

---

# **Saphêneia in Aristotle: ‘Clarity’, ‘Precision’, and ‘Knowledge’**

**J. H. Lesher**

---

Aristotle authored an influential account of the factors that can either enhance or detract from *saphêneia* (usually translated into English as ‘clarity’) in thought or expression.<sup>1</sup> He also criticized various earlier thinkers for failing to make things *saphes* or ‘clear’,<sup>2</sup> identified truth and *saphêneia* as the twin standards by which his own philosophical accounts ought to be judged,<sup>3</sup> and introduced a well-known distinction between ‘things clearer (*saphestera*) to us’ and ‘things clearer (*saphestera*) by nature’.<sup>4</sup> It would appear then that clarity was a major Aristotelian concern — and to some degree it was. But in what follows I will try to show that what Aristotle often had in mind when he spoke about *saphêneia* was not *clarity* but either a detailed and accurate accounting of the phenomena or the attainment of full scientific knowledge.

## **I      *Saphêneia* as Clarity in Perception or Expression**

In various portions of his writings Aristotle identifies factors that can serve either to enhance or inhibit *saphes* or ‘clear’ perception: ‘An

---

1 See *Topics* 108a, 111a, 129b, 130a, 131b, 139b, 157a, and 160a. For the nature and extent of Aristotle’s influence on later rhetorical theory, see the accounts in Atkins (1934) and Kustas (1973).

2 See *Metaphysics* 985a.

3 See *On the Soul* 413a; *Nicomachean Ethics* 1108a and 1138b; *Eudemian Ethics* 1216b-1217a and 1220a; and *On Generation and Corruption* 322a.

4 See *Physics* 184a; and *On the Soul* 413a.

intermediate-width tongue gives the best and clearest (*saphestatē*) perceptions' (*Inquiry into Animals* 492b); 'Is it because the tongue is cold that it is unable to express itself clearly (*ou dunatai saphēnidzein*)?' (*Problems* 888b10); 'Voices appear clear (*sapheis*) in proportion to the precision (*tēn akribēian*) of the articulation' (*Acoustics* 801b); and 'It seems likely that in the generation of sound there is always an echo, even though it is not clear (*ou saphēs*) ...' (*On the Soul* 419b).

Aristotle also sometimes identifies conditions that can either enhance or inhibit clarity in expression. In his presentation of the doctrine of the mean, he explains that when the state that represents the mean between the two extremes happens not to have a name, we will need to invent one 'for the sake of clarity and in order to be easily followed (*saphēneias heneken kai tou euparakolouthētou*)' (*Nicomachean Ethics* 1108a). Similarly, in the *Poetics* he recommends that the poet employ a mixture of familiar and unfamiliar words since 'The strange word, the metaphor, the ornamental equivalent, etc., will save the language from seeming common and prosaic, while the ordinary words included in it will secure the requisite degree of clarity (*saphēneian*)' (*Poetics* 1458a-b). Written or spoken discourse, in turn, can be said to be clear in so far its component elements possess clarity: 'Being clear (*saphē einai*) is the chief merit in discourse, since if it is not clear (*dēloī*), speech cannot perform its proper function ... and it is the parts of speech that give speech its clarity (*saphē*)' (*Rhetoric* 1404b). Similarly, in dialectical argument, clarity of presentation is to some degree a function of the clarity of the individual parts: '... the framer of a definition ought to use the clearest possible language (*saphestatēi*), since the definition is assigned in order to make the subject known (*gnōrisai kharin*)' (*Topics* 139b); and 'It is an ... error when less familiar terms (*agnōstoterōn onomatōn*) are substituted, for example "gleaming mortal" in place of "white man", since it forms no definition and is less clear (*hētton te saphes*) when stated in this way' (*Topics* 149a). Clarity is also enhanced by the specification of multiple senses: 'It is useful to examine the different senses of a term for the sake of clarity (*to saphes*), for a man will better know (*mallon ... eidiē*) what he is stating if the various senses have been made evident' (*Topics* 108a); and 'Using any word with several meanings renders the statement obscure (*asaphes*)' (*Topics* 130a; cf. *Topics* 139b and 160a). A failure to achieve clarity would be attributable, then, either to: (1) a muddling or indistinctness among the individual elements of speech; (2) using unknown or unfamiliar words; or (3) using terms with multiple but unspecified senses.

