UNIVERSITAT DE BARCELONA

Nature and End

The Metaphysical Foundations of Ethics in Aristotle and Aquinas and its Vindication in Recent Philosophy

Enric Fernández Gel

UNIVERSITAT DE BARCELONA

Tesi doctoral

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The Metaphysical Foundations of Ethics in Aristotle and Aquinas and its Vindication in Recent Philosophy

Autor: Enric Fernández Gel

Directora: Pfra. María Margarita Mauri Álvarez

Co-director: Pfr. Alfredo Cruz Prados

Tutora: Pfra. María Margarita Mauri Álvarez

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The beginning is more than the half of everything.
Aristotle, *Nicomachean Ethics*, 1098b 7

If you want to understand morality, the very last *place you should look is morality.*
David Oderberg, *The Metaphysics of Good and Evil* (2020), p. XI

So long as he is content to assume the reality and authority of the moral consciousness, the Moral Philosopher can ignore Metaphysics; but if the reality of Morals or the validity of ethical truth be once brought into question, the attack can only be met by a thorough-going enquiry into the nature of Knowledge and of Reality.
Hastings Rashdall, *The Theory of Good and Evil*, vol. 2 (1907), pp. 192-193

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ABBREVIATIONS USED

For Aristotle's works:[1]

NE – Nicomachean Ethics

EE – Eudemian Ethics

GA – Generation of Animals

Met. – Metaphysics

Meteor. – Meteorology

Phys. – Physics

Pol. – Politics

PA – Parts of Animals

PoAn – Posterior Analytics

Rhet. – Rhetorics

Top. – Topics

For Aquinas's works:[2]

DP – De Potentia

DPN – De Principiis Naturae

In Met. – Commentary to Aristotle's Metaphysics

In NE – Commentary on the Nicomachean Ethics

In Phys. – Commentary to Aristotle's Physics

In Sent. – Super Libros Sententiarum Petri Lombardi

ST – Summa Theologiae

SCG – Summa Contra Gentiles

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[1] Unless otherwise noted, all translations from Aristotle will be from: *Nicomachean Ethics*, J. A. K. Thomson (London, Penguin Books, 2004); *Eudemian Ethics*, A. Kenny (Oxford, Oxford University Press, 2011); *Generation of Animals*, A. L. Peck (London, Harvard University Press, 1948); *Meteorology*, E. W. Webster, in W. D. Ross (ed.), *The Works of Aristotle*, vol. 3 (Oxford, Clarendon Press, 1931); *Physics*, Robin Waterfield (Oxford, Oxford University Press, 1996); *De Anima*, Mark Shiffman (Newburyport, Focus Publishing, 2011); *Topics*, W. A. Pickard-Cambridge, in J. Barnes, *Complete Works of Aristotle*, vol. 1 (Princeton, Princeton University Press, 1984); *Parts of Animals*, A. L. Peck (London, Harvard University Press, 1961); *Posterior Analytics*, David Ross (Oxford, Clarendon Press, 1957); *Politics*, Joe Sachs (Indianapolis, Hackett Publishing, 2012). Translations from the *Metaphysics* will be mine, unless otherwise stated.

[2] Unless noted otherwise, all translations from Aquinas will be my own. I'm using the version of Opera Omnia, recognovit ac instruxit Enrique Alarcón (Pamplonae, Universitatis Studiorum Navarrensis), www.corpusthomisticum.org.

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ABSTRACT

I study the metaphysical foundation of ethics in Aristotle and Aquinas. I conclude their ethical systems rest on an essentialist and teleological metaphysics, without which they collapse. Next, I go on to study the philosophical justification of said metaphysics, with arguments drawn from Aristotle and Aquinas and recent trends in contemporary English-speaking philosophy. I end exploring how an Aristotelian naturalist could use this metaphysical foundation of ethics to undercut a famous moral argument for God's existence. I also propose a way for the Thomist to rebuild the moral argument, arguing from the metaphysical foundation of ethics to God.

INTRODUCTION

The following is primarily a work in Aristotelian metaphysics. It did not, though, start in this way —its genesis is quite another story. This work began gestating out of very different philosophical concerns. When I finished my Degree in Philosophy back in 2015, thinking the classics were fine but largely irrelevant today, I was primarily interested in contemporary continental philosophy. I felt the most pressing discussions were currently taking place in the philosophy of politics, so I enrolled in a Master's in Political Philosophy. My idea was to study the relationship between violence and politics. Is all political enforcement upon individuals illegitimate? Is all law, ultimately, violence in disguise? What must be true for it not to be? These were the questions that worried me, and so I read Hannah Arendt and made plans to study these matters in her thought and Jacques Derridas's.

As it happens, Providence had other plans. Somewhere down the line, I started feeling some discomfort with this topic and decided to delay the beginning of my Ph.D. until I had gained more clarity on the matter. That this was the right call I saw when realizing that, to get clear on the key political philosophy questions, I first needed to get clear on the key ethical questions. With this in mind, I found myself re-reading Plato, Aristotle, and Aquinas almost as a guilty pleasure. As I said above, I always thought they were fine philosophers, but until then, I had never realized they were *that* fine. Suddenly, the unapologetic intuition that they were as relevant today as they had been in their times grew inside me until I could not ignore it anymore. And so, I decided to study the foundations of ethics in Aristotle and Aquinas and began my Ph.D. in 2018.

As I read Aristotle and Aquinas, though, something stuck out to me: their ethical and metaphysical insights were so intertwined that they seemed impossible to separate. Indeed, ethics appeared permeated with presuppositions that were metaphysical in nature. Hence, as I had gone from political philosophy to ethics, I was forced to take the next step: from ethics to metaphysics.

But then I identified a problem. I was becoming more and more convinced that Aristotle and Aquinas's treatment of the great ethical questions was essentially correct. But at the same time, nothing in their ethical treatises made sense if I assumed their general metaphysical outlook on the world was radically mistaken. And common knowledge, I was told, had it that Aristotelian-Thomistic metaphysics was a thing of the

past, interesting as a piece of historical archeology but useless, irrelevant, and long ago refuted as a picture of the world.

And then I discovered the work of Edward Feser and David Oderberg. I cannot stress enough the influence these two authors have had on my thought over the years. Through them, I was introduced to a plethora of recent, rigorous, and scholarly defenses of Aristotelian-Thomistic metaphysics which completely shattered any impression still left in me about its indefensibility today. I discovered Aristotelian ethics had nothing to be ashamed of in searching for its motivation in metaphysics.

