1 Introduction

Ethics as Practical Science

Aristotle’s *Nicomachean Ethics* is among the first systematic treatments of ethics, and it is arguably the most important and influential philosophical work ever devoted to its field.\(^1\) With glorious preparation in the thought of Socrates and Plato, and equipped with a rigorous depth in all the principal areas of inquiry, Aristotle aimed for a comprehensive presentation of ethics that could stand the test of time. He deals in a compelling and authoritative way with most of the issues that confront anyone considering the best sort of life to lead. His topics of investigation include: happiness, the role of chance or fortune in life, the place of character and intellect, deliberation and choice, the contrast of making and doing, desire overriding our better judgment, and the importance of friendship and pleasure.

Subsequent authors borrow heavily from him or make his positions their target. The appeal of his work has reasserted itself in recent decades as the hold of Kantian and utilitarian approaches has somewhat lessened and applied ethics and virtue ethics have gained urgency. The sense of breakdown in modern ethical thought, the turn to applied and virtue ethics, the reassertion of the importance of literature and narrative for ethics, and the longing for a thorough guide to life have fastened attention upon Aristotle. Focus on this fundamental work in ethics is not, however,

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\(^1\) Its field is ethics as practical knowledge or science. Plato’s Academy may have divided philosophy into physics, logic, and ethics, but none of the early Academicians before Aristotle is reported to have written a treatise called “ethics,” and in fact the term ἠθική (*ēthikê*) does not appear prior to Aristotle’s time. The *Nicomachean Ethics* may be only among the first systematic works in ethics, however, since also attributed to Aristotle are the *Eudemian Ethics* and the *Magna Moralia*, which cover much of the same terrain as the *Nicomachean* version. The *Protrepticus* also touches on themes of ethics, but it is primarily devoted to a genre of literature turning its readers to the philosophical life.
the result of its being easy to read, immediately engrossing, or obviously soul stirring.²

In antiquity Aristotle’s treatises received careful commentary, and they continue to require these efforts since his thought needs unpacking. Argument follows argument with only limited explanation of their aim. Some of the argumentation resembles Socratic dialogue with opposing positions confronting each other. Key phrases and terms are often ambiguous, as in ordinary speech. Each sentence, paragraph, chapter, and book warrants elucidation. Though Aristotle’s ethical inquiry aims to be practical, and serious reflection on ethics should explore this treatise, guidance helps with reaping the reward of his succinct and profound work.³

I. THE EUDAEMONIST APPROACH

Though people have probably always given some consideration to what they should do and how to live, a systematic philosophical approach originates around Socrates. In the late fifth and early fourth century BCE, the framework or paradigm for ethical thought becomes the search for the ultimate goal or end for human life. There was agreement to name the goal happiness (eudaimonia), but disagreement prevailed about what happiness is, some proposing pleasure and others other ends. This approach of looking toward the highest end, called eudaemonism, generally dominated ethical reflection until at least the sixteenth century CE.⁴ Evidently, one hardly has to accept eudaemonism. Before Socrates

² Burnyeat 1980, 81, comments: “He [Aristotle] is not attempting the task so many moralists have undertaken of recommending virtue even to those who despise it: his lectures are not sermons, nor even protreptic argument, urging the wicked to mend their ways. … Rather, he is giving a course in practical thinking to enable someone who already wants to be virtuous to understand better what he should do and why.”

³ Though Aristotle has written a treatise rather than a dialogue, his mode of writing forces the reader to the sort of effort needed to read Platonic dialogues well. Salem 2010, 9, comments that “the task he [Aristotle] imposes upon his readers is not that different from the task he imposes upon himself: We, too, are forced, again and again, to return to, reflect upon, and think through our ordinary experience of the world, a task made more rather than less difficult by the ‘history of philosophy.’ Like Plato, his friend and fellow lover of wisdom, Aristotle the inquirer writes his books for inquiring – and patient – minds.” Probably the comprehensive and detailed treatise was intended for careful discussion rather than lecture.

