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X—ARISTOTLE'S DOCTRINE THAT VIRTUE IS A "MEAN"

By W. F. R. HARDIE

"WE must, however, not only describe virtue as a state of character, but also say what sort of state it is" *(poia tis)* (*E.N.* II 6, 1106a14–15). Aristotle's answer is that it is a state concerned with choice *(prohairetikē)*, lying in a mean *(en mesotēti)* relative to us *(pros hēmās)* and determined by a rational principle *(logō)*, the principle by which the man of practical wisdom *(ho phronimos)* would determine it (1106b36–1107a2). Each phrase in this statement of the differentia of virtue is difficult. We have to look further on in the *E.N.* for much of the explanation needed: Aristotle's account of choice is in Book III, his account of practical wisdom in Book VI. I shall consider now the statement that virtue is, or lies in, a mean.

Commentators and critics have had a great deal to say about and around this celebrated doctrine. Not surprisingly, Aristotle's view that moderation is good, and excess to be avoided, had been anticipated by popular morality and by poets as well as by Plato. Also not surprisingly, the concept of a mathematical mean, especially if allowed to expand to cover any sort of quantitative rule or formula, has many applications in the philosophy of Aristotle himself and of his predecessors: applications for the theory of what is good and bad in art and in the condition, healthy or unhealthy, of living bodies; applications, in Aristotle's works, to the physiology of perception and the constitution of physical bodies. Hence the student of the *E.N.* is bombarded with quotations from, and references to, the works of Plato and other works of Aristotle. The student is faced also by the widely ranging criticisms which have been directed against the doctrine of the mean. Aristotle is accused of spoiling Plato and of failing

to anticipate Kant. All this comment and criticism is usually relevant and sometimes helpful. But it is not always needed to enable us to understand what Aristotle says in the *E.N.*, and it is sometimes only distantly relevant and sometimes confused. It is important, therefore, to start from what Aristotle says in the *E.N.* If and so far as what he says can be understood, the pursuit and disentangling of similar and connected ideas in the works of Plato, and in other works of Aristotle, is not essential for the study of Aristotle's moral philosophy.

We have had a preliminary statement of the doctrine in *E.N.* II 2. Aristotle has just warned us that, in the sphere of action as in medicine or navigation, any general account must lack detail and precision (1103b34–1104a10). He then offers the generalization that, as in the case of strength and health, it is " the nature of such things to be destroyed by defect and excess " (1104a11–14). Thus, if an athlete takes either too much exercise or too little, he destroys his strength; similarly, health can be impaired by eating or drinking too much or too little, while that which is proportionate *(summetra)* both produces and increases and preserves it (1104a15–18). The same principle applies to the virtues of courage and temperance. To fear everything is to be a coward; to fear nothing is to be rash. It is self-indulgent to abstain from no pleasure, insensible to abstain from all. Thus, courage and temperance " are destroyed by excess and defect, and preserved by the mean " (1104a18–27). Aristotle adds that the same kind of activity as produces a certain state, whether the strength of the athlete or an ethical virtue, is also the manifestation or actualization of the state when it has been produced (1104a27–63). Now in at least one obvious respect this statement of the doctrine does indeed lack detail and precision. A quantitative idea is applied to virtue and to vice with only a vague indication of how it can be applicable. Quantities of food and drink can be weighed and measured; exercise can be timed. But the quantities involved in virtuous and vicious action, which must at least be roughly measurable if the analogy with athletic training is to hold, are indicated only by reference to fearing everything or nothing, indulging in all pleasures or in none.

Chapter 6 gives a more explicit and definite answer to the question what, in relation to ethical virtue and vice, are the

variable quantities excess or defect of which constitutes vice. The matter will become clear, Aristotle says, if we consider the specific nature of virtue. " In everything that is continuous and divisible *(sunechei kai diairetō)* it is possible to take more, less, or an equal amount, and that either in terms of the thing itself or relatively to us; and the equal is an intermediate between excess and defect " (1106a26–29). Note first the precise meaning of the phrase " continuous and divisible ". Quantity which is continuous is not merely divisible, but divisible *ad infinitum:* it has no indivisible, atomic, parts. This is the definition of continuous *(suneches)* in *De Caelo* 268a6 and *Physics* 231b16 (*cf.* 232b24, 233a25). Thus the sense conveyed by the whole phrase is that of " continuous, *i.e.*, divisible *ad infinitum* ". Grant and Stewart very strangely take the phrase to mean " continuous and discrete ". Quantity which is discrete is quantity which is *not* divisible *ad infinitum;* and, if the number of indivisible units is odd, it cannot be divided at the half way point. Having asked us to consider the nature of continuous quantity, Aristotle proceeds to try to explain the distinction between " the intermediate in the object" *(tou pragmatos meson)* and "the intermediate relative to us" *(pros hēmās)* (1106a29–b7). Before we consider his explanation, it is desirable to see what answer Aristotle gives us, in this chapter, to the main question not so far answered, *viz.*, what are the quantities with which virtue and vice are concerned.