## II *Saphêneia as Precision in Description or Explanation*

Aristotle sometimes speaks of *saphêneia* not as a function of the manner in which we express some view but rather of the degree of correspondence between the account we provide and the subject under investigation:

We must not for this reason seek a single line of inquiry which is generally applicable to all [kinds of definitions]; for it is not easy to discover, and if it were discovered, it would be wholly obscure (*asaphes*) and difficult to apply to our present treatise. If, however, a special method of inquiry were provided for each of the different classes we have distinguished, the exposition would be more easily performed. (*Topics* 102b)

At *Parts of Animals* 649a, he explains that he has elsewhere dealt in a *saphesteron* manner with how things become solidified. His point here, as is suggested by his use of *diôristai* ('to delimit, determine, draw distinctions'), is that he has elsewhere discussed the matter 'more precisely' or 'in greater or more specific detail'. Similarly, we should take his comment at *Metaphysics* 986b30, to mean that in the *Physics* he has discussed *saphesteron* — i.e., with greater specificity, or in greater detail, the nature of the error made by Parmenides when he held that of necessity only one thing existed.<sup>5</sup> And when, at one point in the *Topics*, Aristotle explains how one word may be substituted for another, the word he chooses as a synonym for *saphês* is neither *dêlos* nor *enargês* nor *phaneros* nor *leukos* — each of which might be translated as 'clear, evident, or manifest' — but rather *akribês* or 'precise': 'For example, using *saphes* instead of 'precise' (*tou akribous*) in speaking of some conception (*hupolépsis*)' (*Topics* 111a9).<sup>6</sup>

We can observe such an exchange being made in *Nicomachean Ethics* I 3, when he claims that:

---

5 For Plato's use of *saphês* in this sense, see *Hippias* I 286b; *Phaedo* 107b; *Sophist* 254; and *Philebus* 61a.

6 We need not take Aristotle to be claiming that *saphês* and *akribês* are complete synonyms. He might have meant only that in some settings, or on some occasions, the two terms may be used interchangeably. If, for example, the situation being described were a complicated one, then only a complicated account would be accurate. In less complicated circumstances a simpler statement might be the one that most accurately described the situation.

...we will speak adequately if we make things clear (*diasaphêtheiē*) to the extent to which the subject matter allows, for precision (*to akribes*) is not to be found in all discussions alike...we must be satisfied then in speaking of such subjects to indicate the truth roughly and in outline form (*pangchulōs kai tupōi*). (1094b)

When Aristotle observes that his predecessors 'failed to make things *sapheis*' or 'to speak *saphôs*' he does not proceed to criticize them for uttering muddled or indistinct claims, or using unfamiliar words, or using words with multiple senses without no attempt made to distinguish them from one another. His criticism is rather that many earlier thinkers failed to develop the kind of richly detailed accounts that could successfully identify and describe the different causes and principles at work in the phenomena. For example, when he conducts his survey of the different kinds of causes (*aitiai*) identified by earlier thinkers he comments:

These thinkers, as we say, appear to have grasped up to a certain point two of the causes we distinguished in our work on nature [*Physics* II.3 7] — that of matter and the source of motion — but obscurely and making nothing clear (*amudrōs mentoi kai outhen saphôs*) as untrained men behave in fights; for they go round with their opponents and often strike fine blows, but they fight without science; so these thinkers seem not to know what they are saying; for they appear to make no use of their causes or only to a small extent. (*Metaphysics* 985a)

Although his point is obscured by the vivid simile of fighters who occasionally land a good blow (misleadingly suggesting that the defect in earlier accounts was that their authors lacked training in how to conduct their inquiries), Aristotle's complaint is that while earlier inquirers did *some* useful things — 'they landed a few good blows' — they failed to 'make use of their causes', i.e., failed to give sufficiently complex and detailed explanations. Thus, as Plato did before him (cf. *Phaedo*, 97b-8e), Aristotle commends Anaxagoras for bringing in Mind in connection with the fashioning of the cosmos but then faults him for failing to make use of it in other settings (985a). Empedocles is also faulted, though to a lesser degree, for failing to make consistent use of the principles he had identified. Empedocles at least managed to identify two basic principles rather than only one and he spoke of four basic elements instead of just two (985b). Similarly, in the discussion of the causes of infertility in the *Generation of Animals* Aristotle faults both Empedocles and Dem-

ocritus for failing to explain why some species are infertile and others are not:

In his account of the cause, Empedocles does not speak clearly (*ou saphôs*); Democritus speaks more informatively (lit: 'knowingly' — *gnôrimôs*); but neither speaks well. They both give one omnibus explanation, covering all kinds of copulation between animals of different kinds. (747a)

At the bottom of Aristotle's list of useful earlier thinkers lie Xenophanes and Melissus, both of whom put forward the least specific view of all, namely that everything was, in some sense, 'one':

... Xenophanes, the first to have 'one-ified' (*henisas*) — for Parmenides is said to have been his pupil — made nothing clear (*outhen diesaphénisen*) nor does he seem to have grasped the nature of either of these causes, but with regard to the whole universe he says that 'the One is God' [or that 'the God is One']. Now these thinkers must be set aside as a little simple minded (*mikron agroikoteroi*); namely, Xenophanes and Melissus ... (*Metaphysics* 986b)

The problem, in other words, was not that earlier thinkers expressed themselves in an unclear manner but that the accounts they presented were insufficiently detailed to adequately describe and explain the phenomena.

Whether or not one agrees with Aristotle's criticisms of the views of his predecessors<sup>7</sup>, at least he was prepared to have his own accounts evaluated on the basis of the same standard. When in the *Nicomachean Ethics* he offers as a general principle that one ought to aim at the intermediate state he adds:

Such a statement, although true, makes nothing clear (*outhen desaphes*), for not only here but in all other pursuits which are the objects

---

<sup>7</sup> One might wish to defend Xenophanes against Aristotle's criticism on the grounds that Aristotle took up what Xenophanes had asserted about the nature of the divine, or 'the one greatest god' (Xenophanes B 23: 'One god [is] greatest, not at all like mortals in either body or thought') and made it into a piece of cosmological explanation. That Xenophanes adopted a rather different approach to identifying the *archai* of things seems clear from his fragment B 29: 'all things which come into being and grow are earth and water.'

of knowledge it is indeed true to say that we must not exert ourselves nor relax our efforts too much nor too little, but to an intermediate extent and as the right rule dictates; but if a man had only this knowledge he would be none the wiser ... (1138b)

Having distinguished the virtues of character from those of the intellect and having just explained the nature of moral virtue, Aristotle proceeds to distinguish the different parts of the soul and, within the rational part, the scientific (grasp of the invariable) part from the calculative (assessment of the variable) part.<sup>8</sup> We find him making the same demand for greater specificity in his discussion of the nature of combination or mixture:

We must speak about matters that have so far been spoken of in a rather indiscriminate way (*adioristōs*) ... the nature of what we mean by 'combining' has not been clearly distinguished (*ou diôristai saphôs*) ... [and since combining involves contact and action] we must give a definite account of these three things. (*On Generation and Corruption*, 322b)

At least in these passages, Aristotle's concern is not so much clarity in expression but rather the degree of precision with which a particular account identifies the elements and causes of the phenomenon under investigation.

### III *Saphêneia* as Full Knowledge

In *Physics* I 1, Aristotle adds another dimension to his use of *saphêneia* when he explains how, in the study of nature as in other subjects, things can be spoken of as 'clearer' (*saphestera*) and 'better known' (*gnôrimôtera*) in two different respects:

In the science of nature, as in other branches of knowledge, our primary task will be to try to determine what relates to its principles (*archas*). The natural route is to start from the things that are better known and clearer to us (*ek tōn gnôrimôterōn hēmin ... kai saphesterōn*) and proceed

---

<sup>8</sup> The *Eudemian Ethics* contains a parallel proposal: 'The standard of goodness is as reason directs, and this is true but not clear (*ou saphes de*)' (1220a).

towards those that are clearer and better known by nature (*epi ta saphestera tēi phusei kai gnōrimōtera*), for the same things are not 'known to us' and 'known without qualification' (*ou gar tauta hēmin te gnōrima kai haplōs*). So in the present inquiry we must proceed in this way and advance from the things that are more obscure by nature but clearer to us (*ek tōn asaphesterōn men tēi phusei hēmin de saphesterōn*), towards the things that are clearer and better known by nature (*epi ta saphestera tēi phusei kai gnōrimōtera*). (184a)