Thus, the picture of this work finally formed in my head. I wanted to focus on the metaphysical foundations of ethics in Aristotle and Aquinas and bring forth, in an orderly and systematic fashion, as many as possible of the recent arguments vindicating it, as if in a state of the question. To avoid making my task unbearable, I decided to limit myself mostly (though not always) to the literature published in English in the last 40 years.

Hence, Chapter 1, titled "Nature and End: The Metaphysics of Ethics", deals with presenting that which Aristotle and Aquinas both share: that ethics rests upon a metaphysical foundation constituted by two interrelated pillars, essentialism (nature) and teleology (end). I call this the Aristotelian Foundation, and it is my full conviction that, without it, Aristotelian ethics simply collapses. Indeed, suppose a given action is morally good when it contributes to the agent's flourishing, and morally bad when it hinders it. In that case, no action could be objectively good or bad for man if he had, as a matter of metaphysical fact, no concrete nature oriented towards certain ends.

I also present an interesting discussion between Terence Irwin and Timothy Roche on the relationship between ethics and metaphysics in Aristotle's thought. Through it, I get clear on the specific nature of this relationship and whether it affects or not the autonomy of ethics as a rational discipline. I also list five critical benefits to the Aristotelian Foundation that, to my mind, help elevate it over and above other meta-ethical alternatives.

Then, in Chapter 2, titled "Nature or Essentialism", I begin my exploration of the Aristotelian Foundation by studying its first pillar. I start looking for arguments in favor of essentialism in Aristotle's own work and then explore its revival in contemporary philosophy. I argue that essentialism is an unavoidable metaphysical thesis, that it makes the most sense of modern scientific practice and the laws of nature science discovers, that it is still a fruitful hypothesis in the philosophy of biology, and that, despite all the objections from evolution, very plausibly the theory of evolution rests on essentialist

assumptions. I end with an argument against reductive essentialism to boost the probability of the enriched form of essentialism the Aristotelian Foundation requires to ground ethics.

Later, in Chapter 3, titled "End or Teleology", I do the same for the Aristotelian Foundation's second pillar. Here, given the myriad of strawman objections teleology receives, I start by getting clear on what Aristotelian teleology is and what it is not. I continue by pointing to several core tenets of Aristotle's philosophy that motivate teleology. I then start the study of teleology in contemporary philosophy, where I show teleology has been argued to be rationally unavoidable, implied in a realist account of powers, necessary to explain several key features of living beings and the very process of evolution, and impossible to deny on pain of radical skepticism.

Chapter 4, titled "God, the Ultimate Foundation of Morality?", is an application of the previous work to the philosophy of religion to show the fruitfulness of the Aristotelian Foundation concerning a hotly debated issue. The sheer lack of any connection between morality and the existence of God in Aristotle's work always struck me, and I surprisingly found the same in Aquinas. To my knowledge, Aquinas never attempts to argue for God from the objective reality of moral values and duties, as was to become prevalent in the Modern age. On the contrary, he gives the impression that no such grounding of morality is strictly necessary.

In this spirit, I show how the Aristotelian Foundation helps the naturalist overcome the moral argument without having to abandon moral realism. This notwithstanding, I then take the place of the theist and argue that, though the Aristotelian Foundation directly grounds morality, the Aristotelian Foundation itself needs to be grounded further in God. I attempt to show this by appealing to Aquinas's Fifth Way, of which I present a novel interpretation, as I find lacking the most common defense of its controversial premise.

I hope this work proves helpful to anyone wondering whether the great metaphysical insights of these great ethical thinkers are still relevant and defensible today.

CHAPTER 1. NATURE AND END: THE METAPHYSICS OF ETHICS

> It is not profitable for us at present to do moral philosophy; that should be laid aside at any rate until we have an adequate philosophy of psychology.
>
> Elizabeth Anscombe, "Modern Moral Philosophy", p. 26

1. That which Aristotle and Aquinas share

There is no denying that both Aristotle and Aquinas exhibit radical differences in their approach to ethical and metaphysical questions. As pertains to metaphysics, perhaps the most significant underlying difference between them is that Aristotle lacks the notion of creation that informs Aquinas's whole thinking. To Aristotle, the cosmos is a hierarchically ordered set of substances that exists from all eternity in perpetual motion. "Why does the world *exist*?" seems to be a question that would have made no sense to Aristotle's ears —it simply exists, and that's all. Aristotle was primarily interested not precisely in the cosmos's *being* but in its *motion*. Given the Parmenidean challenge, what was surprising to him was not that things actually *existed* but that they actually *moved*. Being is necessary; it is motion that seems to cry out for an explanation. Hence, Aristotle's metaphysical inquiries are in the end informed by his search for the ultimate cause behind the *mutability* of the things of our experience, not their *reality*. Why do things *move* (*change*) is his main concern, not why do things *exist*.

Aquinas, instead, adopts quite a different perspective, influenced by his Judeo-Christian background. To Aquinas, the cosmos may have (for all reason can know) always been there, perpetually moving from eternity past. But *even* in such a scenario, it would be radically dependent *in its very being*, not only in its motion, from an outside transcendent source.[1] To Aquinas, what primarily cries out for an explanation is the continued being (*esse*) of things that, though they in fact exist, don't *need* to continue in existence, let alone exist altogether.[2] "Why is *this* currently moving?" was the main

[1] See Aquinas, *De aeternitate mundi* (1270). Though Aquinas believed on faith that the universe had a beginning in time, he did not think (contrary to popular opinion) that such a thing could be established via philosophical argument or natural reason. For an excellent presentation of Aquinas's position on the eternity of the world, see F. van Steenberghen, *Thomas Aquinas and Radical Aristotelianism* (Washington, D.C., The Catholic University of America Press, 1980), pp. 1-27.

[2] See, for instance, his argument in *De ente et essentia*, ch. 4. Two excellent expositions of it can be found in E. Feser, *Five Proofs of the Existence of God* (San Francisco, Ignatius Press, 2017), ch. 4 and G. Kerr, *Aquinas's Way to God* (Oxford, Oxford University Press, 2015). Feser sees the *De ente* argument as key to interpreting the 2nd way, while Scott MacDonald claims a similar thing with respect to the 1st way. See E.

metaphysical question for Aristotle; "Why is *this* currently existing?" was the main one for Aquinas.

Hence, whilst Aristotle's God is an Unmoved Mover, the ultimate source and explanation of the world's *motion*, Aquinas's God is an Uncreated Creator, the ultimate source and explanation of the world's *being*. To Aristotle, *form* is the highest actuality, motion being but the actualization of forms that are in potency in a given substratum. But Aquinas understood *being* (*esse*) itself to be that highest actuality, the act of all acts which grounded even the actuality of forms (*ST*, I, q. 4, a. 1, ad3; *DP*, q. 7, a. 2, ad9).[3] Thus, in seeing *esse* as an act, Aquinas is able to give a picture of the cosmos and its dependency relationship to God (*Ipsum Esse Subsistens*) that Aristotle could never have dreamed of.

