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ARISTOTLE'S ILLICIT QUANTIFIER SHIFT: IS HE GUILTY OR INNOCENT?

Jack Green

1. Introduction

Aristotle's *Nicomachean Ethics* (from hereon *NE*) falters at its very beginning. That is the claim of logicians and philosophers who believe that in the first book of the *NE* Aristotle mistakenly moves from 'every action and pursuit aims at some good' to 'there is some one good at which all actions and pursuits aim.'¹ Yet not everyone is convinced of Aristotle's seeming blunder.² In lieu of that, this paper has two purposes. Firstly, it is an attempt to bring some clarity to that debate in the face of divergent opinions of the location of the fallacy; some proposing it lies at I.i.1094a1-3, others at I.ii.1094a18-22, making it difficult to wade through the literature. Further, the translations of Aristotle's argument at I.ii.1094a18-22 into formal logic have been similarly diverse, rendering any judgement of his argument uncertain.³ In proposing what will be called 'the literal reading', the second purpose of the paper is to acquit Aristotle of committing an illicit quantifier shift. To do this, it will be suggested that if Aristotle commits the fallacy at all it is not at I.i.1094a1-3, as is often assumed. Then the paper will seek to determine the correct translation of I.ii.1094a18-22 into logic and suggest whether or not such a correction will free Aristotle of the charge against him. Before analysing the various passages, however, it is important to name and define the fallacy in question.

¹ Peter Smith, for example, treats this passage (and not the passage from book ii) as a possible example of the quantifier shift fallacy, cf. *An Introduction to Formal Logic* (Cambridge: Cambridge University Press, 2003), 32-33. Admittedly, he does not seem quite so sure that Aristotle has in fact committed the fallacy as other scholars are. Other scholars do however, accuse Aristotle of the fallacy, cf. G. E. M. Anscombe, *Introduction to Wittgenstein's* Tractatus, 4th ed. (London: Hutchinson & Co., 1971), 15-16; *Intention*, 2nd ed. (Oxford: Basil Blackwell, 1972), 34; Peter Geach, *Logic Matters* (Oxford: Basil Blackwell, 1972), 2. Michael Pakaluk in his introduction to the *Nicomachean Ethics* attests to this assumption too, cf. *Aristotle's Nicomachean Ethics: An Introduction* (Cambridge: Cambridge University Press, 2005), 49. He does argue, though, that it may be influenced by translating '*t'agathon*' as 'the good', the definite article obscuring what Aristotle is trying to do. ² Cf., W. F. R. Hardie, *Aristotle's Ethical Theory* (Oxford: Oxford: Oxford University Press, 1980), 12-27; Anthony Kenny, 'Aristotle on Happiness', in *Articles on Aristotle: vol 2. Ethics & Politics*, Jonathan Barnes, Malcolm

Kenny, 'Aristotle on Happiness', in Articles on Aristotle: vol 2. Ethics & Politics, Jonathan Barnes, Malcolm Schofield, Richard Sorabji (eds.) (London: Duckworth, 1977), 25-32; Bernard Williams, 'Aristotle on the Good: A Formal Sketch', *The Philosophical Quarterly* 12, no. 49 (Oct., 1962): 289-296; Christopher Kirwan, 'Logic and the Good in Aristotle'. *The Philosophical Quarterly* 17, no. 67 (Apr., 1967): 97-114.

³ Not only do various translations differ in notational convention as each logician prefers his own style, but there are also differences in the basic structure of the argument and beliefs in what the argument is trying to prove.

2. The Fallacy: its Form

G. E. M. Anscombe, Peter Geach, and others accuse Aristotle of committing the quantifier shift fallacy.⁴ That is the name for an argument that moves from

For any x, there is some y, such that z.

to

There is some y, such that for any x, z.

In the case against Aristotle, allowing P to stand for 'is pursued' (and assuming the verb's transitive nature such that Pxy stands for 'x is pursued for y'),⁵ x to stand for 'action or pursuit', and y to stand for 'end', the alleged fallacious argument can be translated as the following:

(1) $\forall x \exists y (Px \rightarrow Pxy)$ (2) $\exists y \forall x (Px \& Pxy)$

Technically, it is the illicit shift of the quantifiers 'all' (or 'any'), \forall , and 'some', \exists , which is illustrated in the change of the order of the quantifiers between (1) and (2). This would read:

(1*) For any x, there is some y such that, if x is pursued, then x is pursued for y.(2*) There is some y such that, for any x, x is pursued and x is pursued for y.

