could
produce something which permits understanding the way light permits perception and also
generate the intelligible objects just as the sun generates the visible. (Consider a selection of
modern commentators:

A) Nicholas White's Companion to Plato's Republic (Indianapolis: Hackett, 1979; pages 178-
181) is surely correct that Forms are values as well as predicates, that the concept of an F
automatically contains the concept of a good F. But what does this explain about what Good
produces that could be like light? White avoids detail, saying that his remarks are "conjectural".
B) Julia Annas' commentary in An Introduction to Plato's Republic (New York: Oxford UP,
1982; pages 244-246) similarly does not aid much. Her eagerness to ascribe confusion to Plato,
and her quick diagnoses of Plato's views as failures to distinguish clearly between, e.g., values
and facts, make her discussion of the Sun passage unhelpful.
C) R. C. Cross and A.D. Woozley have a multi-chapter discussion of the three similes in
Plato's Republic A Philosophical Commentary, (London: Macmillan & Co Ltd, 1964, pages
196-261). Their discussion concludes with the remark that, "In short what Plato has to say about
the Form of the Good here ...is so brief and so obscure that most comment tends to become
speculation." Their "analyses", as noted above, stop with the suggestion that Truth is what the
Form of the Good produces on the analogy of light.

This essay first states in bald outline the proposed explication (J.N. Findlay's Plato: The
Written and Unwritten Doctrines (New York: Humanities Press, 1974) is the main source of my
general approach to problems of Plato-interpretation. of the simile, and then goes on to unpack
and justify that explication. The fundamental parts of the interpretation identify the Good with
the One and treat "truth" as mathematical structure:
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Good / One = Sun
produces (by logical produces
unfolding) the numbers light
which make possible
mathematical structure = lighted surfaces
which permit
intellection viewing
= grasping mathematical structure = seeing lighted object

(Aristotle) "generation" of Forms sun as the source of light
from the One and the Particuials heat, reproduction in
from the Forms by "application" organisms
the One to the Indefinite Dyad (=Difference)
( The reference to Aristotle and the Indefinite Dyad recall the familiar passages in Metaphysics
A, which the present essay assumes to be reliable reporting of at least the surface of Plato's
conception of generation.)

Both the Sun and the Good, then, are responsible for the generation of the objects whose
apprehension they make possible in their different ways.

(Among numerous problems is how the One could be the Good, and how mathematics is
connected with intelligibility. In brief outline once again: Because knowledge is a vision-like
relation, only what is totally known is known. So only mathematically comprehended totalities
are totally known. The One produces the numbers from an internal necessity, explicated in the
Parmenides. The numbers are what provide the truth of intelligible objects, their mathematical
structure. Mathematical structure is both generated and revealed (a-leth'ed) by the generator of
the numbers.)

The Good is the One, because "must" is univocal in mathematical and moral
applications. So, if understanding why right triangles have two right angles as the sum of their
interior angles is understanding why they must do so, this "must' is to be understood as
mathematical necessity, as the "logical" unfolding of the one, and as a value-necessity, why it is
best that they do so. In each of these "musts", which are the same "must", exactly that unfolding
is required. Briefly, the sense of "required" is the same in mathematically required, in
"aesthetically required", and in "morally required."

This essay's interpretation takes seriously Aristotle's remarks in Metaphysics A that
Plato is a refined Pythagorean, and understands the Forms in ways suggested by those remarks,
and by the Philebus, Sophist, and Parmenides. The interpretation is designed to accommodate
the whole text of Plato, not in the sense of making the supposed "doctrines expressed" in all of
the dialogues cohere, but in making a coherent story out of the whole text. ("The whole text", in
this case, includes the indirect discourses from Aristotle.)

I Knowledge in the Theaetetus
A: Knowledge as Total Knowledge

A fundamental figure (As Jacques Derrida points out at length in his essay "White Mythology," in *Margins of Philosophy*, (Chicago: U of Chicago P, 1982; pages 209-271), knowing and seeing and the associated notions of clarity, distinctness, and light break down the distinction between the literal and the figural. Of course, the term for "know" is "have seen," so the idea that there is any figure here is obscure.) for knowledge, in Plato and in Greek, is seeing. Seeing an object, like grasping an object, can be done more or less completely. Seeing also allows degrees of clarity. Seeing is, at least prima facie, a relation. That is, there is a set of ordered pairs of entities such that the first sees the second. If seeing is a relation, then it is the object itself that is seen. Thus if I see Adam and Adam is the friend of Bart, then I see the friend of Bart. If seeing is a relation to an object, then that object is seen under every description which is true of it.