Now, their differences become even starker when we move from metaphysics to ethics. What Aristotle considers a moral ideal —the *megalopsychos* (*NE*, IV, 3, 1123b-1125a)—, Aquinas would surely have considered a model needing correction.[4] Aquinas's philosophy is so intertwined with his theology that we find him speaking, in the context of ethics, of such un-Aristotelian things as infused theological virtues, gifts of the Holy Spirit, and the need for divine grace to lead a life of virtue. What to the Stagirite was mere moral error or vice becomes, in Aquinas, a sin against God and his divine law. Charity has no place in Aristotle's ethics, yet it is the most excellent of virtues and the core of the moral life for Aquinas (*ST*, II-II, q. 23, aa. 6-8). Also, there is for Aquinas an ineradicable

Feser, *Aquinas* (Oneworld Publications, England, 2019), p. 86 and S. MacDonald, "Aquinas's Parasitic Cosmological Argument", *Medieval Philosophy and Theology*, 1991 (1), pp. 119-155. Some commentators suggest also that Aquinas's most metaphysical proof of the existence of God, his 4th way, should be read as an argument from participated and limited *esse* to unparticipated and unlimited *Esse*, as it appears in the Prologue of his *Super Evangelium S. Ioannis*. See A. L. González, *Ser y participación* (Eunsa, Pamplona, 1979). There is some basis, then, to consider this *esse* approach to be foundational to Aquinas's whole natural theology project.

[3] See J. Owens, "Aristotle and Aquinas", in N. Kretzmann & E. Stump, *The Cambridge Companion to Aquinas* (Cambridge, Cambridge University Press, 1993), p. 56; D. B. Burell, "Aquinas and Jewish and Islamic Authors", in E. Stump & B. Davies, *The Oxford Handbook of Aquinas* (Oxford, Oxford University Press, 2012), pp. 67-68; A. Maurer, "Form and Essence in the Philosophy of St. Thomas", *Mediaeval Studies*, 1951 (13), pp. 173-176.

[4] See A. MacIntyre, *After Virtue* (Notre Dame, University of Notre Dame Press, 1984), p. 177 and *Dependent Rational Animals* (London, Duckworth, 1999), p. XI. It is certainly true that Aquinas incorporates *magnanimity* as a virtue in his ethical framework (see *ST*, II-II, q. 134), but also that he omits or qualifies those features of the Aristotelian "magnanimous man" that seem to conflict the most with the Christian ideal, such as his scorn and obliviousness with respect to receiving benefits and forgiveness from others.

weakness of the will when it comes to evil, consequence of original sin (*ST*, I-II, qq. 82-83), that goes far beyond anything Aristotle ever wrote about incontinence or ἀκρασία.[5]

On the top of this, there's the fact that, to Aquinas, *perfect* happiness, man's ultimate end, is not to be —and *cannot be*— attained in this life (*SCG*, III, 48; *ST*, I-II, q. 5, a. 3). To Aquinas, only by reference to God can the ultimate end of human beings be truly specified. Any ethical theory, such as Aristotle's, that were to overlook this crucial point would be thus condemned to radical incompleteness. This impresses an other-worldly orientation onto ethics that was thoroughly absent in Aristotle's reflections, which focused not on how to get to Heaven *after* death but primarily on how to live a good life *before* dying.[6] But even Aristotle's best life of philosophical contemplation, with all its wonders, had to pale in comparison to the beatific vision of God himself, in whom all the perfection and beauty of being is found unbounded and unrestricted. Only direct contemplation of God could fully satisfy, *pace* Aristotle, the infinite desire for the universal good of the human heart —no other object could appropriately meet its deepest needs nor fill up its endless capacity for more. Hence, Aquinas's *beatitudo* is not Aristotle's *eudaimonia*, but something exceedingly greater.

And yet, what underlies all these differences, important and interesting as they may be, is a basic agreement on the metaphysical foundations of ethics. Aquinas, in the end, is undoubtedly not Aristotle, but he is indeed an Aristotelian, especially regarding ethics. It is hardly controversial to note that Aquinas regarded Aristotle's metaphysical and ethical insights with great esteem. In his so-called "Treatise on Virtue" (*ST*, I-II, qq. 55-67), he quotes Aristotle more than he does the Holy Scriptures themselves (148 times to 65). In the *Secunda Pars* of his *Summa Theologiae*, Aquinas largely follows the *Nicomachean Ethics*, treating the same issues as Aristotle and many times in the same order.[7] It is

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[5] MacIntyre considers this "a crucial difference" between Aristotle and Aquinas. See *Whose Justice? Which Rationality?* (London, Duckworth, 1988), p. 181.

[6] See B. Davies, "Happiness", in B. Davies & E. Stump (eds.), *The Oxford Handbook of Aquinas*, pp. 231-232; R. McInerny, "Ethics", in *The Cambridge Companion to Aquinas*, p. 214; A. MacIntyre, *Whose Justice? Which Rationality*, pp. 163 and 192-193; J. Owens, "Aristotle and Aquinas", pp. 42-44; A. Kenny, "Aquinas on Aristotelian Happiness", in S. MacDonald & E. Stump (eds.), *Aquinas's Moral Theory* (London, Cornell University Press, 1999), p. 23; F. van Steenberghen, *Thomas Aquinas and Radical Aristotelianism*, p. 77; T. M. Osborne, *Aquinas's Ethics* (Cambridge, Cambridge University Press, 2020), p. 17; G. Grisez, "The First Principle of Practical Reason", in A. Kenny (ed.), *Aquinas: A Collection of Critical Essays* (London, Palgrave MacMillan, 1970), p. 362.

[7] See T. M. Obsborne, *Aquinas's Ethics*, pp. 3-4. Aquinas probably wrote his *Commentary to the Nicomachean Ethics* in preparation of this part of the *Summa*. See G. Wieland, "The Reception and Interpretation of Aristotle's Ethics", in N. Kretzmann *et al.* (eds.), *The Cambridge History of Later Medieval Philosophy* (Cambridge, Cambridge University Press, 1982), p. 662. For a brief exposition of the

inevitable to think that, to him, Aristotle had captured the most basic truths about the good human life, surely better than any other pagan philosopher he was aware of.[8] What Aquinas brings to the table from his Christian background and his other (Augustinian and Neo-Platonic) influences doesn't substantially modify the method, categories and principles with which he approaches the inquiry in question: these remain largely Aristotelian. Aristotelianism is opened to new materials, sure, but it is not discarded or abandoned, only expanded.