Its fallaciousness can be seen more clearly when presented informally. For example, if James were to claim 'All fathers have a child' and Bob were to infer from James' statement that 'There is a child that all fathers have', then Bob would be incorrect for not all fathers have the same particular child. In Aristotle's case, it would be incorrect for him to infer from 'every action and pursuit aims at some good' that 'there is some good at which all actions and pursuits aim.' The most the former can show is that actions and pursuits have a trajectory towards goodness as found in particular ends, not that there is some one definite good at which all actions in mind in

⁴ See fn. 1.

⁵ This is to follow Williams' convention in, 'Aristotle on the Good: A Formal Sketch', 289.

this passage, but that to one side for the moment. What follows is an analysis of the cases for and against placing the fallacy at I.i.1094a1-3 before moving to a similar analysis of I.ii.1094a18-22.

3. NE I.i.1094a1-3

Every art and every inquiry, and similarly every action and pursuit, is thought to aim at some good; and for this reason the good has rightly been declared to be that at which all things aim.⁶

3.1 The Case For

This opening sentence of Aristotle's *NE* has been posited as the location of the quantifier shift fallacy. For example, though Pakaluk acquits Aristotle of the fallacy, he does claim that the apparently fallacious argument is found here, for after quoting those opening lines he warns the reader, 'we should look briefly at the common charge that Aristotle commits a crude fallacy in this passage'.⁷ Indeed, the formal translation as previously provided may seem *prima facie* to be an accurate representation of this passage. If 'the good' refers to 'one thing which is good', and if 'some good' refers to 'one thing which is good', then Aristotle has indeed fallen foul of the fallacy, for these are logically equivalent. The case for locating the fallacy here thus rests upon the correct translation of 'the good' into logical notation. To put it logically, since 'some good' (letting 'G' stand for the predicate 'is good') is translated by the existential quantifier $\exists y$ (Gy), for the argument to be fallacious 'the good' must similarly be translated.

If that translation is accurate, 'the good' has to be taken as an assertion of the existence of a member of the set $\forall y$ (Gy). Certainly, when Aristotle claims 'the good is that at which all things aim' he seems to be pointing to one member of the set $\forall y$ (Gy). In support of this, the definite article, assuming the principles of maximality and uniqueness, seems to indicate that there is one good at which all actions and pursuits aim, indeed at most one good.⁸ If this is

⁶ This and all subsequent quotes are taken from David Ross' translation: Aristotle, *Nicomachean Ethics*, translated by David Ross and revised by J. L. Ackrill and J. O. Urmson (Oxford: Oxford University Press, 1980).

⁷ Pakaluk, Aristotle's Nicomachean Ethics: An Introduction, 49.

⁸ For an outline of these principles see Bertrand Russell, *Introduction to Mathematical Philosophy* (London: Allen & Unwin, 1919), 131-132.

what Aristotle meant, then he has committed the fallacy for there are no grounds in (1) that would validate the inference,

(3) $\exists y [Gy \& \forall x (Gx \rightarrow x = y)]$

Richard Robinson, for example, takes Aristotle to be asserting as much. In his *An Atheist's Values* he places Aristotle amongst those people who make the 'very common error to use the word 'the' so as to imply that there is only one thing of a certain kind when in fact there are many.'⁹ He claims Aristotle thinks that to demonstrate there is at least one good is to demonstrate that there is only one good, thus implying that $\exists y$ (Gy) is taken as equivalent to 'one thing which is good', which is in turn equivalent to 'the good'.¹⁰ Hence, Aristotle commits the fallacy.

3.2 The Case Against

However, Aristotle does not fall foul of the fallacy here, if, indeed, he commits it at all. The reason is that 'the good' and 'some good' do not refer to the same thing, that is, they cannot both be translated as, $\exists y$ (Gy): 'at least one thing which is good'. As shall be suggested, 'the good' can be taken either as 'some one good thing', or as referring to a more formal notion of goodness, and Aristotle adopts the latter. As such, 'the good' cannot be translated as $\exists y$ (Gy), for 'the good' belongs to a different set than 'some good'. Admittedly 'a more formal notion of goodness' is quite vague, but this disjunction is not an attempt to determine the specific nature of 'the good'. Instead it tries to point to the idea that 'the good' is either some determinate good or something formal, whether a property, or transcendental, or (as shall be argued subsequently) a determinable. In any case, if Aristotle holds that 'the good' is some determinate good, then he not only commits a fallacy but blatantly contradicts himself, for, as one shall see, he believes there are several determinate goods at which actions and pursuits aim.¹¹ If he holds, instead, to the formal side of the disjunction, then he commits no fallacy at all for he does not assert the existence of some one determinate good at which all actions and pursuits aim.