This last consequence should give us some pause, if the "X sees a red dog" and the "X sees that there is a red dog" locutions are equivalent. (What we see in the former locution seems to be a matter of pure sensation, getting photons from the red dog. In the latter construction, what we see has something to do with what we verbalize on the basis of seeing. When we see that the hidden variable version of quantum mechanics cannot work, we are not dealing with sensory contact with objects of any kind at all. The awareness we have may still be said to be visual, but we are talking about "vision" in the sense of knowledge, not photon inputs.) For we see Adam, and so see the friend of Bart, without thereby seeing that Adam is the friend of Bart. When we see the whole of Adam, we see what is there in Adam, but do not see all that is true of Adam. For seeing, we distinguish between what is really there, in Adam himself, and the various things that are true of Adam but are not really parts of Adam.

As I have argued elsewhere, (Samuel Wheeler, "The Conclusion of the Theaetetus," *History of Philosophy Quarterly*, Volume 1, Number 4, (October 1984), pages 355-67. Plato in the *Theaetetus* takes knowledge to be the kind of relation seeing is, for two reasons:

First, it is prima facie plausible that what is known are objects, and not descriptions of them. It is the world which we seek to grasp when we seek knowledge.

Second, Plato treats the soul as a central kind of object in the natural world. He thus solves the problem of how nature is suited to be known by the soul by guaranteeing a natural affinity between the soul and the world. Thus in Plato's project, important features of the soul must be fundamental principles of a theory of the world. So psychological predicates such as "knows" must be simply understood in terms of fundamental predicates of natural science. (Plato explains the intelligibility of the world by the centrality of Soul. "Recollection" is best taken as a metaphorical presentation of this natural affinity of the soul and the world. A way to realize this: If we understand the "pre-birth existence" described in, for instance, the *Phaedo* as an attempted genuine explanation of how we know the necessity and universality of the axioms of identity, we get a non-explanation. How would it really help to look at perfect equals while floating around in a pre-natal state? Why would that "vision" yield knowledge of necessity, even given that it yielded knowledge of truth?)

Such central predicates of natural science, though, must have rational, simple laws. This is not just a prejudice of Platonic and Greek rationalism, but a demand shared by, for instance, modern physics. A theory which tried to define "knowledge" of objects in terms of descriptions or causal relations or some combination would have an account of "knows" much too complicated to be the account of a fundamental natural feature. (The issue between Plato and much of contemporary philosophy is whether nature is basically alien to human purposes and
goods. A Democritean, purposeless world, in which phenomena such as knowledge are merely accidental nominal agglomerations, can have a very complicated or even unlimited set of principles defining knowledge.) That is, just as contemporary physics will not allow that a fundamental feature of the world could have unsystematically complicated relations with the world, so Plato requires that knowledge have some rational, simple account.

Any account of the knowledge of objects which tries to conform to the way we apply "knows" in ordinary life will be a complicated disjunction of kinds of case. In most such cases, knowledge will turn out to be defined as an elaborated conditional mixture of causal connections and kinds of information known.

To see the complexity of the ordinary usage of "to know," think for a minute about the various things that must be known to know a city, versus what it takes to know the alphabet or to know the time. Just as a physicist need not accommodate all of the various things we tend to say using "mass" in defining the physical quantity Mass, so Plato need not accommodate our ordinary use of "know" in order to define the natural feature Knowledge.

Given these regulative constraints on an account of knowledge, much of what ordinary usage characterizes as known is not really known, in the strict sense. This is not an unPlatonic result.

Plato's requirement on knowledge is not that every truth about an object must be known if the object is known at all. Plato's view is that an object is known only if every part of it is known. If we think of features of an object not as what can be said of an object but rather as parts of an object, then, as it were, to know an object is to know the whole object. So, while knowledge is a relation, it is only parts of what are known that we must know we know when we know.

Thus, Plato distinguishes between intrinsic and merely relational features in the Theaetetus. This distinction would allow that, for instance, the Form Beauty could be known without knowing that Adam thought of Beauty on January 5, 1986. Plato thus distinguishes between features that are genuine parts of the object, and merely verbal, relational attributes.