A significant number of the differences considered above (and many others) are easily explained by the several traditions and lines of thought Aquinas is trying to knit together with Aristotle's teaching.[9] In contrast, in other places he may legitimately be seen as developing that which Aristotle simply left in seed-form or as providing a way out of the Stagirite's internal tensions and inconsistencies. Alasdair MacIntyre has argued, for instance, that in denying that man cannot attain perfect happiness in this life, Aquinas "was trying to be a better Aristotelian than Aristotle".[10] Likewise, Anthony Kenny suggests that such a move is "not an illegitimate development of Aristotelian theory",[11] especially given how Aristotle portrays philosophical contemplation at the same time as both the most properly human *and* the most exceedingly *supra*-human end (*NE*, X, 7, 1177b 26-1178a 8).

Hence, it seems fair to say that Aquinas remains a committed and conscious Aristotelian despite differing from Aristotle in many places. But what is this basic metaphysical agreement between Aristotle and Aquinas that serves as the primary

relevance that Aristotle's philosophy had for Aquinas, see J. Doig, "Aristotle and Aquinas", in *The Oxford Handbook of Aquinas*, pp. 33-44.

8 See R. MacInerny, *Ethica Thomistica* (Washington, D.C., Catholic University of America Press, 1997), p. 31.

9 See T. M. Osborne, *Aquinas's Ethics*, p. 54; J. Porter, "Virtues and Vices", in *The Oxford Handbook of Aquinas*, p. 273, note 6 and MacIntyre's analysis of Aquinas's synthesis of Aristotelianism and Christian Augustinianism in *Whose Justice? Which Rationality?*, ch. 10 and *Three Rival Versions of Moral Enquiry* (London, Duckworth, 1990), ch. 5.

10 A. MacIntyre, *Three Rival Versions*, p. 137.

11 A. Kenny, "Aquinas on Aristotelian Happiness", in *Aquinas's Moral Theory*, p. 23. For a similar example, see F. van Steenberghen, *Thomas Aquinas and Radical Aristotelianism*, pp. 31-32 and 48-49. We could also cite Aquinas's Augustinian notion of the will, which, though sometimes thought to be a complete innovation with respect to Aristotle (see A. MacIntyre, *Three Rival Versions*, p. 111), has been argued to be implicit in his account of man as "appetitive intellect or intellectual appetition" (*NE*, VI, 2, 1139b 4-5; see also *De Anima*, III, 9-10, 433a 5-433b 30). See G. Reale, *Introduzione a Aristotele* (Roma, Editori Laterza, 1977), p. 119; D. Ross, *Aristotle* (London & New York, Routledge, 1995), p. 207.

grounding of ethics to both? The following. They both understand ethics as the science of human flourishing, a rational discipline that studies how to fulfill human nature.

To both Aristotle and Aquinas, human beings are living creatures with a certain nature oriented to a certain end. Ethics, then, is the philosophical discipline that studies *what* this end is and *how* it can be realized or fulfilled. Those actions and dispositions that help man achieve the end he has according to the kind of being that he is are *good*, whereas those that make him depart from it are *bad*.[12] To the extent that an individual realizes such an end in his life, actualizing what is in potency in his nature, he becomes a *good* human being: he *succeeds* or *flourishes* as such. To the extent that he does not, he *fails* at life: he becomes a *defective* human, living and behaving in ways a human being is not supposed to live and behave. Thus, evil actions come from defective persons with defective wills, *not* properly oriented to their nature's end.

Summing up, to Aristotle and Aquinas, the metaphysical foundation of ethics, that which explains and grounds moral values and their objectivity, is made up of the following duality: *nature* and *end*, or to put it in other words, *essentialism* and *teleology*. Let's call this the "Aristotelian Foundation".

2. The Aristotelian Foundation

2.1. The Pillar of Teleology

Teleology plays a prominent role in Aristotle's and Aquinas's ethics from the beginning. Aristotle's starting point in the *Nicomachean* and the *Eudemian Ethics* is a discussion about ends in general and the ultimate end of human actions in particular (*NE*, I, 1-13, 1094a-1102b; *EE*, I, 1-8, 1214a-1218b). As for Aquinas, he readily accepts from Aristotle that "the proper task of moral philosophy […] is to consider human operations insofar as they are ordered towards one another and to the end" (*In NE*, I, 1, 2). Correspondingly, the first five questions of his *Prima-Secundae*, which deals with such a topic, analyze in depth whether man is ordered to an ultimate end (q. 1), what does this end consist of (qq. 2-4), and how can man attain it (q. 5).

Without this notion of an ultimate end to which human beings are oriented by nature, almost none of Aristotle's and Aquinas's ethical reflections makes sense. First, from a psychological point of view, the end is the principle of all practical reasoning. As Aristotle

[12] In David Oderberg's words: "The fundamental test of morality is whether an act is directed by reason to man's ultimate end"; D. Oderberg, "All for the Good", *Philosophical Investigations*, 2015 (38, 1-2), p. 78.

writes: "The originative cause of an action is the purpose [οὗ ἕνεκα] for which it is done" (*NE*, VI, 5, 1140b 16).[13] But this means that, if there was no natural ultimate end —no *voluntas ut natura*, in Aquinas's terminology (see, for instance, *ST*, III, q. 18, a. 3)—, which was just *given* to human beings and not subject to choice, there would and could be no human motion or action, for man would completely lack a reason to move, choose and act (*NE*, I, 2, 1094a 18-21; *Met.*, II, 2, 994b 9-16).[14]

More importantly, if *per impossibile* there was no natural end *and* man could still willfully move, act, and choose, neither Aristotle nor Aquinas would have any legitimate basis to distinguish between *real* and *apparent* goods (as, for instance, in *NE*, III, 4, 1113a 14-23 and *ST*, I-II, q. 8, a. 1). But as they say, although all people seek the good in everything they do, the truth is that not everybody gets it right all the time. Sometimes the will can mistake an *apparent* good —something "which has some measure of the good but is not really suitable to be desired" (*ST*, I-II, q. 19, a. 1, ad1)— for a *real* good, which, in contrast, is really suitable to be desired. As Aquinas says, "Those who sin turn away from that in which the notion of ultimate end is *truly* found *but not from the intention itself of the ultimate end*, which they *falsely* seek in other things" (*ST*, I-II, q. 1, a. 6, ad1; my italics).