⁹ Richard Robinson, An Atheist's Values (Oxford: Basil Blackwell, 1975), 17.

¹⁰ Robinson, An Atheist's Values, 17.

¹¹ Cf. NE, 1.7.1097b2.

Taking the first possibility of translation, if one were to read the rest of *NE* then one would not find Aristotle equating 'the good' with $\exists y$ (Gy) or its expanded form in (3) pointing to the uniqueness claim, for he later on asserts a multiplicity of goods at which actions and pursuits aim,

(4)
$$(\exists w) (\exists x) (\exists y) (\exists z) [w \neq x \neq y \neq z \& (Pww \& Pxx \& Pyy \& Pzz)]^{12}$$

So, either Aristotle commits the fallacy and blatantly contradicts himself, or one cannot translate Aristotle's notion of 'the good' as (3), and conclude $(2)^{13}$. It would be uncharitable to accuse Aristotle of such an obvious blunder if there are other accepted interpretations available. So one must analyse such alternative interpretations of 'the good'.

The alternative interpretation considered here is: 'the good' must be taken as something more formal, like a property or an idea, and not as some one particular object that is good. To adopt contemporary terminology, 'the good' could be conceived of as a determinable, in relation to 'some good' as determinable is related to determinate.¹⁴ Just like 'colour' is a determinable and 'red' a determinate of it, so too 'life', being a good thing, would be a determinate of 'goodness' insofar as it shares the properties of 'goodness'. In natural language, then, a helpful translation of 'the good' would not be 'one thing which is good' but, 'goodness'; and 'some good', 'that thing which has the property goodness'.

If the determinable/determinate distinction were an accurate representation of Aristotle's opening sentence, then it would read:

(1) $\forall x \exists y (Px \rightarrow Pxy)$

(5) $\exists z (Gz) \& \forall y (Py \rightarrow Pyz)$

'G' being the determinable 'goodness'.

¹² *NE*, 1.7.1097b2. This is propositions (11) in Williams, 'Aristotle on the Good', 292. Kirwin makes some corrections to this proposition, placing in the modal operator \diamond to assert possibility, but this is a minor alteration and need not effect the intended purpose here, which is to show that Aristotle holds that there are several goods at which actions and pursuits aim and not only one, cf. Kirwan, 'Logic and the Good in Aristotle', 102.

¹³ Refer to page 17 of this paper that translates (2) $\exists y \forall x (Px \& Pxy)$

¹⁴ David S. Oderberg, 'On an Alleged Fallacy in Aristotle', *Philosophical Papers* 27, no. 2 (1998), 107-118. Whilst Aristotle certainly does not write in terms of determinable/determinate, Edgar Herbert Granger has argued that it may be a helpful notion to some of his metaphysical categories, cf. 'Aristotle on Genus and Differentia', *Journal of the History of Philosophy* vol. 22, no. 1 (1984), 20.

As it stands, this is not invalid in the way supposed, for Aristotle makes no illicit inference from $\forall x \exists y (...)$ to $\exists y \forall x (...)$. The determinable/determinate distinction thus alleviates Aristotle of committing the fallacy, here at least. The next question is: does this translation of 'the good' find precedent in Aristotle's text? That is, is it justifiable to claim that Aristotle conceives of 'the good' as something like a determinable?

If one considers the Greek here, then such a reading is quite plausible, for '*t*'agathon' does not convey the idea of a determinate good at all but the form of the good, or what medievals would call the good *simpliciter*.¹⁵ This kind of reading adds weight to the determinable/determinate reading Oderberg defends, though he does not explicitly deal with the distinction between '*t*'agathon' and 'agathon ti'. But, as he goes on to suggest, all Aristotle's argument goes to show is that actions and pursuits have as their aim an end and the ends that are the aim of such actions and pursuits have the property of goodness, which is what (5) tries to capture. In other words, ends are goods, or good things.¹⁶