⁴ Vlastos 1991, ch. 8, observes that eudaemonism develops around Socrates. With the loss in modern times of the view that we can reasonably speak of or agree about human nature, rejection of purpose in nature, and with the modern quest to eliminate uncertainty and chance (see esp. Machiavelli’s Prince xv), the eudaemonistic pattern of ethical reflection became less prominent. Schneewind 1990, 42–63, argues that weaknesses in applicability of virtue theory led to the decline of eudaemonism with its emphasis upon virtue. Modern ethics tends to seek a criterion or rule for a good or right act rather than to concentrate upon the best sort of life to lead.
there was no such systematic scheme, and persons offered the eudaimon-
ist framework can dismiss the possibility of a best life for humans, doubt
any need for a life organized toward a single goal, or deny any limit to
human desires.

Plato’s dialogues show Socrates pushing interlocutors toward
eudaemonism, to acknowledging that they seek happiness and do
not wish to be miserable (see, e.g., *Euthydemus* 278e and *Meno* 78a).
This is an effective argumentative strategy, because once Socrates
gets the interlocutor to accede to desiring happiness, virtue becomes
Crucial. Any likely definite end that the interlocutor embraces, even
pleasure, makes virtue an important means for achieving this end, or
even an intrinsic part of the end aimed at.\(^5\) Eudaemonism forces the
interlocutor to take virtue seriously and therefore to care for the soul.
Whereas the sophists might seem to have been irresponsible intellec-
tuals inasmuch as they did not emphasize the good for the sake of
which one should seek the powerful means of rhetorical persuasion,
Plato’s Socrates responsibly championed eudaemonism, the concern
for the end, the good, and the soul. If human goods can be roughly
distinguished into external goods (such as honor and money), bodily
goods [such as strength and beauty], and goods of the soul [such as
intelligence and justice], then external goods may be most necessary
for life, but goods of the soul are most essential for the good life, since
they enable us to utilize all the other goods well. Without effective
order in our soul, external and bodily goods may prove destructive
rather than be contributors to happiness.\(^6\)

Aristotle elaborates the Socratic heritage of eudaemonism in com-
posing treatises devoted to ethics. While Plato’s dialogues and other
Socratic writings foster ethical reflection, Aristotle develops this so
systematically that it deserves to be called “practical science.” He
divides the sciences into theoretical, practical, and productive sciences
[see *Topics* 145a13–18 and *Metaphysics* vi 1]. This division can be based
on such factors as the subject matter of the science, the science’s aim,
the methods used, and the precision of the science. For Aristotle a

\(^5\) Moderate hedonism or pleasure seeking, such as Socrates proposes for Protagoras in
Plato’s *Protagoras* or Epicureanism, conforms to eudaemonism. But extreme hedonism,
such as Callicles perhaps comes to embrace in Plato’s *Gorgias*, does not. The eudaemo-
nist position assumes that there are limits to human desires. Extreme hedonism
denies this, as does the view that humans are endlessly trying to outdo each other, as
defended by Thrasy machus in *Republic* i and Glauc on in *Republic* ii.

\(^6\) Since for Aristotle external goods are necessary and vital for the happy life, this life is
somewhat dependent upon good fortune. Already in antiquity the Stoics fought against
this, and modern political and ethical thinkers have tried to limit the role of chance in
political and ethical life, if not always in economic affairs.
science provides knowledge, and knowing requires apprehending principles or causes that explain what follows from them. Theoretical sciences, which for him are first philosophy [metaphysics], natural science [physics], and mathematics, have their principles in the very subject matters under study so that these sciences pursue the truth for its own sake. In contrast, the practical sciences – ethics, politics, and household management (oikonomia) – have their principles in us inasmuch as we engage in action and choose what to do; and these sciences have the practical aim of good choices and appropriate passions for a happy life. The productive sciences, which include all the productive arts, such as medicine, rhetoric, carpentry, gymnastics, weaving, and painting, also have their principles in us insofar as we make the specific product of the art, the end being the product we make. In making and productive science, the producer applies form to some already provided material, the materials perhaps being supplied by a different art, as the builder arranges bricks and boards into a house. But in action and practical science, the doing deals with both form and matter. The statesman molds the population and sets up its political arrangement, thus engaging with both the matter of the community and the form developed for it. Analogously, ethics has passions and actions as the matter to which it gives form by the shaping of character and development of practical wisdom.