So, it is possible that someone may *in fact* desire something which is not *really* desirable or convenient for him *qua* man. This is what a person recognizes when she regrets an action: that what she attained with it was not *really* good for her and made her *worse off* than she was before. Sometimes, what *seems* good to somebody is not *really* good after all, but only good concerning some low transitory desire they may have. However, this only works if there is a natural end to which man is oriented by nature, so that he necessarily wills it or desires it in everything that he does. Only under that assumption can the moral philosopher distinguish between those things that *really and truly* help man attain such a goal and those that only do so *in appearance*.[15]

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[13] See also *NE*, VI, 12, 1144a 30; VIII, 8, 1151a 15-16; *EE*, II, 11, 1227b 25-35. Aquinas also treats the end (or ends) as the principle in practical matters, in analogy with the first principles of the speculative intellect. See *ST*, I-II, q. 8, a. 2; q. 9, a. 3; q. 10, a.1; q. 13, a. 3; a. 5; q. 14, a. 2; q. 15, a. 3, ad1; q. 17, a. 9, ad2; q. 56, a. 3; q. 57, a. 4; q. 58, a. 3, ad2; a. 5. We find this analogy between the practical and speculative intellect already in Aquinas's early works, as in *In Sent.*, III, d. 33, q. 2, a. 4, qc. 4, co.

[14] Because of this, "we all deliberate about what we choose, though it is not the case that we choose everything we deliberate about" (*EE*, II, 10, 1226b 15-20). In other words, man desires all that he chooses, but he doesn't choose all that he desires. See also *ST*, I-II, q. 13, a. 3, and M. R. Johnson, *Aristotle on Teleology* (Oxford, Oxford University Press, 2005), p. 83.

[15] As Edward Feser puts it: "What is genuinely good for someone, accordingly, may in principle be something he or she does not want, like children who refuse to eat their vegetables, or like an addict

Hence, only if there is a natural end can Aristotle and Aquinas account for moral error and right desire, which is essential to practical truth (*NE*, VI, 2, 1139a 17-30; 9, 1142b 20-34). For there to be *right* desire and moral *error*, there needs to be some ultimate end or goal concerning which desire and action can be judged to be well or badly oriented.[16] If there were no natural human end, there would be nothing desirable or good by nature for man, objectively speaking, "but to each what seems good to him" (*NE*, III, 4, 1113a 23; my translation). Without a natural human end, nothing would be good or bad for man in an objective sense: "good" would simply be that which suited the arbitrary ends a given individual may propose to himself and "bad" that which opposed them. If this were so, there would be no rational way for anyone to morally assess his own choices or the choices of other people. Ultimately, all choices would be indeterminable, undecidable, and radically subjective. There would be no wrong way to answer the question: "Is this *really* good, or does it only *seem* so to me?". Indeed, the question would not make any sense —if it *seemed* good, it would *be* good.

Similarly, without the notion of a natural human end, the distinction between virtue and vice collapses into a mere historical, cultural, or personal contingency. As Aquinas writes, following Aristotle, a virtue (an excellence) is that kind of habit or disposition "which renders good the thing that possesses it and its action" (*Quodlibet*, IV, q. 2, a. 1).[17] But this already presupposes teleology, since for something to be made "good" at what it does, it has to have some end to which it is oriented that serves as a criterion for judging its performance as *excellent* (virtuous) or *defective* (vicious). There's no way even to guess whether a conglomerate of metal parts works well, for instance, until someone reveals that it is supposed to be a *watch* and thus tell time. Similarly, talk about human virtues or excellences is inseparable from the notion of an ultimate human end to which human beings are oriented by nature, pursuing it in everything they do.

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convinced that it would be bad to stop taking drugs. From an [Aristotelian-Thomistic] point of view, knowing what is truly good for us […] is a matter of determining what fulfills our *nature*, not our contingent desires"; E. Feser, "Being, the Good", p. 302. See also B. Davies, "Happiness", p. 229; R. McInerny, *Ethica Thomistica*, p. 2 and L. Arnhart, *Darwinian Natural Right* (New York, State University of New York Press, 1998), p. 82.

[16] See T. M. Osborne, Jr., "Practical Reasoning", in *The Oxford Handbook of Aquinas*, pp. 278-279. As Robert Koons puts it, "Teleological realism makes possible a very robust form of ethical and moral realism"; R. Koons, *Realism Regained* (Oxford, Oxford University Press, 2000), p. 138.

[17] In Stump's words, a virtue is "a habit or disposition which makes the power it is a disposition of apt to work well"; E. Stump, "Wisdom: Will, Belief, and Moral Goodness", in *Aquinas's Moral Theory*, p. 47. See also R. McInerny, "Ethics", p. 202.

As Aquinas says, "the good has the intelligibility of an end, and evil [*malum*] has the intelligibility of contrary to the end" (*ST*, I-II, q. 94, a. 2). If there were no natural human end, no disposition to act in one way rather than another could count as *really* virtuous nor vicious, in an absolute or objective sense. Such a judgment would entirely depend on how the particular subject of the disposition felt about it concerning his or her own subjective goals. And it is well known how vice tends to make its possessor feel good about it, as Aristotle himself acknowledges: "evil perverts us and makes us fool ourselves about the principles of action" (*NE*, VI, 12, 1144a 34-35; my translation). But there could be no *fooling ourselves* about the principles of action if there was no natural human end to serve as an ultimate criterion of judgment, concerning which the vicious man could be fooled.

This is why both Aristotle and Aquinas say that the virtuous man sees clearly or "sees the truth" in everything that he does: "the man of good character judges every situation rightly; i.e., in every situation what appears to him is the truth" (*NE*, III, 4, 1113a 30-32). The virtuous man is disposed to work well as a man, so to speak. He is such that what *appears* to him as good (that is, conducive to his natural end) *really and truly* is so, καθ' αὐτά (NE, IX, 9, 1170a 15-16). What virtue does in human beings is to bring together appearance and reality,[18] it orients man *well* to that towards which he is already oriented by nature: it makes him *efficient* in pursuing his end.

On the contrary, the vicious man is fooled by his own character (*EE*, III, 1, 1229b 20-25; *NE*, X, 5, 1176a 3-30), which leads him to judge as good and conducive to his end that which in reality is neither. To expand on Aristotle's example, the virtuous man is like a gifted archer, apt to hit his goal or target. But the man dominated by vice is like the myopic archer that misses his target by the mile, going on to celebrate his shot as if he had indisputably dominated the competition. Indeed, the Greek word ἁμαρτία, which would later become translated as "sin" or "wrong", derives from ἁμαρτάνειν, which means precisely "to miss the mark".[19]

This ultimate end to which all human action is oriented is what Aristotle calls *eudaimonia* (*NE*, I, 4, 1095a 18; *EE*, II, 1, 1219a 25-30). There has been a lot of discussion about how to translate this term properly. The traditional and common "happiness" seems

[18] See J. R. Moncho-Pascual, *La unidad de la vida moral según Aristóteles* (Valencia, Artes Gráficas Soler, 1972), p. 112.