Ethical virtue " is concerned with passions and actions, and in these there is excess, defect and the intermediate " (1106b16–18). It is a mean between two vices, and the vices " respectively fall short of or exceed what is right in both passions and actions, while virtue both finds and chooses that which is intermediate " (1107a2–6). Similarly, in the summary of the doctrine at the beginning of chapter 9, virtue is said to be a mean " because its character is to aim at what is intermediate *(stochastikē tou mesou)* in passions and in actions " (1109a20–24). The natural meaning of these statements is that in the case of *every* virtue, the virtuous man conforms to the mean, avoids excess and defeat, in respect *both* of passions *and* of actions. This is asserted by Gauthier-Jolif: " On peut donc tenir pour assuré que *toutes* les vertus, et pas seulement la justice, ont pour domaine les activités extérieures, en ce sens qu' elles assurent l'accomplissement d'oeuvres pourvues de certaines qualités. Mais elles ne peuvent le faire sans modérer

aussi les passions intérieures" (pp. 141–2). But it is not clear how strictly this should be taken. As regards one important virtue, justice, Aristotle himself tells us that it is " a kind of mean, but not in the same way as the other virtues " (V 5, 1133b32–3). We are not concerned at present with the meaning of this statement. The main point probably is that there is no single range of passions with which justice, in the sense in which justice is a particular virtue, is concerned. As regards the virtues generally, the following point is important. One of the ways in which an action can conform, or fail to conform, to the mean is in respect of the feeling or emotion which is expressed in it and accompanies it. Thus a brave man will go into battle feeling some fear, but not too much. A temperate man at a party will desire and enjoy the good things that are going round, but not too much. Two further points should be in our minds. In the case of some classes of virtuous actions, but not of all, quantitative variables, other than degrees of feeling, are involved. For the temperate man it may be a question of how much to eat or drink; for the liberal man of how much money to give away. But in the case of other virtues there may be no such quantitative aspect. A man is not called brave because he kills neither too many nor too few of the enemy. A man does not avoid the extremes of buffoonery *(bōmolochia)* and boorishness *(agroikia)* by making neither too many jokes nor too few (IV 8). The second point is that all virtuous actions, including those in which external divisible objects are involved, can be right or wrong in respects which are not quantitative at all. They must be done, for example, " at the right times, with reference to the right objects, towards the right people " (1106b21). Aristotle shows awareness of this in the very centre of his exposition of the doctrine of the mean (1106b21–24). There may be much that is unsatisfactory and unclear in Aristotle's doctrine that virtue lies in a mean. But it is wrong to criticize him in a way which would imply that this doctrine is the whole of what he has to say about virtue. What the doctrine does assert is that virtue is manifested in feelings and emotions, and also in actions, which avoid excess and defect, and that, where action is concerned with extensive quantities, virtue again shows itself in avoiding excess and defect. The second part of the doctrine as thus stated is comparatively trivial and obvious. But, in its application to "passions" *(pathē)*, the doctrine is important and an important *part* of the truth about moral

goodness. As we shall find, not all of Aristotle's critics have seen this clearly or have given him the credit which is his due. I return now to Aristotle's exposition of his doctrine in II 6.

" Both fear and confidence and appetite and anger and pity, and in general, pleasure and pain may be felt both too much and too little, and in both cases not well; but to feel them at the right times, with reference to the right objects, towards the right people, with the right motive, and in the right way, is what is both intermediate and best *(meson kai ariston)*, and this is characteristic of virtue. Similarly with regard to actions also there is excess, defect and the intermediate " (1106b18–24). In the application of the mean to athletic training the reference was to continuous extensive quanta, *i.e.*, quanta with spatial or temporal dimensions. When two such quanta, *i.e.*, extensive quanta, differ in size the lesser is equal to part of the greater. What is measured in the case of passions, at least in their pfychical as opposed to physical aspect, is intensive quantity, degree of intensity. The assertion that quantity of this kind is continuous means, in the case of feelings, that there is no smallest interval between one degree of the feeling and another. Thus, if it is said that a pleasure or pain is becoming continuously more intense, this means that the change does not occur in jumps from one degree of intensity to the next: there is no next, any more than, if an extensive quantity is continuous, there is a next size. Having referred to degrees of the passions, Aristotle remarks that there is a mean, as well as excess and defect, " similarly with regard to actions " (1106b23–24). This is not explained. It might, as we have seen, refer to the degree of the passion which is felt in the performance of the action. At least in some cases the reference might be to extensive quanta involved in the action as an external transaction, *e.g.*, to the amount of food consumed or the amount of goods transferred from one owner to another. The parallel passage in the *E.E.* B3 appears to offer an explanation in the remark that " movement is continuous, and action is movement " (1220b26). But the explanation is surely not intelligible; it would suggest that an action achieves the mean by being neither too fast nor too slow.

We return now to Aristotle's explanation, earlier in the chapter, of the distinction between the mean " in terms of the thing itself " and the mean " relatively to us " (1106a28). The

first point to notice is that the word which Aristotle starts by using, in his opening statement on continuous quantity, is not mean or intermediate *(meson)* but equal *(ison)*. Equal to what? There can be no answer except " equal to the amount which is right ". This at once gives rise to a puzzle. If we have to know what amount is right before we know that this is the amount which is intermediate, then surely the statement that it is of the essence of virtue to aim at and hit the intermediate does not tell us anything which has practical significance. We shall return to this question. In order to answer it we must decide how far Aristotle claims to find a resemblance between the ethical mean and the mean in the mathematical sense of a quantity intermediate between a larger and a smaller quantity and calculated from a prior knowledge of the extremes. The resemblance or analogy for which we might look is that knowledge of what is intermediate might be reached, though not strictly calculated, from a prior knowledge of what would be too much or too little. But, if Aristotle did mean to imply this, his use of the word equal instead of intermediate in 1106a27 would be misleading.