The division of the sciences has great significance for Aristotle. Respecting the division, he scrupulously avoids using theoretical principles in practical science. The best evidence for this may be his rejection of appeal to the Platonic idea of the good, an appeal that he views as going outside practical science (see NE i 6). Were theoretical principles employed in practical contexts, all knowledge would perhaps derive

7 If Aristotle in fact holds that ethics belongs within political science (see Nicomachean Ethics i 2), then the Nicomachean Ethics joins with the Politics as the first part of a two-part treatment of political science, and so practical science – the philosophy concerning human things (1181b15) – is political science.

8 The distinction of making and doing that demarcates productive and practical sciences relates to Aristotle’s further distinction of motion (kinesis) and activity (energeia). A motion takes time as it proceeds toward its end, e.g., walking toward a place, and the motion is over when it arrives at its end. Motion can be faster or slower. An activity is complete at every moment from its onset, e.g., smelling an odor, but it can continue indefinitely. So typically motion has an end beyond itself, whereas activity is an end in itself, though activity may also have a further end. Hence, doing or action (praxis) is activity that contributes to the ultimate activity, happiness. Making (poiesis) is motion that originates from choice to make the product, choosing being an activity. Consequently, motions and activities will often be interwoven. For example, choosing a brave action is activity, but such action typically involves motions, such as advancing in formation, thrusting a spear, and so on.
from the same principles, resulting in total unity in science rather than a division of the sciences.\textsuperscript{9} Opposing our modern tendency to expect any science to resemble mathematical physics, this approach of Aristotle should be refreshing and exciting. He recognizes disagreement about theoretical science, for he views his predecessors as a philosophical tradition in conflict over ultimate principles (see \textit{Metaphysics} i 3–7). If practical science depends upon theoretical principles, this might jeopardize its genuine scientific status. Ethics should be able to stand on its own and be convincing even to those not engaged in theoretical sciences. As a consequence of his well-considered approach, if he succeeds in elaborating a practical \textit{science} independent of his possibly discredited theoretical works, his ethics can still hold for us.\textsuperscript{10}

Yet interpreters of Aristotle, aware of his division of the sciences and that ethics and politics are for him practical sciences, nonetheless frequently saddle him with appeals in his ethics to theoretical positions. This leads to the major modern criticism that his central arguments have premises that we can no longer take seriously (see, e.g., MacIntyre 2007, 58, 148, 162, 196–197; and Williams 1993, 161, and 1985, 52). This is an unfortunate misunderstanding of the project and how Aristotle argues in the \textit{Ethics}. The other major complementary objection to his practical works, the claim that in their assumptions they apply merely to the ancient Greek world, is also a misunderstanding.

Aristotle is, of course, most familiar with his own time, but ancient Greeks were everywhere in the Mediterranean region, including Egypt and Persia. Their exposure to various cultures was much wider than we might suppose. Beyond this, Aristotle aims for a scientific treatment. He appreciates that cultures differ; after all, the sophists were emphasizing the contrast of nature and convention (\textit{physis} and \textit{nomos}), so philosophers must consider diversity seriously. Can the eudaemonist approach,\textsuperscript{9} It may look as if Plato aspires to have all the sciences united in derivation from the idea of the good (see \textit{Republic} 511b–c). For Aristotle the sciences must be divided because being is not a single genus (see \textit{Metaphysics} 998b17–28), which prevents there being a single science of all that is, and he insists in \textit{Posterior Analytics} i 7 that sciences of different genera of things cannot share principles (cf. \textit{Rhetoric} 1358a1–26).
\textsuperscript{10} This is hardly to deny that the practical works are generally compatible with the theoretical works, and it is not to assert that Aristotle could have written them without also writing his theoretical works. Practical philosophy or science presupposes that there is philosophy, and practical thinking may even be an application to action of theoretical notions. Aristotle does not, however, make explicit appeal anywhere in the \textit{Ethics} or \textit{Politics} to theoretical principles. Ethics and politics are too important to rest upon principles that others may simply disregard. Practical thought as science requires its own principles. Should this not apply to ethics always, or do we expect results in biological science, psychology, neuroscience, and such fields to change the framework of ethics?
or any ethical reflection, escape cultural narrowness and attain to practical scientific status?