[19] See, for instance, "Hamartia" in the *Merriam-Webster Dictionary*: <https://www.merriam-webster.com/dictionary/hamartia> [Accessed: 01/02/2023].

deeply unsatisfactory, given how it has acquired a psychological tone, connoting primarily a state of "happy" feeling.[20] Many objections against the idea that *eudaimonia* (translated as "happiness") is what all human beings seek do not really prove that *eudaimonia* is not, in fact, the ultimate human end, only that such a translation is an unfortunate one.[21] When Philippa Foot says, for instance, that "Happiness is not the universal aim of action", because "brave people choose great and immediate evils, such as certain death, in order to rescue or defend others",[22] she illustrates just this very point.

Instead, what *eudaimonia* means, roughly, is "the best possible life",[23] and understood in this way, remarks such as Foot's have no force. For as Aristotle himself notes, he who bravely faces a certain death instead of cowardly fleeing from performing his duty is indeed choosing the best for himself (*NE*, IX, 8, 1169a 12-1169b 2). Tragic as it may be to lose one's life, a life that ends with a brave virtuous act of self-sacrifice is certainly *better* than one which continues a bit longer at the price of cowardice. Hence, to say that *eudaimonia* can't be the ultimate moving end for such a person because he sacrifices "happiness" for duty is to be misled by translation.

In reality, someone that renounces a prosperous life (or even life itself) in favor of doing his duty does so precisely in pursuit of *eudaimonia*, the best possible life for him in such circumstances: one that ends in defense of duty, instead of continuing thanks to cowardice. As the magnanimous man knows, "there are some circumstances in which it is not worth living" (*NE*, IV, 3, 1124b 9-10), the price of life can be too high. Indeed, sometimes the cost of life might be the good life, and none should pay it. And so, he is prepared to sacrifice (natural) life for the good life. In doing so, he is not forfeiting *eudaimonia* but achieving it.[24]

This is also why, from Aristotle's perspective, a position such as Richard Kraut's doesn't seem to make sense. Kraut frequently appeals to the example of a philosopher who has to give up some time of contemplation to take care of his dying father. "In this

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[20] See A. MacIntyre, *After Virtue*, p. 148; J. L. Ackrill, "Aristotle on *Eudaimonia*", in A. Oksenberg (ed.), *Essays on Aristotle's Ethics* (Berkeley, University of California Press, 1980), p. 24; M. J. Adler, *Ten Philosophical Mistakes* (New York, Simon & Schuster, 1996), ch. 6 and D. Ross, *Aristotle*, p. 198. Ross proposes the soberer "well-being", which seems to have similar problems.

[21] See, for instance, Anthony Kenny's paper on "Happiness", *Proceedings of the Aristotelian Society*, 1966 (66, 1), pp. 93-102 and John Ackrill's critique of it in "Aristotle on *Eudaimonia*", pp. 23-24.

[22] P. Foot, *Natural Goodness*, p. 82.

[23] J. L. Ackrill, "Aristotle on *Eudaimonia*", p. 24.

[24] For how the same phenomenon applies to other living beings, see D. Oderberg, *The Metaphysics of Good and Evil* (London & New York, Routledge, 2020), pp. 96-101.

case", Kraut writes, "one settles for less happiness in one's life because one owes it to one's father to benefit him in certain appropriate ways".[25] Once again, this seems to be to fall prey to translation. I contend that this duty to settle for a less happy life would have made no sense to Aristotle, who says that he who deliberates well has as his goal "the best of the goods attainable by man" (*NE*, VI, 7, 1141b 12).

Suppose it were true, for any given individual, that caring after his dying father meant that his life, as a whole, would be a less "happy" one than if he had kept on contemplating and left his father to die alone all by himself. Suppose too such a person knew about this life-affecting consequence. I contend it would be against reason for him to go on and do such a thing, given that happiness (*eudaimonia*) is "the end [τέλος] of human conduct" (*NE*, X, 6, 1176a 32-33). Sure, if his father had not fallen ill and he could have continued engaging in philosophical contemplation, his life would have been happier: he would have been enjoying a superior kind of happiness, at least from Aristotle's perspective. But that is no longer an option open for him to choose. Once his father falls ill, the only two options available to him for comparison are (1) a life in which he forfeits contemplation to take care of his father and (2) a life in which he continues to contemplate, neglecting his father. But the latter, a life in which the son neglects his father, would not be a happy life, one worth the name of *eudaimonia*. So *eudaimonia* itself compels him to choose the first option instead of the second.

In truth, any preference for a less happy life than what is available to one is always irrational, contrary to reason: there is no further end or criteria besides *eudaimonia* that would allow anybody to rationally prefer a life that was less *eudaimon* than another. On the contrary, it is *because* in failing to be a good son in such circumstances he would be falling short of a truly good human life *that* his father's condition has upon him the claim it has. To paraphrase Aristotle in the *Eudemian Ethics*, for one who chose contemplation instead of taking care of his father, "there would be no difference between being born [a god] or a human" (*EE*, I, 5, 1215b 35).[26] In reality, one does not settle for a less "happy" life in trading some contemplation to fulfill his filial obligations. Quite the opposite, one does such a thing to keep forging a life that could rightly merit the name of *eudaimonia*.

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[25] R. Kraut, *Aristotle on the Human Good* (Princeton, Princeton University Press, 1989), p. 111.

[26] The actual quote is as follows: "No one who was not an utter slave would put any value on existence solely for the pleasures of food and sex, in the absence of all other pleasures that are provided to humans by knowing and seeing and using any of their other senses. It is clear that for a person making such a choice there would be no difference between being born a beast or a human" (*EE*, I, 5, 1215b 30-35).

So, these are some reasons why other translations seem more accurate: "realization", "completion", or "flourishing" maybe capture most of it, despite the third's metaphorical nature. Monte R. Johnson's "human success" also appears to get at its core.[27] In this sense, Aristotle would be envisaging a whole human life as susceptible to victory or defeat. To achieve virtue and *eudaimonia* is to win at life, to succeed at living as a human. To succumb to vice, instead, is to fail at doing so —as we said before, an immoral man is a failed man. Hence, the first thing that needs to be said about evil is that it is *bad*. Evil is *bad* for human beings, it *hurts* man *qua* man. It turns he who engages in it into a defective human being, prone to a failed life —a sweeping arrow that gets lost into the wilderness, cast away by a semi-blind archer that may claim victory, fooled, with no clue as to where his real goal lied.