John Finnis takes a similar line, arguing for a differentiation between 'the good' and 'some good' and positing the latter as an end of practical reason and the former as *eudaimonia*.¹⁷ His notion of *eudaimonia* is not some determinate good but a state in which those ends of practical reason are found.¹⁸ This is, in effect, an inclusivist reading of *eudaimonia*.¹⁹ Whether or not *eudaimonia* should be read inclusively or exclusively and whether or not *eudaimonia* is a state or activity, Finnis' reading lends support to the argument made above that 'the good' and 'some good' do not belong to the same set and so, cannot both be translated as $\exists y (Gy).^{20}$

In effect, what the case against I.i.1094a1-3 has shown is that Aristotle is simply providing a characterisation of practical reasoning that is presupposed throughout the rest of

¹⁵ Aristotle, *Nicomachean Ethics: Translation, Introduction, Commentary*, trans. and with commentary Sarah Broadie and Christopher Rowe (Oxford: Oxford University Press, 2002), 261.

¹⁶ Pakaluk, Aristotle's Nicomachean Ethics, 49.

¹⁷ John Finnis, 'Action's Most Ultimate End', in *Reason in Action: Collected Essays Volume 1*, John Finnis (ed.) (Oxford: Oxford University Press, 2011), 160-162.

¹⁸ John Finnis, 'Action's Most Ultimate End', in Reason in Action: Collected Essays Volume 1, 161.

¹⁹ There is some debate as to whether Aristotle held to an inclusivist or exclusivist notion of *eudaimonia*, but that discussion is a discussion for moral philosophy rather than logic, so it shall be left alone here. For a brief discussion of the differences between inclusivist and exclusivist interpretations of *eudaimonia* cf. J. L. Ackrill, 'Aristotle on *Eudaimonia*', in *Essays on Aristotle's Ethics*, edited by Amelie Oksenberg Rorty (Berkeley and Los Angeles, California: University of California Press, 1980), 17.

²⁰ Aristotle certainly doesn't consider *eudaimonia* as a static state, but an activity. Though this disagreement with Finnis loses nothing of the distinction between 'the good' and 'some good', for Aristotle still distinguishes between particular goods and *eudaimonia* as shall be demonstrated when discussing his notions of 'most final' and 'more final'.

the book.²¹ As such, one ought not to accuse Aristotle of committing the fallacy here. Although, as attested by the literature, he may have committed it only a few lines later.²²

4. The Case of NE I.ii.1094a18-22

If, then, there is some end of the things we do, which we desire for its own sake (everything else being desired for the sake of this), and if we do not choose everything for the sake of something else (for at that rate the process would go on to infinity, so that our desire would be empty and vain), clearly this must be the good and the chief good.

4.1 The Case For

It is not as straightforward to translate the above passage into formal logic as it was the opening passage, which makes presenting the cases for and against difficult. However, as Ackrill argues, Aristotle can be taken in a general way to be arguing that since, of the things we do, there is some end desired for its own sake, then there is some end desired for its own sake for the things we do.²³ That is,

(6) $\forall x \exists y [(Px \rightarrow Pxy) \& \forall z \{z \neq x \& (Pz \rightarrow Pzy)\}]$ (7) $\exists y \forall x [(Px \& Pxy) \& \forall z \{z \neq x \& (Pz \rightarrow Pzy)\}]$

Notice the difference between this and the opening lines of the book. There the end 'y' was not qualified. Here, there is an additional quality attributed to the end Aristotle is considering: everything else being desired for it:

(8) $\forall z \{ z \neq x \& (Pz \rightarrow Pzy) \}$

This would suggest that the distinction between determinable and determinate used to interpret I.i.1094a1-3 will not help in the same way it did there, for the qualification suggests some actual end that is pursued, not the notion of a formal concept of which some ends have the property. There is then, a distinction between the function of 'the good' as found at the

²¹ Williams, 'Aristotle on the Good', 289.

²² Several scholars consider the next passage and not the opening passage to be the location of the fallacy (if indeed Aristotle does commit it, which not all are convinced of), cf. Cf. Kenny, 'Aristotle on Happiness'; Williams, 'Aristotle on the Good'; Ackrill, 'Aristotle on *Eudaimonia*', Georg Henrik von Wright, *The Varieties of Goodness* (London: Routledge & Kegan Paul, 1963).

²³ Ackrill, 'Aristotle on *Eudaimonia*', 25.

beginning of *NE* and 'the chief good' found here. Whilst the former argument is taken to be demonstrating a principle of practical reason, the latter argument is taken to be suggesting some one final good for which all actions and pursuits aim. This latter argument may then be a movement towards an instantiation of 'the good' found in I.i.1094a1-3, but that shall be considered in section IV.