II. PRACTICAL SCIENCE AND CULTURAL NARROWNESS

Eudaemonism along Aristotle’s lines, while avoiding theoretical premises, aspires to cover all of human life. Humans typically act for a purpose, such as walking to get to some location or for exercise. Other animals also do things for purposes – for example, birds build nests, and spiders spin webs. It does not seem, however, that the other animals reflect upon what they are doing and deliberate about choices: they merely do what is natural for them. Humans are capable of much more planning and deliberation than the beasts, or we routinely engage in these while the beasts do not or cannot (cf. Frede 2011, 15–16). Thus, living an examined life appears to be peculiar to humans and even their function. Ability to speak and think is natural for humans, but using this ability well requires special effort and not merely naturally instinctive behavior. Reflection about what we do enters into and encompasses everything humans do in their human way. While only humans may tell jokes, pray, farm, and play sports, reflection enters into each of these and to all specifically human activities. When Aristotle develops his “function argument” in Nicomachean Ethics i 7 and singles out acting according to reason as the human function, he most obviously means human reason in its widest capacity enabling us to reflect, deliberate, and choose. He is himself of course engaged in reflection throughout the opening of the Ethics and subsequently, and so part of what he discloses is what permits his own setting out of this practical science.

If the human function consists in acting purposively reflectively, then doing so well requires virtue, both moral and intellectual virtue. Whatever has a function, for example, a knife to cut, must have the requisite virtue to do the function well, which for the knife is to be sharp and of appropriate size and strength. So a good knife has the relevant virtue for its function. Analogously, humans need appropriate virtue or excellence to act well reflectively. Intellectual virtue pertains to our having reason and being able to initiate thinking, whereas moral virtue concerns desire’s capacity.
to follow the guidance of reason. One sort of intellectual virtue, theoretical wisdom (sophia), enters into theoretical science; another kind of intellectual virtue, practical wisdom (phronesis), enters into practical action. Fully good human action demands both practical wisdom and moral virtue since we must deliberate well and desire appropriately. A very strong point in his ethics is the way Aristotle brings together in the good life the formation of character and development of intellectual insight. Moral virtue is the shaping of our desire and character, which makes us tend to choose appropriate actions and to have appropriate emotional responses. As practicing sports develops bodily skill to perform well at them, from choosing appropriate sorts of actions we get the skill to act well and the dispositional desire to do so. Becoming accustomed to enjoy what we should and to be pained by what we should avoid, we gain the sort of disposition that is the virtue of character, the proper orientation of our desires. Aristotle thinks this shaping of our desires comes along only with the maturing of our practical intelligence that enables us to discern what is appropriate. The fullest completion of our practical intellect has us practically wise – that is, possessing practical science.

Most of the Ethics works out accounts of the virtues, both those of character and intellect, to equip us to live a happy life, to engage in activity in accordance with virtue in a complete life. Modern ethics subsequent to the Renaissance typically renounces the project of locating the best life and describing virtues essential for it and instead seeks a test or criterion for good or right actions. This is often called normative ethics, with meta-ethics considering the presuppositions of “moral” thought and how “moral” terms are to be understood. For such modern approaches, only some subset of actions and the motivations guiding them are “moral” and have “moral worth or value.” Much of our life would not enter, then, into ethical reflection but exclusively what has to do with “morality.”

12 From the eudaemonistic perspective, desire is following reason’s guidance toward the ultimate human good, but from the standpoint of practical deliberation and choice, well-developed desire, i.e., our character and virtue, directs us toward the end that our practical, deliberative reason calculates the way to achieve.