2.2. The Pillar of Essentialism

With this, it is possible to see how teleology is a main building block of the Aristotelian Foundation: it is the intrinsic moving force that drives the entire moral enterprise from its very start. But it is not the whole story, or not explicitly, at least. The other side of the coin, already implicit in what I have said, is *essentialism* —that is, the idea that things in the world, and human beings among them, have real essences or natures (or, to use the more technical language, substantial forms). This second pillar allows Aristotle and Aquinas to concretely specify what the ultimate human end, *eudaimonia*, consists of.

Now, Aristotle explicitly draws a close connection between the formal and the final cause, which he says "should be taken as being almost one and the same" (*GA*, I, 1, 715a 4-6). This seems to be because any natural substance is directed to its own actualization or completion, that is, it has as its end *the realization of its essence*, the unfolding of its essential properties, since "the *logos* of what has being in potential is its being-fully-itself" (*De Anima*, II, 4, 415b 7-21). Essence and end, in a sense, are thus intimately connected. A given thing's essence determines its end (it is directed to actualize what it truly is already in potency) and in reverse, its end reveals its essence (that to which it is oriented signals that which it is in nature). And so, "what a thing is and its purpose are the same" (*Phys*., II, 7, 198a 24).[28]

[27] See M. R. Johnson, *Aristotle on Teleology*, p. 221.
[28] See also *Phys*., II, 7, 198a 35 and 8, 199a 30.

The link between nature and end seems to be, for Aristotle, the notion of "function" (*ergon*), which, in David Oderberg's words, "in its broadest sense just means the natural specific activity of some thing".[29] Indeed, Aristotle writes in several places that the function of a thing *is* its end (*EE*, II, 1, 1219a 5-10; *Met.*, IX, 8, 1050a 21; *De Caelo*, II, 14, 286a 8-12) and also that:

> What a thing is is always determined by its function: a thing really is itself when it can perform its function; an eye, for instance, when it can see. When a thing cannot do so it is that thing only in name, like a dead eye or one made of stone, just as a wooden saw is no more a saw than one in a picture (*Meteor*., IV, 12, 390a 10-15).

Accordingly, he says, a hand made out of bronze is not, properly speaking, a hand, nor a physician in painting a physician, for "none of these can perform the functions appropriate to the things that bear those names" (*PA*, I, 1, 641a 1-3). Hence, that which reveals the definition or essence of a thing, that which shows what a thing *is*, is its function, its end, that to which it is oriented. And so, "this is how it is in nature: what a thing is potentially, its function [τό ἔργον] reveals in actuality [ενέργεια]" (*NE*, IX, 8, 1168a 8-9; my translation).

This means that from a metaphysical point of view, essence is prior to function, because the latter is given (determined) by the former. But epistemologically speaking, function is prior to essence in the sense that knowledge of function is a window into knowledge of essence.[30] It makes total sense, then, that when Aristotle tries to specify the ultimate end *for human beings* (*eudaimonia*'s content), he retorts to the notion of function (*NE*, I, 7, 1097b 23-1098a 19). For the function "reveals in actuality" what a thing is potentially, and hence that to which it is oriented by nature.

Now, sometimes it is thought that "good" must mean something radically different, almost equivocal, depending on whether somebody is talking about morality or anything else. Aristotle's insight, shared by Aquinas, is that this is not so. To both, moral evaluations are but a special case of evaluation in general. One can determine what a good human being is in broadly the same way he can identify what a good shield or a good squirrel are —by how well the thing one is evaluating conforms with what it is supposed to be or do, that is, with its *form* or *function*, respectively.[31]

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[29] D. Oderberg, "The Metaphysical Foundations of Natural Law", in H. Zaborowski (ed.), *Natural Moral Law in Contemporary Society* (Washington, DC, Catholic University of America Press, 2010), p. 63.

[30] One can find here the intuition of the famous Scholastic principle *agere sequitur esse*.

[31] See T. M. Osborne, *Aquinas's Ethics*, pp. 43-44; M. R. Johnson, *Aristotle on Teleology* (Oxford, Oxford University Press, 2005), p. 289; H. McCabe, *The Good Life* (London, Continuum, 2009), pp. 21-22.

Thus, a shield made from plastic may be a good *toy* for a 5-year-old, but it would not be a good *shield* for a soldier. Though it would exemplify the form of a toy excellently and perform well its function (i.e., attain its end) as such, it would certainly fail to do so if taken under the description of a shield.[32] A suicidal squirrel that ran straight toward its predator instead of fleeing from it would also be an imperfect or defective (*bad*) specimen of its kind, poorly equipped to live a squirrely life. Similarly, a good human being is one that has fully realized the potencies inherent in his own nature, thus performing his own function excellently (whatever it may be).

And hence we find Aristotle comparing the good man to the good harpist (*NE*, I, 4, 1095a 16) and Aquinas, the bad man, who lacks virtue, to the bad eye, which lacks the power to see well (*ST*, I, q. 5, a. 3, ad2). Eleonore Stump makes the point in general terms: "A thing is good to the extent to which it is actual; it is good of its kind or perfect to the extent to which its specifying potentiality is actualized, and bad of its kind or imperfect to the extent to which its specifying potentiality remains unactualized".[33]

Ethics implies the application of this general evaluative principle to human beings, who exhibit their own distinctive features with respect to other animals and are capable of deliberation and superior goods. The so-called "moral" good is not some separate and autonomous realm, somehow disconnected from other uses of the word, but a special case of the good in general. An action is morally good to the extent to which it helps the agent to flourish as the kind of thing that he is, to the extent that it actualizes or completes him *as a human being*. To achieve *eudaimonia* is to actualize one's full potential as a human being, to be truly what a human being is, to realize one's essence. Hence, ethics is the discipline that explains what man should do to *become* what he already *is*.[34]

This may be implicit in the (admittedly cryptic) expression which Aristotle uses to denote the notion of essence: τὸ τί ἦν εἶναι, which translates as "what it was to be".[35] The idea appears to be that the essence of a thing contains implicitly or potentially a reference to its own fullness, which is its end. And so, when one sees something fully realized, its

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[32] Recall that "a wooden saw is no more a saw than one in a picture" (*Meteor.*, IV, 12, 390a 14). See also P. Foot, *Natural Goodness*, pp. 2-3.

[33] E. Stump, *Aquinas* (London & New York, Routledge, 2003), p. 67.