Thus, knowing grasps what is in the object itself. The object is known if and only if every part of it is known. (A merely verbal feature such as being shorter than Theaetetus is not a real part of the object at all. The mark of such a verbal feature not being a part of the object is that no real change takes place in the object when that verbal feature no longer obtains. See Theaetetus 155a and b for a passage which seems to me to clearly distinguish between intrinsic real change and merely relational change.)

So, the merely semantic argument that knowledge is a relation does not capture Plato's motivation and intent. Plato believes that in knowing an object, one grasps the whole of an object, and that one is aware of what is grasped. Thus, not every open sentence true of an object is a real feature or part of the object that is grasped. Rather, there is a distinction between the real and the merely external relational features of an object.

To summarize these considerations: For genuine knowledge, we know every real property of an object when we know the object. Only thus can knowledge be a natural relation of thing and person. The feature of knowledge that we know that we know, is only true of genuine parts of the object, not of merely relational properties. (Note that, given mereological essentialism, all parts of an object will be essential to the object. If essential relations are internal, all essential properties will be intrinsic.)

B: The Knowable and the Mathematizable
a) Sensible objects:

Given these notions about knowledge, only things which can be totally known can be known at all. These notions thus rule out knowing any object with unpredictable future intrinsic features, so that an object with contingent intrinsic properties is unknowable. If intrinsic features are parts of the being of the thing, then medium sized physical objects are not knowable, since strictly speaking they do not exist over time. "Strictly speaking" means "given the truth of mereological essentialism."( For an account and defense of mereological essentialism, see Roderick Chisholm's Person and Object, (London: George Allen & Unwin, 1976); especially pages 148-158.) That is, such an object is really an aggregate of feature-instances, each of which is a part of the aggregate. When a new element joins the aggregate, it is a new aggregate, not a new condition of an old aggregate.

One could try to define "same object" for physical things, but there would be little sense in doing so. While there objectively are the privileged aggregates which constitute such instances of complex kinds as "same man," given the formal unity of the system of features which amounts to being a man, this is not sufficient to give a criterion for "same object." For several such systems can coexist in the same location, constituting a single "sensible object." Since such "objects" are subject to future contingent changes, there is no total knowledge of them.( Besides the flaw that sensible objects have future contingent parts, the actual configuration of a particular instance is not knowable for other reasons derivable from the dialogues.

For one thing, sensible particulars at a given time only approximate the form of which they are an instance. Thus, if the degree of that approximation changes, the way that particular is is unpredictable. If we conceive of the Forms as the reality of the Laws of Nature, what enforces the laws of nature, then a thing is predictable only insofar as it instances a pattern among the Forms. Drift in approximation must be absolutely random.

Another Platonic consideration about approximation: If what is being instantiated is a ratio, then an instance which only approximates that ratio may fall anywhere on an indenumerable infinity of ratios. None of these ratios will be detectable by the senses (no-one can tell pi apart from any one of an infinity of other rational and irrational numbers) and so the particular quantity or ratio the sensible individual exactly is is strictly unknowable. Such unlimited objects not only lack knowability, they also lack being, in the sense of a determined nature that they are.)

b) Knowing Forms

Since the sensible world is not knowable, what about Forms? Forms are knowable if and only if all of their intrinsic features of parts are known. So, what intrinsic features do forms have? Under "intrinsic feature" is surely included every eternal fact about the form, and thus every fact about its relations of blending with other forms.

In addition to relations with other special Forms, Forms themselves seem to have an internal structure because of their relations with the "mega"-Forms, entities such as Existence, Sameness, Difference, and Unity. According to the view in the Sophist, each Form has parts of the Different, Unity, and Sameness. According to the Parmenides, these parts themselves have components, and so on infinitely.

In the simplest example, a Form which is one has Unity. If that unity is, it has Being. Its Being is One, and so has its Unity. And so forth. There are an infinity of distinct property instances of other Forms in any given Form. This means that in the simplest case, a thing has an
infinity of parts. All knowledge of any entity is thus infinite knowledge. So, how can anything be known?

c) Mathematical knowledge

Mathematical knowledge of infinite arrays is Plato's model for real knowledge of anything. The kind of grasp we have of, for instance, the infinite structure of the One from the above Parmenidean argument, is made possible by the mathematical nature of the sequence of beings and unities.

So, the Forms are knowable because they are totally graspable infinities. Just as you in a sense know every successor to every number, so you can know every intrinsic feature of a Form. Each number in the number sequence likewise has an infinity of essential properties—for instance its numerical difference from every other number in the sequence. You can see how a sequence goes on into infinity.