Aristotle now tells us that by the " intermediate in the object " he means " that which is equidistant from each of the extremes, which is one and the same for all men " (1106a29–31). By the " intermediate relatively to us " he means " that which is neither too much nor too little ". This may well not be the half-way point between two extremes, and it is " not one, nor the same for all " (1106a31–2). Aristotle illustrates again from the training of athletes. If a ration of ten pounds (of meat) is too much and two pounds too little, it does not follow that the trainer will order six pounds. This might be too much for the beginner, but too little for Milo, a wrestler of whom Athenaeus (X, 412–413) tells us that he once ate a whole ox in the course of a day (1106a33–b5). Thus, a master of any art chooses " the intermediate not in the object but relatively to us " (1106b5–7).

There is nothing, so far as I can see, abstruse or elusive in the doctrine conveyed by this passage: that the ethical mean must be appropriate to circumstances including facts about the agent himself. The mean is not " one and the same " for all (1106a32). The mathematical terms in which Aristotle chooses to express himself need not, and indeed cannot, be taken very seriously. It

is a lecturer's patter. Do not imagine, he is saying, that finding the mean is a matter simply of " splitting the difference " between opposing over- and under-estimates. It is not as easy as that. On the evidence of this passage, there is no suggestion of any quasi-mathematical derivation of the mean from prior knowledge of the extremes. This is made obvious by the fact that the extremes mentioned, ten pounds and two pounds of meat, are quite arbitrary. If the extremes named had been ten pounds and six pounds, the mean for the man beginning his training, a quantity less than six pounds, would not have been intermediate at all.

Since I find nothing either obscure or profound in Aristotle's distinction here between the " mean in the object " and the " mean relative to us ", I do not agree with the commentators who make heavy weather of this passage. I have in mind Joachim in particular (pp. 85–89). He extracts from the passage a "geometrical proportion", *i.e.*, an equation of the form a:b::c:d of which the terms are the amount of a passion " embodied in this act " by a given agent, the amount which the man of practical wisdom would embody, the nature of the agent and the nature of the wise man. The mean to be determined is "the *meson* (mean) in a geometrical proportion, and therefore the range of its variations is determined by precise limits " (p. 87). I do not find any of this in the text. Moreover, I do not think that the expression " mean in a geometrical proportion " is significant: as there are four terms in the proportion as formulated by Joachim there is no middle term (when a:b::b:c, b is the " geometrical mean " between a and c). Aristotle is not saying that the ethical mean, while not an arithmetical mean (a–b=b–c), is some other kind of mathematical mean.

The next step in Aristotle's exposition of the doctrine is a suggestion that the principle of the mean is exemplified in the successful products of the arts. " We often say of good works of art that it is not possible either to take away or to add anything, implying that excess and defect destroy the goodness of works of art, while the mean preserves it " (1106b8–14). This remark again is surely a popular illustration, a lecturer's aside, rather than an essential part of the exposition. The idea of spoiling a work of art by adding or removing a part is remote from the

idea of excess and defect in action constituted by choosing too much or too little from a continuous range of quantities, whether extensive as amounts of food or intensive as " amounts ", in terms of degree, of a passion. Aristotle, in expounding the mean, allows himself to range over a wide territory. But for the student of the *Ethics* the important passages are those in which he formally and explicitly applies the doctrine to virtuous and vicious passions and actions.

There are two further passages which should be noticed in Aristotle's exposition of the mean in II 6. They are important not because they add any new points to the doctrine, or because they modify points which have been made, but rather because they indicate implications of the doctrine which have to be stated in order to anticipate or eliminate misunderstanding. The first is the statement that ethical virtue, while in its essence a mean, is an extreme " with regard to what is best and right " (1107a6–8); *cf.* 1107a23; " What is intermediate is in a sense an extreme" *(pōs akron)*, Aristotle is pointing out that, on a scale of merit, a virtue is above both the corresponding vices and not between them. Thus to be in a state of excess or deficiency in relation to a virtue is to have a vice not to have a virtue but too much of it or too little of it. Similarly in IV 3 Aristotle says of the proud man that he is " an extreme in respect of the greatness of his claims, but a mean in respect of the rightness of them " (1123b13–14). This point is closely connected with the point made in the second, and immediately following, passage which we have to consider.

" But not every action nor every passion admits of a mean; for some have names that already imply that badness is included in them *(euthus ōnomastai suneilēmmena meta tēs phaulotētos)*, *e.g.*, spite, shamelessness, envy, and, in the case of actions, adultery, theft, murder; for all of these and such like things imply by their names that they are themselves bad, and not the excesses or deficiencies of them " (1107a9–14). The opening words of this passage might suggest that Aristotle was asserting or admitting that there are exceptions to the doctrine of the mean, ranges of actions or passions to which it does not apply. But he is making a purely logical point which arises from the fact that certain words are used to name not ranges of action or passion

but determinations within a range with the implication, as part of the meaning of the word, that they are excessive or defective, and therefore wrong. Thus, envy is never right and proper because " envy " conveys that it is wrong and improper. Again, it does not make sense to ask when murder is right because to call a killing " murder " is to say that it is wrong. Most of the commentators get this point right, but Stewart at least is wrong or confused when he says: " There are certain passions and actions which cannot be so modified as to form parts of an orderly character and life, but must be eradicated by education " (i 120). This may be true, but it is not the point which Aristotle is making in this passage. There is a point about the vocabulary of the passage which should be noticed because of its significance for the doctrine. Aristotle says that some words name combinations of elements with the implication that badness is included. The word corresponding to "combinations" is *suneilēmmena* (1107a10); *cf.*, E.E. B.3, 1221 b18–26. The word is applied in the *Metaphysics* to the combination of matter and form. Thus, in Z10 he speaks of " things in which the form and matter are taken together" *(suneilēmmena to eidos kai hē hulē)* (1035 a25–26). The standard example of a term which refers to both form and matter is "the snub" *(tō simon)*. " 'Snub' is bound up with matter" *(suneilēmmena meta tēs hulēs)* (for what is snub is a concave *nose*) (1025 b32). We can now restate, making use of the Aristotelian expressions, form and matter, the point which Aristotle is making in the *E.N.* In our vocabulary for referring to actions and passions there are words which name misformations; and, in such cases, there is no sense in asking what is the right formation of the object named. This, and no more than this, is what Aristotle means when he says that " not every action nor every passion admits of a mean " (1107a8–9).