In light of the many points of correspondence between these remarks and similar remarks at *Metaphysics* 1029b, and *Posterior Analytics* 71b-2a, it is natural to try to explain the nature of the distinction Aristotle has in mind here along the following lines: what is *saphesteron* and 'better known' to us is also what is 'prior with respect to us', 'more evident' (*phanerōteron*), 'nearer to sense', and 'related to particulars'. By contrast, what is *saphesteron* and 'better known by nature' or 'in itself' or 'without qualification' is what is 'prior without qualification', 'farther from sense', and 'relates to universals'. At least as Aristotle explains it in the *Metaphysics* and *Posterior Analytics*, the path toward the best and most complete kind of knowledge begins with experience, with the reception by our sense faculties of individual sights, sounds, smells, tastes, etc. Among human beings these impressions are retained and subsequently organized in such a way as to constitute 'a single experience' (cf. *Metaphysics* 981a). From many experiences, in turn, comes our knowledge of universal concepts and the truth of universal principles, and these in turn serve as the premises within the special kind of syllogisms that can yield 'unqualified or absolute scientific knowledge' (as described in *Posterior Analytics* I 2). Since the process of acquiring this body of knowledge begins with sense experience, our awareness of the particulars may be said to be prior in time to our grasp of the universal principles. But since the supreme or first principles within a given discipline are the basis on which the truth of all the other principles can be proven (and thereby known in the most scientific sense of 'knowledge'), they can be said to be 'better known' or 'epistemologically prior' to all the conclusions than can be deduced from them, even though our knowledge of them is not prior in time.<sup>9</sup>

---

9 Cf. *Metaphysics*, 982b: '... and the first principles and the causes are the most knowable (*malista d' epistēta ta prōta kai ta aitia*); for by reason of these, and from these, all other things come to be known, and it is not the case that these come to be

As is well known, the chief difficulty with this story is that in *Physics* I 1, Aristotle seems to use the terms ‘universal’ and ‘particular’ in a way that is inconsistent with one of its central features:

Now the things that are at first plain and clear to us (*hēmin to proton dēla kai saphē*) are the rather confused masses (*ta sungkechumena mallon*),<sup>10</sup> the elements and principles of which later become known to us by analysis (*diairousi*). Thus we must advance from the universals to the particulars (*ek tōn katholou epi ta kath' hekasta*); for it is the whole that is best known to sense perception (*to gar holon kata tēn aisthēsin gnōrimōteron*), and the universal is a kind of whole (*to de katholou holon ti estin*), since the universal (*to katholou*) comprehends many things as parts (*merē*). (184a)

Here, what is said to be plain and clear to us at the outset of our inquiries is *not* ‘the particulars’ but rather ‘the universal’; and what we are said to advance toward is *not* ‘the universal’ but rather ‘the parts’ or ‘the particulars’ — which is to say, just the reverse of the story told in the *Metaphysics* and *Posterior Analytics*.

Various attempts to reconcile these two views have been made over the centuries<sup>11</sup>, but several recent accounts have converged around a single, plausible explanation: the universals and particulars mentioned here in *Physics* I 1, are not the same sorts of things as the universals and particulars Aristotle has in mind in the *Metaphysics* and *Posterior Analytics* accounts.<sup>12</sup> In the latter passages the ‘particulars’ (*ta kath' hekasta*) he

---

known by means of the things subordinate to them.’ Aristotle elsewhere affirms and makes use of the general principle that a thing is more of an X, or X to a greater degree, when it is the reason or cause why other things are X.