The fallacy is present, it is suggested, when the move is made from the second condition,

'and if we do not choose everything for the sake of something else (for at that rate the process would go on to infinity, so that our desire would be empty and vain)'

to the first condition,

'there is some end of the things we do, which we desire for its own sake (everything else being desired for the sake of this)'.²⁴

To put it more formally, let the first condition of Aristotle's passage be A, the second B, and the consequent, C:

B = 'For any action or pursuit x, there is some end, y, such that if x is pursued for y, then y is pursued for y.'

A = 'Thus, there is some end, y, such that for any action or pursuit, x, x is pursued for the sake of y and y is pursued for y.'

C = 'For any y, such that y is pursued for y, y is the chief good'

which can be translated as:

- (9) $\forall x \exists y (Pxy \rightarrow Pyy)$
- \therefore (10) $\exists y \forall x (Pxy \& Pyy)$
- $\therefore (11) \; \forall y \, (Pyy \rightarrow SGy)$

'SG' being the supreme (or chief) good.²⁵

²⁴ Ackrill, 'Aristotle on *Eudaimonia*', 25.

²⁵ Anscombe would seem to agree with the thrust of such a translation as she tries to show Aristotle incorrectly moving from a premise like, 'All chains of means to ends must terminate somewhere' to the conclusion, 'There is somewhere where all chains must stop.' Cf. *Intention*, 34. One problem here is that no scholar translates the argument in precisely the same way as another. One must be satisfied, then, with broad similarities in the formal representation of the argument and excuse minor differences.

If this is the correct translation of Aristotle's argument, then it is fallacious, provided no supplementary premises are added.²⁶ As Kenny points out and as was shown above, for this argument to be fallacious the first conditional statement must be taken to be an inference from the second conditional statement.²⁷ The fallacious argument thus appears as B \therefore A \therefore C.²⁸

It is difficult to see, however, what in the above quotation would suggest this reading. Perhaps the 'then' at the beginning of A signals that it follows upon something, presumably B. However, that would render the conjunctive 'and' that semantically (and as will be suggested, logically) joins A to B irrelevant, in fact useless (which shall be returned to momentarily). Nevertheless, Ackrill believes that the only reading of the section in question is that \sim B – that is, the proposition 'we *do* choose everything for the sake of something else, such that there is an infinite regress of choices' – is 'the only alternative' to A.²⁹ Thus, asserting B proves A. This suggests that Aristotle's full argument would read,

(12) A $\leftrightarrow \sim B^{30}$

(13) B

: (14) A

: (15) C

Whilst this seems valid in such a form, when put into quantification logic, one can see the illicit step between (13) and (14) where Aristotle would have to swap the universal and existential quantifiers, as represented in (9) and (10). Hence, if this is the correct translation of I.ii.1094a18-22, then Aristotle illicitly moves from 'all' to 'some'.

4.2 The Case Against

This is a strange translation, however, for it seems nothing at all like the passage in *NE*. Not only does Ackrill introduce a foreign logical connective (that is, one not present in the original text), 'xor', but he forgets to include one that is already there, 'and'. In fact, any attempt to render A an inference from B falls to this same forgetfulness, for the form of such arguments

²⁶ Williams, for example, attempts to acquit Aristotle of the fallacy by providing supplementary premises, cf. Williams, 'Aristotle on the Good'.

²⁷ Kenny, 'Aristotle on Happiness', 26.

²⁸ Cf. Peter B. M. Vranas, 'Aristotle on the Best Good: Is "Nicomachean Ethics" 1094a18-22 Fallacious?', *Phronesis* 50, no. 2 (2005), 118.

²⁹ Ackrill, 'Aristotle on *Eudaimonia*', 25.

³⁰ By assuming ~B is the *only* alternative to A, Ackrill clearly assumes that the disjunction is exclusive, hence \leftrightarrow .

must be rendered as $B \therefore A \therefore C$, as Kenny has argued (see fn. 25). Ackrill's case for holding A as an inference from B is, therefore, to be rejected.

So, fortunately for Aristotle, $B \therefore A \therefore C$ is not the correct translation of the argument. It badly misrepresents the literal reading of the argument which, *prima facie*, suggests that A is a conjunct of B, both together forming the antecedent of the consequent, C.