I have claimed that the doctrine of the mean states " an important part of the truth about moral goodness " (pp186/7). I wish now to amplify this statement and, in connexion with it, to comment on a criticism of Aristotle's doctrine made by Ross in his *Aristotle*. The discovery for which I wish to give Aristotle credit is that of the distinction between two different kinds of moral goodness, the goodness of the man who does what is right in spite of desires which incline him strongly not to do it and the goodness of the man who does what is right without any resistance

from unruly or discordant desires, the man whose inclinations are in harmony with his concept of the life he ought to lead. It would, perhaps, be more correct to speak of this as a distinction between classes of good actions than between men. For most men, sometimes at least, find that duty and inclination coincide; and most men, sometimes at least, find that they do not coincide. If we ask ourselves which of these two kinds of goodness is the better, we find ourselves distracted by a difficulty. In one way we admire the man who behaves well in a battle without undue distress more than the man who has to overcome obvious terror. In one way a man naturally moderate in his appetites is better than a man who has to struggle to control them. On the other hand, the merit of moral victory seems to be enhanced when there have been obstacles to overcome. Is the saint, or moral hero, the man who is not tempted or the man who struggles successfully with temptations?

The man who does what is right, in spite of opposing desires, is given by Aristotle the name conventionally translated "continent" *(enkratēs)*. He is distinguished from the man who is temperate *(sōphrōn)*, whose desires are in harmony with the right rule, being neither excessive nor defective. I quote from *E.N.* VII 9: "for both the continent man and the temperate man are such as to do nothing contrary to the rule for the sake of the bodily pleasures, but the former has and the latter has not bad appetites, and the latter is such as not to feel pleasure contrary to the rule, while the former is such as to feel pleasure but not to be led by it" (1151b34–1152a3). To make this distinction so clearly was a major achievement in the reflective study of human conduct. If it has become a platitude, this is what happens to many discoveries in philosophy. As to the relative ranking of these two kinds of moral goodness, Aristotle, I think, takes it for granted that "continence" is a second best to "temperance" or virtue: it is better not to have bad or excessive desires. He does not formulate and face the problem, and there is still no agreed solution. But Aristotle's doctrine of the mean, taken along with his treatment in Book VII of continence (*enkrateia*) and incontinence *(akrasia)*, brings the problem into the light.

Ross's chapter VII (Ethics) in his *Aristotle* has much that is interesting and suggestive to say on the doctrine of the mean

(pp. 194–196, and, with reference to particular virtues, pp. 202–208). But, in an important section of his criticism, he appears to take insufficient account of the distinction between virtue and continence, which I have held to be the vital centre of the doctrine. Ross writes: " The essential thing is not that feelings should have some particular intensity, but that they should be thoroughly subjugated to the ' right rule ' or, as we might say, to the sense of duty " (p. 195). At this point Ross does not press his criticism; he points out that Aristotle's definition of virtue does include " determined by a rational principle ". But he returns to the attack in a passage later in the chapter (p. 206) where he contends that " the trinitarian scheme of virtues and vices is mistaken ", and that " each virtue has but one opposite vice ". " Must not this be so from the nature of the distinction between virtue and vice? Vice is passive obedience to natural instinct, virtue the controlling of instinct by sense of duty or by some other high motive—as Aristotle says, by the rule discerned by reason. There can be too little of such control, but there cannot be too much " (p. 206). It is clear that Aristotle has a reply to this criticism. The criticism lumps together two states of character which Aristotle has been anxious to distinguish, continence and virtue, both of which are manifested in the control of natural instinct. In order to distinguish them it is essential, as the doctrine of the mean affirms, " that feelings should have some particular intensity ".

Ross goes on to say that what Aristotle has seen, though he has not expressed it very well, is that, in many cases at all events, " natural reactions to stimulus go in pairs of opposites " (p. 206). Thus, in Aristotle's account of courage two types of feeling are involved, fear and "cheer" or love of danger (*v.* J. L. Stocks in *Mind,* 1919). Both must be controlled. So, Ross suggests, we must substitute for Aristotle's trinity " not one duality but two ". Courage is control of fear and cowardice the lack of control. Discretion is the control of cheer and rashness the lack of control. Again the distinction between virtue and continence disappears in this corrected version of Aristotle. The distinction requires us, if there are two distinct ranges of feeling, to recognize not two vices but four, and this is just what Aristotle does in his treatment of courage in *E.N.* III 7. In principle at least, even if some types of character are too rare to have been given a name, as in the

case of the man who has no fear (1115b24–28), there is excess and defect of both fear and its opposite. It would be natural to suppose that this implies two virtues, even if "courage" *(andeia)* is the name for both. But N. Hartmann, in his *Ethics* Ch. 61, suggests that for Aristotle there is one virtue with two aspects, *i.e.*, virtue, as he puts it, is a "synthesis of values" *(Wertsynthese)* (pp. 517–518). In this he seems to be right, Aristotle appears to hold that courage and discretion, in the sense given to it by Ross, are aspects of a single virtue.