How does this seeing take place? We see infinite sequences and the structure of infinite arrays by the light of reason. Since this kind of sight is the only sight that gives us complete information about the entities being seen, it is the only sight that gives us knowledge. To preview the next sections somewhat, the light of reason is what makes mathematical sight possible. Sensible light, which doesn't permit infinite knowledge of the sensible objects it reveals, is a pale copy of the light of reason.

A further preview: What is the necessity of the unfoldings of the One that Plato elaborates? Why should the One which is generate the sequence of numbers, planes, figures, and solids which are described in the *Timaeus* and the *Parmenides*? The answer we seem forced to is that this HAS to happen. But that "has to" must be understood (from our post-Platonic perspective) as simultaneously causal, logical, aesthetic, and moral.

C: The Good, the One and the Sun

But what is the light of reason? Plato characterizes it as coming from the Good. The Good and the One are the same, because both the Good and the One are said to be the source of all other things, in a variety of locations in Plato's direct and indirect text. This is a position at most one entity can hold.

The Good and the One are both beyond being, as is proved for the One in an argument in the *Parmenides*, sketched here: In the first hypothesis of the *Parmenides*, Plato shows that all cases of unity are impure by being mixed through and through with plurality. This discovery proceeds through two main stages:

In the first part of the argument, (137c~142a), Plato shows that if a single thing is in no way diverse, then it cannot be, cannot be the same as itself, and so on. Most strikingly, such a one, if it is just one, cannot be, since being is distinct from unity and a unity which had being would have something distinct from unity itself. The premise of this argument seems to be that anything which is real is a being, and thus that any predications which is true names an additional being. This requires that any subject of features be a distinct being from those features.

The difficulty with a unity which is just one is a difficulty with anything having just one feature. In the case of a unity which is just one, the feature is taken to be identical with the subject of that feature.

Given these considerations, a thing which is undividedly one must be a subject—cum-feature which has no other features. In a way, the entire dilemma of the first hypothesis
derives from the demand that features be essentially of things, combined with the demand that anything real be an entity. The problem is not just that neither feature nor subject can exist apart from the other, since Plato allows features to be subjects, but that features cannot stay themselves while being subjects of features.

This becomes clearer in the second part of the argument, from from 142b-155e: Suppose that one thing A is, or obtains in a case, A is a feature. Then that one thing A has its being, which must be entity B, and is distinct from A. The being of an entity is a feature of that entity, in the sense that it is in virtue of something other than unity itself that a thing is. ("One thing", here can be a property instance, e.g. of Unity Itself, or an exotic object, or whatever.) Entity A then has two real parts, A and B. (The difficulty put alternatively: what has the unity of the one thing must itself already be one thing; and what has the being of a thing that is must already be a being.)

Several questions demand answers: How could the Good be the One? What do these entities (or aspects of a single entity) have in common? How could this entity plausibly function with respect to mathematical sight in the way that the sun functions for sensible sight?

a) The One in mathematical structures

To begin to answer these questions, let us think about the possible functions of the One in mathematical objects. The One, according to numerous familiar accounts Plato gives, makes the numbers. Each number is one, and is made up of ones. The ones in a number are what allow it to be what it is, and what define its intrinsic relations to every other number. Thus the One makes the numbers be what they are, and determines the infinity of relations each number has to all the others. That is, every feature of a number is a consequence of how many ones make it up, which ū"[making up" can be construed as the work of differentiation on the One.

Also, and just as important, the One makes possible determinateness and definition. If a thing is determinate, it has to have a certain number or a certain proportion. So all definiteness is a creation of the One, and is to be given an account in terms of the One and its differentiation in the Other.

The One is like the sun, because Oneness is what makes the infinite complexity of a number or a mathematical structure comprehensible. An infinite structure, such as the number line or Unity Itself, is comprehensible when understood in terms of numerical generation, the unfolding of unity into further unities. Only thus do we see that the infinite structure is itself one, and also see what it is; that is see every truth about it. So unity makes it possible to know an infinite structure or an infinitely complex entity, in the way that we know each of an infinity of sums of numbers.