With a view to supporting this literal reading, another look at the structure of the argument may help clarify the analysis of it. As one will notice, the argument Aristotle makes is made up, seemingly, of two conditional statements, each with their own explanatory clauses, and a remark prefaced with 'clearly this must be' implying that what comes next follows from what came before. Considered as such, the argument can be standardised as:

If A And if B Then C

It would seem then, that the only fair way to render the argument in logic is to join A with B to form the antecedent, (A & B). This is in direct opposition to Ackrill's assertion, 'Nobody will suggest that the [B] is here a condition additional to [A].³¹ In fact, rendering the passage as a conditional with a conjunctional antecedent does not only reflect the literal sense of the passage far more accurately than Ackrill's B \therefore A \therefore C, but the original Greek is also rendered more accurately, but this to one side.³² Returning to the logic of the argument, the new conditional can be formalised as,

(16) $[\{\forall x \exists y (Pxy \rightarrow Pyy)\} \& \{\exists y \forall x (Pxy \& Pyy)\}] \rightarrow \forall y (Pyy \rightarrow SGy)$

Clearly, there is no fallacy here for there is no inference from B to A to C. In fact, there is no inference whatsoever. This is a conditional premise which states that for C to hold, A and B must first hold. In other words, A and B are sufficient conditions for C. Aristotle is thus acquitted of the fallacy at hand, for he in fact makes no inference.

³¹ Ackrill, 'Aristotle on *Eudaimonia*', 25.

³² Cf. Michael V. Wedin, 'Aristotle on the Good for Man', *Mind*, new series 90, no. 358 (Apr., 1981), 247. See particularly his discussion on '*kai*' and '*gar*'.

5. Justification for Literal Translation

Yet this is not the final word on the passage. If the passage were a conditional premise, then one would expect Aristotle to assert A and B at some stage in order to discharge C. So, in order to justify the literal translation of the passage, one must show that Aristotle asserts A and B in order to obtain C. This he does in *NE* I.vii when discussing happiness (or *eudaimonia*) as the instantiation of the chief good.

The first sufficient condition, A, is used to characterise the chief good as a final end, 'the chief good is evidently something final.'³³ That is, the chief good is a member of the class 'final end'. This class is a determination of the general class of ends, being that which is pursued, $\forall x$ (Px). Amongst these ends some are always pursued for the sake of others;

(17) ∃x (Pxy & ~Pxx)
and some are pursued for others and for themselves
(18) ∃y (Pyy & Pyz)

This latter group are final in the sense that chains of practical reasoning cease in them. A proper definition of such ends would then be: 'x is a final end if and only if, for any x, x is pursued for x, and any end, y, that is pursued is pursued for the sake of x.'

(18*) FEx = $\forall x (Pxx) \& \forall y (Pyx) def.$

It is amongst this latter group of ends that Aristotle searches for an end that would serve as the chief good.

Yet, as was pointed out earlier, Aristotle holds to the idea that there are many such final ends (see proposition (4)). Since, however, C indicates that there is one chief good (indicated by the definite article), Aristotle cannot hold that all such final ends (FEx) are the chief good. So, he tries to isolate the chief good from amongst these other final ends.

In order to assist him in that search Aristotle narrows down the field of (18*) by employing the second conditional of the initial argument, B. This conditional serves to differentiate amongst the final ends between what Aristotle ambiguously calls 'more final' and

³³ NE, I.vii.1097a28. What follows is a summary of Aristotle's argument concerning final goods in NE I.vii.

'most final' by stipulating that the 'most final' can only be one such 'more final' thing.³⁴ 'More final' is the general class of ends that fit the definition of FEx above. That is, 'more final' refers to final ends. 'Most final' is defined by Aristotle as that which is desirable in itself and never for the sake of anything else. More precisely, 'x is a most final end if and only if, for any x, x is pursued for x, and for any y such that y is a final end, y is pursued for x.

(19) MFEx = $\forall x (Pxx) \& \forall y (FEy \rightarrow Pyx)$

What B tries to say is that of these final ends that fit the definition in A, there must be one which is desired for itself and only for itself.³⁵ It does this through the appeal to the absurdity of infinity. Now, if there were, say, two final goods which were most final - call them g_1 and g_2 – then all things would be desired for these and these for themselves and each other. As Wedin has argued, there is nothing in A to exclude this.³⁶ However, this would lead to a circularity between g_1 and g_2 where g_1 is pursued for g_2 and g_2 is pursued for g_1 . For Aristotle, this is absurd for it would proceed *ad infinitum*, leaving action without something at which it is aiming.³⁷ Action would then become 'empty and vain'.³⁸ Therefore, there can only be one such 'most final' end.