I have argued that Aristotle's "trinitarian scheme" is a necessary deduction from the important distinction which he makes between virtue and continence. But Ross finds in Aristotle's treatment of temperance *(sōphrosunē)* confirmation of the view that each virtue should be opposed to only one vice. The vice which consists in the excessive indulgence of physical appetites is profligacy *(akolasia)*. Aristotle admits that the vice of defect has no name. "People who fall short with regard to pleasures and delight in them less than they should are hardly found; for such insensibility *(anaisthēsia)* is not human. Even the other animals distinguish different kinds of food and enjoy some and not others; and if there is anyone who finds nothing pleasant and nothing more attractive than anything else, he must be something quite different from a man; this sort of person has not received a name because he hardly occurs" *(dia to mē panu ginesthai)* (III 11, 1119a5–11). Ross is surely not justified in suggesting that, in this passage, we see "the breakdown of the doctrine of the mean" (207). Even if complete insensibility would be inhuman, it may be claimed that defective degrees of sensibility are not uncommon. But is such a defect vicious? In the sense that it is a deviation from a reasonable standard of human excellence it surely is. Ross will not allow this. "There is here no *vice* of defect; the 'defect' can only be either an innate insensibility for which one cannot be blamed, or asceticism, which is not enslavement to instinct but subjugation of instinct to a rule, though perhaps not to the 'right rule'" (207).

There are two comments to be made on these arguments. First, the suggestion that a man "cannot be blamed" for "innate insensibility" would, if pursued, have wide-ranging implications for Aristotle's whole theory of ethical virtue and

vice. The profligate man might claim to be the victim of innate sensibility. Again, a similar argument might be used against the appropriateness of praising a man for courage and temperance, if these virtues can be developed only on the basis of normal and healthy innate tendencies. The argument might thus lead to the conclusion that, from a moral point of view, what should be blamed is incontinence not vice, and what should be praised is continence, control of " instinct " when control is difficult, not effortless virtue. Secondly, Aristotle would not accept the descriptions which Ross gives of vice as " passive obedience to natural instinct " (206), or " enslavement to instinct " (207). According to Aristotle the vicious man deliberately pursues his ill-judged end. If, then, an ascetic is a man in whose " end ", or plan of life, there is no place, or not an adequate place, for bodily pleasures, Aristotle would surely reject Ross's assumption that asceticism is not a vice. The ascetic follows a rule which, as Ross says, is not the right rule. No doubt some deviations from right rules are much more serious than others. But the following of wrong rules is, in Aristotle's view, the essence of vice.

We have already seen, in considering Aristotle's doctrine that the mean is " relative to us " (1106a29ff), that he does not make clear how close an analogy he wishes to suggest between the ethical mean and the various types of mean in mathematics. Does the ethical doctrine assert only that deviations from what is right may be either excessive or defective, or does it assert also that, just as in mathematics, the extremes are data from which the mean is calculated, so, with due allowance for the fact that ethics is not mathematical, there is in moral thinking a movement of thought from the extremes to the mean? Aristotle does not explicitly make this second assertion, but Ross implies that it was in his mind. " Even in the light of Aristotle's disclaimer of the suggestion that any mere arithmetical calculation will tell us what we should do, to describe virtue as essentially a mean suggests that we first know the extremes and from them infer the mean " (p. 195). Ross suggests that we do sometimes reach decisions in this way, *e.g.*, in deciding how much to give to a charity we might start by thinking that £100 was too much and £5 too little, and then work inwards. In this way a man might " finally decide what it would be right to give " (p. 196). But Ross thinks that normally " we recognise what is too much and too little by

recognizing what is right ". Similarly, as Ross might have added, we recognise what is false by first finding what is true.

Have we any grounds for attributing to Aristotle the idea that, at least sometimes, we " work inwards " from the extremes to the mean? I think that Ross could have put his case more strongly if he had connected the suggestion with Aristotle's doctrine that ethical knowledge is only approximate, that it lacks mathematical precision *(akribeia)* (I 7, 1098a26–32; *cf.* I 3, 1096b11–27). In the example of the subscription to charity we are, in fact, unlikely to decide that some determinate sum, say £25, is right. We are more likely to decide not to give more than £30 or less than £20, and then quite arbitrarily fix on £26 5s. 0d. The brackets are brought closer, but they remain separated. And so what is right is defined as coming between certain limits, and in this sense is a mean. The idea is expressed accurately by the words of Horace,

sunt certi denique fines
quos ultra citraque nequit consistere rectum.

In *E.N.* IX 10 Aristotle considers the question whether there is " a limit to the number of one's friends, as there is to the size of a city ". " You cannot make a city of ten men, and if there are a hundred thousand it is a city no longer. But the proper number is presumably not a single number, but anything that falls between certain fixed points " (1170b29–33). Similarly in X 3, in a discussion of the argument that pleasure cannot be good because it is indeterminate *(aoristos)*, Aristotle points out that health, while determinate, nevertheless admits of greater and less. "The same proportion *(summetria)* is not found in all things, nor a single proportion always in the same thing, but it may be relaxed and yet persist up to a point *(aniemenē diamenei heōs tinos)*, and it may differ in degrees" (1173a23–28). Ethical virtue, like health, " may be relaxed and yet persist ". In a given situation there is no precisely determinate intensity of feeling which is characteristic of courage or temperance. Any degree within a limited range is good enough to avoid the vices of excess and defect. It is not merely that we do not know which degree within that range is the right degree. There is no one right degree. Any degree within the range is right, just as any subscription between £20 and £30 would be right. I suggest that, in the

passages to which I have referred, the doctrine of the approximateness of non-mathematical knowledge and the doctrine of the mean are interconnected and help each to elucidate the other.