This is the core idea of the whole passage. Take a simple fact about numbers, such as that the sum of the first n odd integers is always equal to n squared. This is a fact which has an infinity of components, but which is grasped in a single insight. The visible squares by which this relation can be seen to be necessary are not the infinities of aggregates of ones, but that infinity is what is seen in the insight. The same is true of the famous proofs of the Pythagorean Theorem, which show how an arbitrary (a+b)-sided square can be divided to form the same square either made of a^2 + b^2 + 4 right triangles with hypotenuse c and sides a and b; or made of c^2 and those same 4 triangles.

So how is Unity like a source of light when we know something? The One is what makes rational structures knowable, just as the sun is what makes sensible objects perceivable. We see sensible objects only if they are lit (ultimately, such lighting derives from the sun) just as we know rational structures only if they are mathematizable (ultimately, mathematical
structure is derived from the One and its unfolding). That is, the lighting of sensible objects by the sun is like the mathematical structure of mathematical objects brought about by the One.

Another point of alienness needs to be overcome here: If the One brings things about then the One is not "merely abstract." (Later characterization of the Platonic Forms as "abstract," combined with the view that abstractions don't make things happen, make the Platonic view that the One is causally efficacious incomprehensible. But that characterization is one that develops after Plato, using distinctions alien to his thought.) Platonic Forms are not sets. They are not "abstract entities" whose existence has no consequences and is, in contemporary ontological parlance, "for free." Platonic Forms' inter-relations are laws of nature. Forms are the realities whose relations are the facts about what laws of nature there are.

The relations which constitute laws of nature are mathematical relations. Laws of nature are formulae, i.e. structures of Forms, which constrain what is and happens. The real, as opposed to the merely abstract, Forms really determine what happens. E=mc\(^2\) is just as real an "abstract object" as E=mc\(^2\), but it is not an efficacious formula, not a formula which has been generated and which makes things happen. In the same way, of the various formalisms that could be invented, only one corresponds to the real numbers. Only the numbers are really there, having been unfolded from the One in the appropriate way.

There are two stages in making less alien the idea that mathematical facts bring things about: First, we have to think that mathematical and physical principles have a similar standing, as far as being "empirical" or "descriptive." Quine's destruction of the analytic/synthetic distinction should facilitate this move. Quine shows that there are no grounds for thinking that mathematical facts are a priori in a way that sharply separates them from physical laws. (It is perhaps worth mentioning that the borders between the mathematical and the physical are blurred in contemporary physics as well, given geometrodynamics and string theory.)

Second, we have to think that physical laws really make things happen; that they function as a kind of constraining reality on the real world. How do physical laws keep things from going faster than the speed of light, unless they are grounded in real entities of some kind? Forms would be Plato's explanation of the difference between projectible and the unprojectible regularities. For a law to exist is not just for a correlation of features to exist, but for there to be a real relation among Forms. The existence of Forms, on this account, is the existence and real functioning of formulae.

The soul's access to such structures is not mysterious if we take as a datum our understanding of the inverse square law. Some real relation among Forms, which will ultimately be explained by the part-whole relation, makes the amount of radiation hitting a surface be proportional to the square of the distance from the source. Is the inverse square law mathematics or physics? It would seem to be something which is proved geometrically, but is borne out physically. Plato may have been over-hopeful that the rest of physics could be founded on the kinds of arguments that convince one of the inverse-square law.

b) The One as the Good

Even if we accept the efficacy of the One and the mathematical structures it engenders, we must explain how the One can be identified with the Good. Here again, some post-Platonic distinctions have to be attacked, among them the distinction between fact and value, and the distinctions between the various categories in which things can be said to be "good."

Consider first that in a rational sequence of propositions the propositions occur in the sequence they ought to. Also, rational actions are ones that ought to be done.
Now, much modern dogma will raise the following rhetorical questions: Isn't "rational" different in kind in the two cases? Aren't there really distinct senses of "ought" in these cases? Isn't the justification for an action a "justification" in a different sense than the justification for accepting "B" on the basis of "A" and "A only if B"? Post-Platonic dogma answers "Yes of course" to all of these questions. But the justification for these assumed distinctions of sense and kind are archaic distinctions about kinds of language. Most especially, one has to believe that there is a difference in kind between the a priori and factual information on the one hand, and between valuations and factual judgments in order to think it obvious that "good proof" and "good man" use "good" in two senses.