- 10 *Sungekhumenos* is a perfect passive participle formed from *sungkheō*, for which LSJ gives: (1) ‘to pour together, commingle, confound’; (2) ‘to make ruinous, destroy’; II (1) (of the mind) ‘to confound, trouble’, (2) ‘to confound, make of no effect, frustrate.’ Cf. the passage quoted from the *Eudemian Ethics* 1216b.
- 11 For the references to the ancient Greek commentators see Konstan (1975), 241n and Ross 1936, 456–8; for the accounts given by the Arabic commentators, see Lettinck (1994), 91–109; and for medieval accounts of the passage see McMahon (1957). For other discussions, see Ross (1936), Charlton (1970), Angioni (2001), and Bolton (1991).
- 12 Which would, however, imply that Aristotle violated his own standard for ‘clarity’ by employing without explanation a term that possessed multiple senses (cf. the passage from *Topics* 130a quoted above).

identifies as the starting points of knowledge are sensible particulars, the individual things we see and hear. In addition, the 'universals' discovered as the result of the repeated perception of such individuals, and of repeated experiences of associated individuals, are the general concepts and principles the scientist must first acquire from experience and then organize within valid syllogisms. As we can infer from the examples Aristotle gives in *Physics I 1*, the universals and particulars he has in mind here are quite different:

Much the same thing happens in the relation of the name to the account (*logon*). A name, e.g. '*ho kuklos*' means vaguely a sort of whole: its definition (*horismos*) analyzes it into its particular senses (*diairei eis ta kath' hekasta*). Similarly a child begins by calling all men fathers and all women mothers but later distinguishes each of these (*dioridzei toutōn hekateron*). (184b)

To explain what he means here by 'universal' Aristotle compares the universal with a single term, *ho kuklos*, in so far as it has the general meaning of 'circle or circular kind of thing' as well as a large number of specific meanings (according to LSJ): either a 'ring', 'round thing', 'place of assembly', 'circle', 'circle of people', 'wheel', 'circular dance', 'round shield' or 'vault of the sky', 'disc of the sun', 'wall around the city', 'eye ball', 'orbit of the sun', and 'revolution of the seasons'. He then explains how a child might at first speak indiscriminately of all men as 'fathers' and all women as 'mothers' and only later learn how to restrict the use of the terms 'father' and 'mother' to those who actually fit that description.<sup>13</sup> The point of these examples would appear to be that in much the same way our inquiries into nature must begin from single 'whole' notions such as 'nature', 'chance', 'cause', 'motion', 'place', etc. and move toward a more detailed understanding of their specific senses, constituent elements, and causes or principles. In fact, he speaks in just these terms at the outset of *Physics I 7*, when he begins his account of 'coming to be':

We will now give our own account, approaching the question first with reference to coming to be in general (*prôton peri pasê̄s geneseô̄s*): for we shall be following the natural order (*kata phusin*) if we speak first

---

<sup>13</sup> I follow the account of the significance of Aristotle's examples given in Konstan (1975).

of common characteristics (*ta koina*), and then consider the characteristics of special cases (*ta peri hekaston idia theôrein*). (189b)<sup>14</sup>

The same commitment to a ‘process of analytic clarification’ characterizes Aristotle’s explorations of many other topics. For example, he begins his account of the soul by describing a movement toward ‘the definitive account’ (*to horistikon logon*) that begins from ‘things that are themselves obscure but more evident to us’ and progresses toward ‘what is clear or better known in connection with the account’:

Since what is clear or better known in connection with the account (*to saphes kai kata ton logon gnôrimôterôn*) emerges from things that are themselves obscure but more evident to us (*ek tôn asaphôn men phanerôterôn*), we must reconsider our results from this point of view. For it is not enough for a definitive account (*to horistikon logon*) to make clear (*dêloun*) the fact as most do now, it must also include and exhibit the cause (*tên aitian*). (*On the Soul* 413a)

Similarly, the opening chapter of *On the Parts of Animals* features a series of methodological observations that concludes with the claim that ‘The true method is to state what the characters are that distinguish the animal as a thing of a certain sort, to explain what it is both in substance and in form, and to deal after the same fashion with each of its parts (*peri ... tôn moriôn hekastou*)’ (641a); and ‘The course of the exposition must be first to state the attributes common to whole groups of animals (*ta sumbebêkota dielein peri hakastou genos*), and then to attempt to identify their causes’ (645b).<sup>15</sup> The same holds true for the approved method in the study of ethical questions: we begin from a true but in-

14 Ross (1936: 458) comments on this passage: ‘...what Aristotle says of the actual method of physics is that it is one of analysis of the confused data of experience into their elements (184a21-23), and at the same time one of coming to recognize the specific nature of that whose generic nature alone is first recognized (184a23-26); these two features not being clearly distinguished from each other. Both are amply illustrated in Aristotle’s actual conduct of his inquiry; the former, e.g., by his analysis in Book I of the experienced fact of change into the elements matter, form, privation; the latter by the frequent transition from a more general to a more particular determination of some conception.’