In the account which I have given of the doctrine of the mean, as Aristotle explains it in *E.N.* II 6, I have made no reference to the view of those commentators who say that it is important to take account of certain physical doctrines in the exposition of which Aristotle makes use of the term *mesotēs*. It is claimed that, in these other uses of the term, we find clues to the interpretation of the ethical doctrine, and that without these clues the doctrine cannot be fully understood. I think that the most important of the passages adduced are the treatment of sense perception in *De Anima* B and the theory, in *De Gen. et Corr.* II 7, of the combination or fusion of elements to form compound bodies *(homoiomerē)*. This approach to the doctrine of ethical virtue was explored by Burnet, and is expounded in his Introductory Note to Book II. Burnet's views appear to have influenced Mure's account of the mean in his *Aristotle* (pp. 141, 142 and Note 1 on p. 107), and also Joachim's treatment of the subject in his commentary on the *E.N.* There are some critical comments on Burnet's interpretation in Joseph's *Essays on Ancient and Modern Philosophy* VI, pp. 156–158 and the footnote on pp. 170, 171. Burnet was clearly right to raise the question whether Aristotle's use of the term *mesotēs* in other words throws light on the doctrine of the *Ethics*. But I do not think that he succeeds in showing that it does. I think that his attempt fails in two ways. First, he fails to produce evidence that the idea on which he lays most stress is, in fact, part of Aristotle's doctrine in the *Ethics*. This is the idea of the combination, or blending, of opposites in determinate ratios. It is not easy to find this in the doctrine of the ethical mean. Secondly, the doctrines to which Burnet refers belong to Aristotle's now obsolete speculations in physics and physiology. They are, if intelligible at all, more obscure than the doctrine of the *Ethics*. Thus, if they were helpfully relevant to the interpretation of the *E.N.*, they would throw only a murky light.

Burnet tells us that "we must go to the *Physics* for Aristotle's moral philosophy" (p. 69), but does not give us a clear account

of what we find when we go there. He says that the Greek word *mesotēs* does not mean "only or even primarily the arithmetical mean", but is "the oldest word for a proportion of any kind however determined" (p. 70). In the following paragraph he speaks of the mean as a "ratio between opposites" (p. 71). This makes it likely that he is using "proportion" as a synonym for "ratio", but he does not say what he has in mind when he speaks of a "proportion of any kind". What are the different kinds of ratio? Moreover the sentences which immediately follow, although presumably intended to elucidate the determination of a proportion, do not in fact mention any ratios. "We must admit that a feeling like fear is capable of such determination; for we must fear either more or less or equally. And the same is true of an act like giving away money; for we must give away either more or less or an equal sum" (p. 70). As we saw earlier, "equal" in 1106a26ff is a surprising substitute for "intermediate" *(meson)*. But how is any ratio involved? Burnet says, that, in the theory of goodness as a mean, the ratio is between opposites. Joachim seems to imply the same idea when he translates *horismenē logō* (1107a1) in Aristotle's definition of virtue as "determined by a proportion". But the idea of a ratio between opposites has, so far as I can see, no possible application to the example of giving away greater or smaller sums of money: the right sum is not a ratio *between* a larger and a smaller sum. What of Burnet's other example? Does Aristotle's analysis of courage involve a mean which is a "ratio between opposites"? It is true that courage has for its sphere the opposed feelings of fear *(phobos)* and cheer *(tharrios)* (*E.N.* III 6ff). But, as Allan correctly states, Aristotle treats these feelings "not as opposite points on a single scale, so related that to exceed in one is to fall short in the other (like hot and cold), but as distinct emotions each admitting of excess, moderation and deficiency" (*The Philosophy of Aristotle,* p. 173). Aristotle does not say that courage lies in a ratio between amounts or degrees of fear and amounts or degrees of cheer. He describes it rather as involving appropriate, and intermediate, degrees of both these ranges of feeling. This fact makes it impossible to understand the mean as an equipoise, determined by a ratio, between the opposed feelings or qualities. As we have seen, it is not clear how these two means are connected or integrated in courage as Aristotle conceives it.

But, even if it were possible to give sense to the suggestion that courage essentially involves a ratio between opposite passions and to produce evidence that Aristotle maintained this, the general assertion that the ethical mean is a ratio between opposites could not be maintained. It is not applicable to excessive and defective sums of money, to the mean in action in respect of divisible goods. And, on the side of feeling, not every virtue is concerned, as courage is, with ranges of contrary passions. Aristotle tells us that temperance is concerned primarily with bodily pleasures, and with pains only in the sense of the " pain " caused by the absence of such pleasures (*E.N.* III 10, 11, especially 1118b27–33). I can see here no possibility of interpreting the mean as being " determined by a ratio " between opposites.

I have argued that Aristotle's ethical mean is not as such a ratio of opposites. But Burnet, as we have seen, asserts that *mesotēs* is "the oldest word for a proportion", apparently in the sense of ratio. If *mesotēs means* ratio, we must look for a ratio in the mean. But *mesotēs* means a state of being between or in the middle. It does not mean " ratio " for which the Greek word is *logos* in one of its senses (not, in my opinion, the sense it has in the definition of ethical virtue). But it is, of course, true that any ratio, being a quantity, lies between ratios which are larger and ratios which are smaller. Burnet reports correctly that, in his physical and physiological doctrine, Aristotle emphasises the intermediate character of certain ratios. Although these ideas are not as closely relevant to the ethical doctrine of the mean as Burnet thought, it will be helpful to follow some further steps in Burnet's exposition. Consider the following passage. " Now the form which is the cause of all becoming is always a ratio *(logos)* or mean *(mesotēs)* between the two opposites, it is a definite ' interval ' as musicians call it, a fixed proportion in which the opposites neutralise one another and give rise to a new product " (p. 71). Burnet next suggests that " a chemical formula like H_2O is the most typical instance of what he calls a *logos* or *mesotēs*' (pp. 71–2). It is not clear why Burnet is so pleased with the example of the chemical formula. For, although this is a ratio, it is not a ratio of opposites. But his reference to intervals in music does lead us to an Aristotelian application of the idea of a ratio of opposites, the application of the idea to ranges of sensible qualities. The doctrine of the formation of " homoeomerous "

substances, such as flesh and bone, is another instance which Burnet adduces at the end of his Introductory Note (pp. 72, 3).