So let us consider three kinds of phenomena: actions, sequences of actions, and proofs. What is it to understand any of these? To understand an action is to see it in the light of the actor's view of what is good. To see why someone did something is to see what the Good of it is. In the same way, to see why an action in a sequence of actions occurred when it did or in the place in the sequence it did, is to see the good of having that item there. To understand a proof is likewise to see why each step is where it is, and to see what contribution it makes to the proof. Again, to understand the proof is to see the good of each step, and to see what each step is for. Thus, prima facie, "rational understanding" is always a matter of seeing what is good. Rational structure is, likewise, the structure that makes rational understanding possible. Thus "rational structure" is the Good that is seen and grasped.

Such prima facie univocity could be taken to be merely metaphorical, if there were some powerful reason to suppose that these are categorically different phenomena, such that no common property or structure can inform them. (Persons are clearly different from numbers, but that does not mean that "is larger than" has two senses for numbers and for people. The same structure orders people and numbers, and explains why the numbers (of centimeters tall, for instance) can order people.) Plato, not unreasonably, supposes that "good" is univocal in the above explanations by "appeal to the good."

Plato takes the goodness of good action to be real and so subject to scientific understanding. That is, there is an objective fact about whether some action has the feature "goodness", and this fact can be known. But, something knowable is something subject to mathematical account; and so something whose infinite features are grasppable in the way mathematical proofs are. Another way to put this: If it is no mere accident that "good" in inference, sequences, and actions is the same word, then there must be an analogy. But if the analogy has a basis, then it must be an analogy of structure. So good, for a kind of thing, is a feature of structure or is the name of a structure. But all structures are mathematical, that is, grasped in the mode of insight that yields mathematical proofs.

Suppose these analogies in the use of "good" are real analogies, and not matters of material or sensible sameness. Then they are structural samenesses which must be grasped by the mind. But structural samenesses are mathematical structures. So, Goodness is a feature, primarily, of mathematical structures. So, what is the domain of the merely mathematical? If value is there and value is structure, and structure is mathematical, then the door is open to identifying the Good and the One.

c) The Good = the One

Mathematical structures and definitions allow us to "make sense of" such structures. But that is seeing the good in the various parts, that is seeing how the parts make up a whole and how the whole is a single thing. An infinite grasp of the thing, a grasp of a thing in its infinite
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complexity, can only be a grasp of the measure of a thing, the way the One gives structure and
determinacy to the thing.

So, just as Unity itself is the source of the various ways things can be one, i.e. the
various Forms; so Good Itself is the same entity as the source of the various ways things can be
Good, i.e. the various structures which actually get enforced in the natural world. Those
structures get enforced because they are the structures that acquire reality in the generation from
the One.

Now, how can the generation of the various structures that flow from the One be the
same as the generation of the various structures that flow from the Good? It would seem that
the logical generation of the numbers is forced by the very nature of a One. Well, the quick (and
only) answer is that the aesthetic/ valuational generation of the Forms is brought about by the
same necessity. Necessity is necessity. Moral necessity, that something just has to be, is at
bottom the same as the necessity by which the one generates the numbers.

Only if we think that values are separate from facts could we think that aesthetic
necessity or moral necessity could not be the same constraint as logical and causal necessity.
This is why the One and the Good and the Beautiful are names of the same thing.

d) Knowing Forms is Knowing the Good

Forms have complex relations to one another, and thus, given that these relational
properties are essential to a Form's being the form it is, in themselves. For a form to be known,
then, requires an infinite knowledge. So, seeing the good in a form's analysis is seeing the
mathematical structure. And, by the arguments above, seeing the mathematical structure is
seeing the way the One occurs in the Form. The ultimate cause of there being a determinate
structure at all is that there is the One making mathematical, determinate and graspable,
relations possible.

Since Forms can be known accurately, and since that knowledge is of an infinity of
relational properties, Forms must be graspable in all of their relations at once. Only if Forms
have a number-governed structure can such knowledge be possible.

So, this explains how Forms are automatically value-ideals as well as universals in the
post-Platonic sense. A Form makes sense only if its components make sense. Such making
sense is the only way a Form could be known, given its infinite character. A component of a
formula is where it ought to be, in its proper place, logically. A component of a Form is its
relation to another Form. What is in a Form is what must be in that Form. To understand a
Form, then, is to see how each relation to another Form is required. (In this sense, the Forms
can be compared to the integers. Each integer is essentially related to the other integers by
being so many less or more than it, by being divisible or not by it, etc.) Seeing the Good, then,
is seeing the necessity and appropriateness of each property of a Form.

e) Generation of the Objects of Knowledge from the Good

The Good Itself is the source of the goodness of each of the Forms, since the structure
the Form is is generated from the Good. How the Good/One is unfolded in a particular Form is
determined by the internal necessity of the Good/One.