In any case this is merely hypothetical at the moment. Aristotle must determine whether or not there is actually a member of the class MFEx. That is, he must instantiate MFEx. Otherwise the argument at I.ii.1094a18-22 is incomplete and he cannot infer C, which is the whole point of the conditional premise. So, he claims that happiness or eudaimonia is the member of the class MFEx such that happiness is the chief good.

Assessing the claim of happiness with the conditions just stipulated, Aristotle argues that happiness is always desired for itself (fulfilling the conditions in A) and never for the sake of anything else (fulfilling the conditions in B) and so, is the chief good. Hence, Finnis is correct in his description of eudaimonia insofar as he stipulates that it must be 'self-sufficient'

³⁴ Cf. NE I.vii.1097a28-34; Wedin, 'Aristotle on the Good for Man', 248-249.

³⁵ Finnis presents a similar reading, treating A as a step to B which, in turn, is a step to C, cf. Finnis, 'Action's Most Ultimate End', 160-161. It is unclear whether Finnis takes the literal reading or whether by treating A, B, and C as separate steps he considers them unique premises. It is clear, though, that he would agree with the argument above inasmuch as B qualifies in some way what is asserted in A.

³⁶ Wedin, 'Aristotle on the Good for Man', 249. The idea seems to be that in spite of the explanatory phrase 'everything else being desired for the sake of this' B does not preclude the intelligibility of two ends which are most final, for the above relationship between g_1 and g_2 still fulfills that criteria, merely in a circular manner. ³⁷ Cf. Aristotle's *Physics* III for his rejection of the actuality of infinities.

³⁸ NE, I.ii.1094a21.

and 'unrestrictedly final'.³⁹ In other words, *eudaimonia* is always desired for itself and never for the sake of anything else. Now, what *eudaimonia* or happiness is in a substantive sense is another question and beyond the scope of this essay, and for that matter beyond the scope of Aristotle's argument here.⁴⁰ It is clear, however, that Aristotle not only proposes the conditional premise but also asserts the conjunctive antecedent and so yields the consequent such that happiness is the chief good.

6. Possible Counter Arguments

Against this reading of I.ii.1094a18-22 there are at least two possible objections.⁴¹

6.1 Semantic Objection

Firstly, if it were a conditional argument then the language surrounding the argument would indicate this by being hypothetical in nature, but there is little suggestion of this in I.ii.1094a18-22 or in I.vii where it has been argued Aristotle asserts A and B to discharge C. Ackrill argues along such lines when he attempts to rebut W. F. Hardie's argument for the hypothetical nature of the passage.⁴² He does this by pointing out assertoric phrases like 'has a great influence' and 'to determine what it is'.⁴³ Thus he assumes to identify phrases in the indicative mood and not the subjunctive.

The problem with Ackrill's objection is his splicing of assertoric phrases from both interrogative and hypothetical statements. For example, 'has a great influence' comes from the sentence 'Will not the knowledge of it, then, have a great influence on life?' and the second supposed assertoric phrase comes from a sentence beginning with 'If so', which clearly indicates a hypothetical sentence.⁴⁴ Thus, both counter-examples Ackrill offers are parts of sentences not in the indicative mood. Moreover, I.vii is replete with the hypotheticals up until Aristotle asserts $\exists x$ (MFEx) and instantiates this MFEx with happiness. Ackrill's counter-argument thus amounts to nothing.

³⁹ Finnis, 'Action's Most Ultimate End', 161.

⁴⁰ This is evinced in the subsequent discussion Aristotle has concerning what happiness truly is and what people mistakenly think it is, cf. *NE*, I.iv-vii.

⁴¹ There are, conceivably, other objections, but due to limitations of space, only two shall be considered here.

⁴² Cf. Ackrill, 'Aristotle on *Eudaimonia*', 25-26.

⁴³ Ackrill, 'Aristotle on *Eudaimonia*', 25-26.

⁴⁴ NE, I.ii.1094a23-24.

6.2 The Function of B

The second objection attempts to refute the claim that B isolates one end amongst the final ends to assert a most final end such that whenever this end is pursued it terminates the chain of pursuit. There are seemingly two ways of presenting this objection.