I have shown that Burnet appears to use the word "proportion" as a synonym for "ratio". How else might he have used it? What other meaning might be present to his mind? "Proportion" in mathematics is used in the sense of equality of ratios, *i.e.*, a/b = b/c if the proportion is "continuous", and a/b = c/d if it is "discrete". The Greek term for proportion in this sense is *analogia,* defined by Aristotle in *E.N.* V 3 as *isotēs logōn* (1131a31). Aristotle here says that a proportion "involves four terms at least", since a continuous proportion "uses one term as two and mentions it twice" (1131a31–b3). He points out that *analogia* in this sense is called "geometrical" in mathematics (1131b12–13), and he distinguishes it, in his treatment of justice, from "arithmetical proportion", *e.g.*, a–b = b–c (1131b32–1132a2; *cf.* II 6, 1106a35–6). There is a certain vagueness in Burnet's use of "proportion" which suggests that he may not have been clearly aware of its ambiguity. Whether this is so or not, I think that in Joachim's commentary "proportion" is equivalent sometimes to *analogia,* equality of ratios, not *logos* ratio. When he translates *horismenē logō* (1107a1) in Aristotle's definition of ethical virtue as "determined by a proportion", "proportion" seems to mean ratio (p. 89). But, when he uses the expression "*meson* (mean) in a geometrical proportion" (87), the context, especially the "rule" formulated at the bottom of p. 88, implies that "proportion" has the meaning "equality of ratios". (See above page 189 on Joachim's view.)

The way in which the musical "interval" involves a ratio of opposites is not made clear by Burnet. The pitch of a note in music depends on the length of the string in the lyre, or more directly on the frequency of the sound waves, and hence the interval between two notes is correlated with a numerical ratio. The Pythagoreans discovered that the intervals between notes in the scale are correlated with simple rational fractions, that for the octave being 1/2, for the fifth 3/2, *etc.* So far there is no ratio of contraries. But we find, in Aristotle's account of sensible qualities, a theory that determinate qualities within a range are the product, in some sense, of a blending of opposites in a ratio

(*De Anima* III 2, 426a27ff; *cf.* 423b27–424b3, 407b30–31). The opposites for hearing are the sharp and the flat (426a30–31), for sight white and black, for taste sweet and bitter (426b8–12). A sufficient excess of one opposite in the object of sense can make perception impossible, and perception, therefore, depends on a ratio *(logos)* which is a mean *(mesotēs)* between extremes. According to Aristotle, there is a corresponding, or identical, ratio in the faculty or organ of sense. It is not, I think, possible to find in the *De Anima* any clear and consistent account of the sense in which sensation is a ratio *(logos)* or mean *(mesotēs)*. Some of the difficulties in the way of making the doctrine intelligible were pointed out acutely by J. L. Stocks in an article ("*Logos* and *Mesotēs* in the *De Anima* of Aristotle") in the *Journal of Philology*, vol. 33 (1914). But, at least in some passages, Aristotle seems committed to a doctrine that all sensible forms are ratios in the sense of being blends, according to a ratio, of opposed qualities. As regards hearing the doctrine is stated in the following passage (see Ross's notes on the text and its interpretation): "If voice *(phōnē)* always implies a concord *(sumphōnia)*, and if the voice and the hearing of it are in one sense one and the same, and if concord always implies a ratio, hearing as well as what is heard must be a ratio. That is why the excess of either the sharp or the flat destroys the hearing" (426a27–31). Ross quotes a statement of this difficult doctrine from Simplicius 194. 15–19: The actual object of hearing is said to be in a concord *(sumphōnia)* of extremes, so that it avoids excess or defect; concord is defined as being, as it were, a blending of extremes *(hoion krasis tis ousa tōn akrōn)*. This evidence shows that Aristotle *might* have tried to exhibit the ethical mean as a mixture of opposites according to a ratio. But he does not, in fact, do so. By not doing so he avoids serious difficulties, if not absurdities.

It has been suggested that the way in which the concept of a mean *(mesotēs)* enters into Aristotle's account of sense-perception helps us to understand what Aristotle says in the *Nicomachean Ethics* about the rôle of perception *(aisthēsis)* in ethical cognition. The suggestion was elaborated by Mr. E. Harris Olmsted in an article entitled "The 'moral sense' aspect of Aristotle's ethical theory" (*American Journal of Philology*, 1948). The object of the article is defined at the outset as being "to bring into relation the use of the term *mesotēs* (i) in

Aristotle's theory of perception as stated in the *De Anima*, and (ii) in his account of the differentia of virtue in the *Nicomachean Ethics*" (p. 42). The writer does not claim to show a close connexion, and such a claim would lack initial plausibility. For the application of the term in Aristotle's theory of perception is, at least primarily, to the perception of objects perceptible by one sense only, colour, sound, taste (*De Anima,* 418a 7–16); and Aristotle insists that practical sense is not like this kind of sense (*E.N.* VI 8, 1142a 25–30). And Aristotle is right. Seeing what should be done is not like seeing a colour.