13 Along with moral virtue and vice, Aristotle lines up at least six named character dispositions: heroic (divine) nature, virtue, continence, incontinence, vice, and brutishness (see NE vii 11). He might also add to this scheme endurance and softness between continence and incontinence, with most people being between endurance and softness.

14 This modern term “morality” derives indirectly from Aristotle since for him virtue of character is due to habituation, which connects with Latin mos and mores. But our understanding of “morality” comes, according to Anscombe 1958, more directly from the Christian tradition of divine law. Regarding the term “morally wrong,” she says, “it has no reasonable sense outside a law conception of ethics … you can do ethics without it, as is shown by the example of Aristotle. It would be a great improvement if, instead of ‘morally wrong,’ one always named a genus such as ‘untruthful,’ ‘unchaste,’ ‘unjust.’”
Aristotle offers a fuller or more encompassing account of human life than does this concentration on morality. Because humans can reflect and aim their lives at various ends, these ends and everything having connection with them is of concern to ethics, at least as pertaining to the good and happy life. Practical science differs from theoretical and productive science, and yet practical science has to consider even the place of these other sciences in a good human life. For all human activities, what they seek as their ends and what motivates them are relevant concerns. When Aristotle treats the virtues of character and intellect, he aims to be comprehensive. The eleven or so virtues of character intend to cover all that contributes to making actions and emotions appropriate. Virtues having to do with fear and confidence, bodily pleasures, money, honor, anger, social interactions, and fairness hardly seem antiquated, and they may deal with all the vital areas of practical life. Aristotle has virtues relating to sense of humor and expenditure on parties, not because the ancient Greeks had a culture so different from ours, different though it might be, but because these have a role in any culture, and they pertain to how we assess human lives. Aristotle tries to include all the crucial areas of human action and emotional response in his accounts of the virtues of character rather than narrowing his attention to what we might label “morality.”

We often suppose that “morality” requires caring most for others. While Aristotle understands the emphasis on being good to others – we see him suggesting in *Rhetoric* i 9 that speakers emphasize it to be persuasive, and in *NE* 1120a22–24 he acknowledges that liberality is the most popular virtue and justice is virtue with respect to others – the eudaemonist approach does not focus on helping others. The concern has to be with living well or happiness, which includes doing what is appropriate. Doing what is appropriate for the right reason requires virtues.

Commentators sometimes protest against Aristotle’s seeming to limit a virtue such as courage to battle. Or his taking seriously, as when he comments upon greatness of soul, matters that look to be indifferent, such as how someone walks or talks. Again this misunderstands his project and approach. If he can present the features most characteristic of those in possession of the virtue, he helps us to identify them. And to

See more recently Kraut 2006, esp. 163 and 190–191. Kraut pertinently argues that Aristotle does not, like those influenced by Kant, have *two* sorts of justifications for action, the good and the right, where moral rightness must always have precedence [see pp. 195–199]. Aristotle employs only the good to justify action, where the good can be narrow, as the good in cooking, or broad, as the human good and the political good. Yet contemporary loss of confidence in a basis for determination of the good beyond personal preferences, along with fear that pursuit of the good may lead to trampling upon rights, explains the attraction to distinguishing right from good.
get to what is most essential in the account of a moral virtue, he seeks the sphere in which the virtue best manifests itself. According to an ancient saying, “Fine things are hard”; so to act according to virtue and to act finely or nobly is difficult, and virtue best displays itself in certain difficult settings. Aristotle is not denying, say, that courage appears in terminal illness or elsewhere besides battle, but he supposes that if someone can do well in the difficult special sphere or theater of the virtue, then the person will also do well everywhere else (see esp. 1127a33–b7, and Rhet. 1367a33–b7). He thus offers practical accounts of the virtues through focusing upon the special theaters for action according to virtue and what most deserves praise and blame. If his ten or eleven moral virtues cover as intended all the relevant areas of human action and passion, then the special theaters are the main challenges. He looks to poetry, observation, praise and blame, argument, and such matters for a practical and compelling account of the moral virtues. When he describes what we may suppose irrelevant to “morality,” he is still dealing with something he considers important for character. He well recognizes that faults in fairly small matters of character do not amount to wickedness, though they may be vices. To be wicked we have to harm others or seek to (see, e.g., 1123a31–33 and 1125a16–19). Perfection of character leads consistently to appropriate action and passion, and good character is what he endeavors to clarify. Accusations that his accounts of the virtues present us merely his own or his culture’s prejudices are thus very open to challenge. We confuse ourselves and are unfair to Aristotle, therefore, through supposing he comments upon a special sphere of “morality” and comments in odd ways pertinent only to his time. The ancients have no terminology paralleling our usage of “moral” and “morality” when they