If the necessity that we see in a proof or in the generation of the numbers from the One
is an undifferentiated moral/ aesthetic/ causal/ logical necessity, then the explanation of how the
Good/One allows understanding is precisely parallel to how the Good/One generates the reality
that is understood.
f) The Divided Line and the Sun

An important constraint on an account of the Good and the Sun in this passage is that it make sense of another famous passage, the divided line. The remarks in this section will necessarily be programmatic, since the divided line clearly deserves at least an independent essay. The divided line is proposed as a further explanation to the baffled and amused Glaucon. To quote again at some length:

"Understand that, by the other section of the intelligible [noetou] I mean that which reason [logos] itself grasps by the power of dialectic. It does not consider its hypotheses as [archas] but as being hypotheses, as stair-steps or moorings, in order to reach the a-hypothetical arche of all that exists..."(511b2-8)

The relevant feature of the divided line, for the purposes of showing the adequacy of the above explication of the simile of the Sun, is Socrates' proposal that there is a starting object of knowledge which can be the basis for drawing consequences without being itself merely a hypothesis. That is, where much knowledge is knowledge of conditionals, knowledge of what follows from certain suppositions, a genuine foundation for knowledge would start with some object of knowledge whose knowledge was categorical.

What kind of object of knowledge could be known unconditionally? One idea would be an object which existed in virtue of its own nature. Plato's views about the One and existence are not very clear to me. It would be surely hasty to assert that Plato thinks that the One is an entity which necessarily exists. But two other suggestions as to the status of the categorical foundation of knowledge agree with the One as such categorical foundation:

First, an object of knowledge would be the categorical foundation for knowledge if it could be shown that any knowledge of anything depends on this object. The One /Good surely fits this bill. Without the one as the basis for mathematical, rational structure, even that conditionals have consequences could not be explained.

Second, one could start with the other very famous place where hypotheses are discussed, the second part of the Parmenides. The argument there seems indeed to show that the One, this object of knowledge, whether it exists or not, suffices to generate all features. That is, the One functions as the unhypothetical starting point for knowledge and being whether or not it also is, and so whether or not any "hypothesis" of it is correct. So one way to find an unhypothetical foundation of knowledge is the find an object of knowledge which is independent of the question of its being.(The reader is referred to Kenneth Sayre's excellent work, Plato's Late Ontology, Princeton: Princeton UP, 1983, for a discussion of the complex considerations concerning these topics.)

The suggestion that the One would be the starting point of numbers, natures, and knowledge whether or not it has Being allows a kind of understanding of perhaps the most puzzling aspect of the simile of the Sun, that the Good and the One are "older than" being or beyond being.

That the good is "older than" being is the best understanding of the "presby" adjective in the passage. In a Platonic generation-context, "older than" is to be interpreted as "logically prior." Thus the idea that the One is prior to Being, in the sense of being a precondition for being. But how could this be?

To be is to be something, to be an F. To be something is to have a nature. The One /Good, as argued above, is the fount of all natures, and so is a precondition of anything being F and so of anything being at all.(There is serious question whether Plato thinks that Being is a
nature at all. The discussion in the *Sophist* 242d ff suggests that "being a being" is not a feature at all.)

g) Conclusion:
Now we are in a position to see what the original passage says about knowledge, the Good, and what is:
"Say that what gives truth to the objects of knowledge, and to the knowing mind the power to know, is the Form of Good. As it is the cause of knowledge and truth, think of it also as being the object of knowledge. Both knowledge and truth are beautiful but you will be right to think of the Good as other and more beautiful than they. As in the visible world light and sight are rightly considered sun-like, but it is wrong to think of them as the sun, so here it is right to think of knowledge and truth as Good-like, but wrong to think of either as the Good, for the Good must be honoured even more than they....You will say, I think, that the sun not only gives to the objects of sight the capacity to be seen, but also that it provides for their generation, increase and nurture, though it is not itself the process of generation....And say that as for the objects of knowledge, not only is their being known due to the Good, but also their reality [and] being, though the Good is not being but superior to and beyond being in dignity and power." Grube's translation (Plato's Republic, translated by G.M.A. Grube, (Indianapolis: Hackett, 1974).\(^\text{1}\) (508e1-509b10)