15 Aristotle’s comment at *On Parts of Animals* 639b that ‘As yet no definite rule has been laid down in this matter’ would suggest that this is his initial statement of what he regards as the proper method of inquiry, at least in connection with

sufficiently precise account of the elements or conditions of virtue to a more adequately detailed one: 'For from statements that are true but *ou saphôs, sapheneia* will be attained if at every stage we adopt the better-known principles (*ta gnôrimôtera*) in exchange for the customary confused statements (*tôn eiôthotôn legesthai sungkechumenôs*)' (*Eudemian Ethics* 1216b).<sup>16</sup> These passages show that, as Aristotle understood and practiced it, the search for truth: (1) begins from the unreflective and largely undifferentiated concepts and opinions we acquire from sense experience; (2) consists in disambiguating the different senses of the relevant expressions and distinguishing different kinds of phenomena from one another; and (3) ends with giving an account of a thing's nature that specifies in sufficient detail its various kinds, essential features, and formative causes.

Although this has sometimes been denied,<sup>17</sup> the process Aristotle describes in these passages differs in important respects from the progression toward first principles described in the famous passages in *Posterior Analytics* II 19, and *Metaphysics* I 1. Among other things, these accounts focus on the conditions under which we advance toward the possession of a demonstration (*apodeixis* or *epistêmê apodeiktikê*), and how the movement toward knowledge of first principles begins in sense experience and proceeds by 'induction' (*epagôge*).<sup>18</sup> In *Physics* I 1, by contrast, we are told nothing about the construction of syllogisms and demonstrations, but rather how we must proceed from a less *saphes* to a more *saphes* grasp of the natures of things

In the opening chapter of *On the Soul* Aristotle makes use of many of the terms employed in *Physics* I 1 to describe the method we will need to follow in developing an account of the soul. Here too, the focus is on the analysis of 'wholes' into their component parts, the drawing of

---

inquiries concerning the origins, nature, parts, and development of plants and animals.

16 The progression from vague or confused general statements to more precise or detailed ones is also described at *Eudemian Ethics* 1217a and 1220a.

17 See the account in Bolton (1991).

18 Although neither syllogism nor demonstration is explicitly mentioned in the *Metaphysics* passage, Aristotle's aim there is to establish that, in general, wisdom consists in knowledge of certain principles and causes (*tinas archas kai aitias*, 982a1). The emphasis is placed not on the analysis of our 'pre-analytic intuitions' but on how we can advance toward the discovery of a universal principle (cf. 'that a certain treatment cured all people of a certain type' at 98a10) by means of our experience of individual cases.

distinctions among different kinds of things, and determining what is common and what is peculiar or special. In Book I he asks, among other things: 'To which of the various categories that have been distinguished (*diairethesón*) does the soul belong?' (402a); 'Does the soul have parts or is it uniform in its nature (*meristê è amerês*)?' (402b); 'Can the soul be defined in a single account (*heis ho logos*), as is the case for "animal", or must we give a different account for each different sort of soul (*he kath' hekaston heteros*) as we do for "horse", "dog", "man", 'god'?' (402b); and 'Are the affections of the soul all common (*koina*) [to the complex of body and soul], or are some among them peculiar (*idion*) to the soul itself?' (403a).

At one point Aristotle helpfully pauses to explain how the process of analytic clarification he proposes to carry out in connection with the soul differs from demonstration. At 402a he asks whether there might be a single method to be adopted in all forms of inquiry 'as there is for derived properties the single method of demonstration (*apodeixis*).'<sup>19</sup> And at 402b, after stating that knowledge of the essential nature can lead us to an identification of derived properties, as well as vice versa, he explains:

... for when we are able to give an account conformable to experience of all or most of the properties of a substance, we will be in a position to say the best things (*hexomen legein kallista*) about the essential nature of that subject; in all demonstration a definition of the essence is required as a starting point (*pasêς gar apodeixeôs archê to ti estin*), so that definitions that do not enable us to discover the derived properties, or fail to facilitate even a conjecture about them, must obviously, one and all, be dialectical and futile.