6.2.1 First Objection

Firstly, as Vranas has argued, B does not preclude the possibility of 'pursuit circles' – that is the type of situation described between g_1 and g_2 above in which a chain of pursuits returns in on itself.⁴⁵ So, it fails to guard against a chain of means and ends that do not have a terminating end. This would mean that Aristotle cannot claim a single instantiation of MFEx, but must admit several.

It was clearly demonstrated, however, that the whole point of B is to avoid such 'pursuit circles' because, Aristotle believes, such circles would not yield a point of action and thus action would not proceed. Vranas' counter argument does not sit well with a correct understanding of Aristotle's claims concerning infinity and in fact makes the literal reading of B unintelligible for it clearly attempts to counteract an infinite pursuit chain (or circle). Furthermore, this reading would render B useless for Aristotle has already shown in A that there are several ends to chains of pursuits, so admitting the same in B would be redundant. Hence Vranas' interpretation of B simply misses the point and can be rejected.

6.2.2 Second Objection

The second way of posing the counter argument to the proposed function of B may be to undermine the use of B as a condition for C. This would be a helpful line of argument for those convinced that Aristotle uses B to infer A. Such an argument may run: B does not function as the determinate of a 'most final' end, for that function is contained in the explanatory phrase in A, 'everything else being desired for the sake of this'. This phrase clearly indicates that the 'some end' A speaks of is in relation to all other ends as that which is desired. So, by attributing that function to B – *contra* what this paper has argued above – the passage is distorted. In fact, B is clearly seen to stipulate that our actions and pursuits must have an end or else the chain of pursuits would go on *ad infinitum*.⁴⁶

⁴⁵ Vranas, 'Aristotle on the Best Good: Is "Nicomachean Ethics" 1094a18-22 Fallacious?', 123.

⁴⁶ This seems to be the assumption of Anscombe and others who accuse Aristotle of performing the illicit quantifier shift.

This is by far a stronger counter argument than the one proposed by Ackrill. Yet it, too, is flawed. Firstly, whilst B certainly demands at least that chains of pursuits must have an end, if that is all it says, then we have arrived back at the accusation of the illicit quantifier shift. Assuming for the moment that all B says is that there is an end of actions and pursuits, in what relation would B then be to A? It certainly could not be an additional condition. Yet, that was shown to be the most plausible interpretation. Clearly on this reading, B would have to be a premise from which A is inferred, for A assumes that there are ends of actions and pursuits and B, according to this counter argument, merely stipulates that there are ends of actions and pursuits. So, we have arrived back at the accusation that A is inferred from B, which was shown to be an untenable reading of I.ii.1094a18-22. Thus this objection is nothing more than a faulty reading of the passage and so, can be dismissed.

However, it does propose a problem that ought to be addressed. The above counter argument makes the claim that the explanatory phrase in A – '*everything else being desired for the sake of this*' – suffices for the function of B. If we take the explanatory phrase as the condition for the 'most final' end, then not only does B become redundant and out of place, but Aristotle would no longer be offering conditions that, if fulfilled, point to C. Instead, he would simply be inferring C from A as in (6) and (7).

The explanatory phrase in A would then merely point to the distinction between things that are always desired for something else and those ends desired for themselves, the 'more final' ends. Now this is clearly different to the function of A and B proposed earlier in which B was needed to qualify the class in A, which presents a problem for the literal reading defending in section IV.

Wedin has shown, however, that the Greek clearly indicates that the 'some good' Aristotle speaks of assumes that there are several such goods and not one, which in any case was shown in (4).⁴⁷ Again, just as the previous counter-argument was flawed for its untenable translation of I.ii.1094a18-22, so too this counter-argument fails to accurately translate A, and so misunderstands its point.

7. Conclusion

Given these arguments, one cannot accuse Aristotle of making the quantifier shift fallacy here, nor indeed at I.i.1094a1-3, for he never infers 'there is some one good at which

⁴⁷ Wedin, 'Aristotle on the Good for Man', 249.

all actions and pursuits aim' from 'every action and pursuit aims at some good.' I.i.1094a1-3 never asserts that there is some one end at which all things aim. Moreover, the most satisfactory way to translate I.ii.1094a18-22 into quantification logic is found in proposition (16) – which can be represented more generally as (A & B) \rightarrow C – and not in propositions (9) - (11), which are undoubtedly fallacious. Of those possible translations considered in this paper, (16) is the only logical formulation that accurately reflects the sense of I.ii.1094a18-22 both in Greek and its English translation. Adopting it thus acquits Aristotle of the philosophical crime of which he stands accused.

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