15 The focus is thus upon the fine or noble rather than exclusively assisting others. He probably always has in view the depiction of Socrates in Plato’s dialogues. So the virtue having to do with sense of humor may in fact resemble Socrates’ awareness of his and other persons’ limitations.

16 When we depict the whole realm of human action and passion as a large circle with the special theaters of the moral virtues as much smaller circles scattered within the encompassing circle, the special theaters resemble chocolate chips in a cookie. Thus envisioning our lives helps clarify the way character training through habituation or practice occurs. To develop courage, for example, a young child need not go frequently into battle. Nibbling on the rest of the cookie, i.e., engaging in less difficult efforts, as in participating in sports, crossing the street, or playing at being a soldier, prepares for the chip, i.e., the more demanding special theater for brave action and passion.
are put in sharp contrast with “immoral” and “immorality.” This lack of terminology may well be strength, however, rather than weakness. We get along better by speaking of actions as appropriate, noble, useful, just, or the opposite of these rather than moral or immoral, and limiting “moral” merely to the phrase “moral virtue” that means character virtue. Aristotle’s way of speaking does not neglect a large part of human action and passion to focus upon a realm of choices deemed “moral” or “immoral,” and neither does he favor action and passion foreign to our understanding. He can reject egregious behavior as we do, while reflecting broadly upon the appropriate and inappropriate in action and passion and praiseworthy or blameworthy character. Action can be inappropriate and indicate bad character, that is, vice, well before it causes harm to others and crosses over into being wicked and unjust. His appreciation of the depth of feeling about appropriate action and emotional response is seen in the emphasis upon virtue of character and the comment that we do not forget practical wisdom (see 1140b28–30).

III. INTELLECTUAL VIRTUE AND PHILOSOPHICAL PREFERENCE

The prominent intellectual virtues for Aristotle are philosophic wisdom (sophia) and practical wisdom (phronēsis). That he considers both fits with the comprehensiveness of practical science. But it may surprise or disappoint us that he seems to give the preference for the happy life to the activity stemming from philosophic wisdom or theoretical science. Is this a mere prejudice of the philosopher?

The intellectual virtue relating to practical life is practical wisdom. Practical wisdom enables us both to deliberate generally about what is happiness and what contributes to it, that is, to develop practical science as Aristotle does, and to deliberate about what to do in particular situations. Moral virtue gives us our practical end, for example, we aim to act bravely or justly, and for the calculation or deliberation of what contributes to brave or just action, Aristotle appeals to practical wisdom. Now not all calculation or deliberation has a good end because those with vice

17 This becomes clear in NE x 7–8, though it is hinted before this (see 1096a4–5). Commentators have debated the “inclusivist” and the “dominantist” interpretations of Aristotle’s ethics. The inclusivist view holds that all the sorts of virtue, moral virtue and both prominent types of intellectual virtues, have to belong to the happy person, whereas the dominantist position reads the work as favoring the theoretical life for the most complete happiness (these terms were introduced in Hardie 1967).

18 Though practical wisdom mainly calculates the means to a given end, it has cognizance of the end and, by its deliberation and determination of the means to the end, endorses and in a way chooses the end, i.e., has the end as its purpose, along with the means toward the end.