In short, while demonstration proceeding from well-established definitions may be the 'best' or most perfected form of knowledge, it is necessarily dependent on, and in general<sup>19</sup> subsequent to, the process of analysis that results in the identification of the attributes that make up a

---

<sup>19</sup> Patrick Miller has suggested that an investigator might easily move from analysis to demonstration and then return to analysis in order to identify new attributes and/or new connections among the attributes that make up a thing's essential nature. But on the whole Aristotle's view appears to be that it is analysis that first gives us the attributes and demonstration that enables us to arrange them in such a way as to establish the truth of some principles on the basis of others.

thing's distinctive nature. Aristotle speaks of some matters as '*saphes* to us' in so far as they are familiar but not well understood aspects of our experience while he speaks of other matters as '*saphes* in themselves' in so far as they are the basic elements and causes whose identification enables us to define the essential natures of things, identify the connections that hold among their attributes, and thereby know them in the fullest and most proper sense of 'know'.<sup>20</sup> Aristotle also speaks of 'distinguishing' (*dioridzein*), achieving 'precision' (*to akribēs*), and giving a *saphesteron* or 'more precise or detailed' account on some topic, as opposed to speaking 'roughly' (*pangchulōs*), 'in outline' (*tupōi*), or 'in general' (*peri pasēs*), and many of the accounts he offered — on specific scientific topics as well as on broader philosophical questions — illustrate perfectly the analytic process he described. Thus Aristotle's pursuit of *saphêneia* reflected not just one but several objectives: clarity in thought or expression, a detailed and accurate account of the phenomena, and full knowledge of the elements and causes that make a thing what it is.<sup>21</sup>

Department of Philosophy  
Campus Box 3125  
University of North Carolina at Chapel Hill  
Chapel Hill, NCX 27599-3125  
USA  
[jlesher@email.unc.edu](mailto:jlesher@email.unc.edu)

- 
- 20 In this respect Aristotle appears to have spoken of *saphêneia* in the same way in which Socrates speaks of *saphêneia* in the simile of the divided line in *Republic* VI — i.e. as 'the fullest, most complete, and most accurate form of awareness' we can have of an object. *Saphêneia* in this 'epistemic' sense makes its earliest appearance in Greek thought in Alcmaeon B1: 'the gods have *saphêneian* but [it is given to] mortals to conjecture (*tekmairesthai*). For a defense of this view of the meaning of *saphêneia* in Plato see the discussion in Lesher (2009).
- 21 This paper was written during a period in residence at the National Humanities Center in Research Triangle Park, North Carolina. I gratefully acknowledge the assistance of the Center's staff and the support provided by the Gladys Krieble Delmas Foundation.

### List of References

- L. Angioni, 'Explanation and Definition in *Physics* I.1', *Apeiron* 34 (2001) 307-320.
- J. Atkins, *Literary Criticism in Antiquity* (Cambridge: The University Press 1934).
- R. Bolton, 'Aristotle's Method in Natural Science' in L. Judson, ed., *Aristotle's Physics: A Collection of Essays* (Oxford: Clarendon Press 1991) 1-29.
- W. Charlton, *Aristotle's Physics: Books I and II* (Oxford: Clarendon Press 1970).
- D. Konstan, 'A Note on Aristotle *Physics* I.1', *Archiv für Geschichte der Philosophie* 57 (1975) 241-245.
- G. Kustas, 'The Concept of Obscurity in Greek Literature', in G. Kustas, *Studies in Byzantine Rhetoric* (Thessaloniki: Patriarchikon Hidryma Paterikon 1973), 63-100.
- J. H. Lesher, 'The Meaning of *Saphēneia* in Plato's Divided Line', in M. McPherran, ed., *A Critical Guide to Plato's Republic* (Cambridge: Cambridge University Press 2009).
- P. Lettinck, 'Problems in Aristotle's *Physics* I, 1, and Their Discussion by Arab Commentators', *Journal for the History of Arab Science* 10 (1994) 91-109.
- G. J. McMahon, 'The Prooemium to the *Physics* of Aristotle', *Laval Théologique et Philosophique* 13 (1957) 9-57.
- W. D. Ross, *Aristotle's Physics* (Oxford: Clarendon Press 1936).