Mr. Harris Olmsted starts from the account of "the physiological side of sense-perception" in the *De Anima* (423b30–424a7). The sense-organ is "sensitive to a set of qualities ranging between extremes, and to be sensitive to the whole range it must itself be a kind of mixture of the opposed qualities, in which neither extreme unduly predominates" (p. 43). In its application to temperature this account says that, for an object to be felt as warm or cold, it must be warmer or colder than the organ. But the article points out that this account cannot be applied to the senses generally. "Sight and hearing, far from having a neutral spot, are most acute in the middle of their range"; and "we perceive by touch what is just as hard or soft as we are" (p. 44). Moreover the writer does not try to explain, still less defend, the idea that the sense-organ is "a kind of mixture" (what kind?) of the opposed qualities. Nor does he, as I understand, claim that the ethical mean is a mixture of opposed emotions, or of pleasures and opposed pains. He discusses helpfully some crucial passages about sense-perception in the *De Anima* (424a17–b3, 431a8–20) and about "moral sense" in the *Nicomachean Ethics* (1142a25–30 and 1143a35–b10; *cf.* 1109b22–3, 1126b3–4). It is right to stress the importance, in Aristotle's account of virtuous conduct, of the doctrine that the virtuous man exercises intuitive judgment in particular situations. But Mr. Harris Olmsted wished to hold that the doctrine of the ethical mean is primarily a doctrine about moral sense. I do not think he has shown this. But, if he had, it would still be questionable whether the doctrine of the mean in sense-perception helps us to understand the doctrine of moral sense. He hardly claims that it does. As we have seen, he has himself pointed acutely to obscurities and weaknesses in the doctrine of the perceptual mean. It would

not be profitable, he tells us, to try to "interpret moral perception rigidly" in terms of Aristotle's theory of sense-perception (p. 58). Hence the theory of the ethical mean, as seen in the light of the *De Anima,* seems in the end, for Mr. Harris Olmsted, to fade out into the broad and innocuous assertion that to be virtuous is to be "able to deal with the particular moral situation clear-sightedly" (p. 61).

Aristotle's theory of the "chemical" composition of homoeomerous bodies, minerals and tissues, by fusion of the physical elements is stated in *De Gen. et Corr.* II 7, 334b20–30, and is explained in Joachim's Commentary. The whole passage is quoted as being "specially instructive" by Burnet (pp. 72–3). Flesh and bones, for example, are formed as the result of "the reciprocal action-passion of a completely-hot and a completely-cold which were present in amounts approximately balanced or equal" (Joachim p. 241). The opposites, dry and moist and hot and cold, produce flesh and bone and the remaining compounds "in accordance with a mean" *(kata mesotēta), i.e.,* according to a ratio which is a mean (334b28–30). If one of the contraries is present in sufficient excess, blending will not occur; the result, according to Aristotle, will be either bare matter or the one extreme "existing in its full reality without qualification" *(entelecheia haplōs)* (334b28ff). But, when there is no such excess, then in the process of mixing the contraries "destroy one another's excesses" and produce something intermediate *(metaxu)* "which, according as it is potentially more hot than cold or *vice versa,* will possess a power-of-heating that is double or triple its power-of-cooling, or in some other ratio" (334b13–16).

It is important to notice the following point about these speculations of Aristotle. The theory of the ratio of opposites must be stated, if it is to be intelligible, in terms of opposites which are absolute not relative, *i.e.,* not just cross-sections of a range of qualities or of intensities. If this were not so, the theory would involve a vicious infinite regress since the extremes themselves would be constituted by ratios. In Aristotle's philosophy of nature the two pairs of primary qualities, hot and cold and dry and fluid, are indeed absolute. The possible combinations of them, excluding the coupling of contraries, constitute the simple

bodies of which what we call fire (hot and dry), air (hot and fluid), water (cold and fluid) and earth (cold and dry) " are impure or exaggerated forms " (Ross, *Aristotle,* p. 106). Similarly, Aristotle's theory of sensible qualities as ratios of opposites presupposes, for example, the notion of an absolute low and an absolute high in pitch, and the notion of the absolutely sweet and the absolutely bitter. The difficulty of these notions might well be taken to be a fatal weakness in the theories. In the case of the ethical mean the difficulties are so obvious and glaring as to constitute in themselves a serious objection to Burnet's interpretation of the doctrine. As we have already seen, the mean in the case of divisible goods, such as money or food, cannot be a ratio of opposites because it would not make sense to speak of ratios between amounts of the absolutely large and the absolutely small. Joseph elucidates the difficulty clearly, with reference to passions *(pathē),* in his criticism of Burnet. He argues that the *logos* by which the *mesotēs* is determined cannot be a ratio of contrary impulses. " For these impulses would themselves be capable of ranging in degree of strength, and it is difficult to see how the ratio in which they are to be combined, in order to secure the ' mean ' required, can be fixed unless the strength of each is first fixed. Yet this strength might in turn be regarded as involving a combination of contraries in a certain ratio, and so *ad infinitum* ". (*Essays in Ancient and Modern Philosophy*, p. 171.) Burnet tells us to " go to the *Physics* for Aristotle's moral philosophy " (p. 69). I have argued that Aristotle did not in fact import into his *Ethics* the "physical" ideas which Burnet finds there. I think we should be glad that he did not do so. For, if he had, he would have spoiled his ethical doctrine by introducing into it confusions and mistakes from which it is in fact free.