[34] To unironically adopt Friedrich Nietzsche's *motto* in *Ecce homo*. There's a case to be made that Nietzsche, with all his a-moralistic postures, actually understood morality right. See P. Foot, *Natural Goodness*, pp. 108-109; L. Polo, *Quién es el hombre* (Madrid, Rialp, 2007), p. 113 and E. F. Gel, "Nietzsche y el cristianismo", in *La larga sombra de lo religioso* (Madrid, Biblioteca Nueva, 2017), pp. 155-156.

[35] See, for instance, *Met.*, VII, 4, 1030a 1. M. R. Johnsons suggests "that which something was to be"; M. R. Johnson, *Aristotle on Teleology*, p. 48.

essence is made manifest and one can say "*That* is what such a thing *was* all along". In this sense, one could apply to *moral* growth what Aristotle says about *natural* growth, that it is "a passage *towards* nature" (*Phys.*, II, 1, 193b 12; my italics). When someone grows in virtue, he is growing *towards* his proper form, getting to be in a better and more excellent way what he already *was* (ἦν). In Aristotle's words:

> Goodness is a kind of completion: it is when something becomes as good as it may be that we say that it is complete, because that is when it pre-eminently conforms with its nature. A circle, for instance, is complete when it is pre-eminently a circle and when it is as good a circle as there could be. Badness, on the other hand, is the dissolution of and departure from this completion (*Phys*., VII, 3, 246a 13-16).

In other words, man, as any other living being, finds himself in a sort of impasse. As MacIntyre puts it, there is a way in which man "happens" to be and a way in which he "could be" if he realized (completed) his essential nature or *telos*.[36] What ethics studies is how to transition from one state to another, how human beings can truly and effectively actualize, bring to actuality, what they already are potentially —in other words, how to fulfill human nature. In this sense, ethics is medicinal, or more like medicine than any other discipline. Its subject is how to be *healthy* human beings, in a broad enough understanding of the word that would encompass all the dimensions of man's being and not just the physiological ones. This is why one can find Aristotle casually and naturally comparing virtue and vice to health and sickness (*NE*, III, 4, 1113a 23-28).

But now notice that, as before with the notion of an ultimate human end, if there were no human essence or nature, there could likewise be no virtue or vice in an absolute sense, no good or bad human beings. There would be no more fundamental (more substantial or essential) form with respect to which Aquinas could say, for instance, that a *good* thief was still a *bad* human (*ST*, I-II, q. 55, a. 3, ad1). Without a given nature, all moral evaluations would ultimately become subjective. There would be no objective third-person standard, independent of contingent desires and societal norms, concerning which to judge the different roles agents can embody in their lives. No way to tell that this agent is a good man, for there would be no kind "man" to work as a criterion of evaluation.[37]

This essentialist framework has been a common theme in the revival of Aristotelian virtue ethics since Elizabeth Anscombe, Philippa Foot, and Alasdair MacIntyre, and in

[36] See A. MacIntyre, *After Virtue*, p. 53.

[37] See also D. Oderberg, *The Metaphysics of Good and Evil*, p. 27.

the more Thomistic natural law ethics approach. Anscombe noted that for virtue ethics there was "philosophically a huge gap, at present unfillable as far as we are concerned, which needs to be filled by an account of human nature, human action, the type of characteristic a virtue is, and above all of human 'flourishing'", and advised against doing moral philosophy altogether, at least "until we have an adequate philosophy of psychology, in which we are conspicuously lacking".[38] Foot put it in quite bald terms, stating that she wanted to show moral evil as a kind of "natural defect" and claiming that there was no serious or radical change in the meaning of *good* "between the word as it appears in 'good roots' and as it appears in 'good dispositions of the human will'".[39] And MacIntyre has seen clearly that the concept of the good "has application only for beings insofar as they are members of some species or kind" and that "what is good or best for anyone or anything is so in virtue of its being of a certain kind, with its own essential nature and that which peculiarly belongs to the flourishing of beings of that kind".[40] As for natural law theory, it has always been a tradition heavily committed to this metaphysical framework, seeing moral truths as "objectively grounded in the natures of things".[41]

To be sure, what it means for a human being to be good is not wholly identical to what it means for a tree to be good. As Aristotle himself says, "what is wholesome or good is different for humans beings and for fish" (*NE*, VI, 7, 1141a 22-23), which is why "there is no one wisdom that is concerned with the good of all animals, but a different kind for each species" (*NE*, VI, 7, 1141a 31-32). Goodness is, so to speak, species-relative: *to different natures, different goods*.[42] This is why there's no way one can speak objectively

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[38] E. Anscombe, "Modern Moral Philosophy", in *The Collected Philosophical Papers of G. E. M. Anscombe*, vol. 3 (Oxford, Basil Blackwell, 1981), pp. 41 and 26, respectively.

[39] P. Foot, *Natural Goodness* (Oxford, Oxford University Press, 2010), p. 39. As MacIntyre notes, to the classical tradition, "'man' stands to 'good man' as 'watch' stands to 'good watch' or 'farmer' to 'good farmer'"; A. MacIntyre, *After Virtue*, p. 58. See, also, M. R. Johnson, *Aristotle on Teleology*, p. 289.

[40] A. MacIntyre, *Three Rival Versions*, pp. 134 and 138.

[41] D. Oderberg, "The Metaphysical Foundations of Natural Law", p. 50.

[42] As Peter Geach once wrote: "There is no such thing as being just good or bad, there is only being a good or bad so-and-so"; P. Geach, "Good and Evil", *Analysis*, 1956 (17), p. 34. See also R. McInerny, *Ethica Thomistica*, p. 13; E. Stump, *Aquinas*, p. 72. This seems to be MacIntyre's whole point in *Dependent Rational Animals:* that to know what virtues human beings need (that is, what dispositions of character are good for them), one needs to get clear first on what kind of thing human beings are (i.e., dependent rational animals).

of a good X if one can't speak with the same objectivity of an X. Hence, Aristotelian virtue ethics brings with itself a commitment to some kind of essentialism.[43]

And this is what one finds in Aristotle and Aquinas. Aristotle's discussion of virtue, ethics, and the moral good is dependent on his metaphysical understanding of human nature, following his treatment of it in the *De anima*, III.[44] The core of his famous *ergon* argument (*NE*, I, 7, 1097b 23-1098a 19) is to find that which is proper of human beings *as such* (i.e., their specific difference), over and above that which they may have in common with other living beings and substances. Similarly, in his *Eudemian Ethics*, Aristotle introduces the discussion of human virtue by enquiring into the parts of the soul that characterize human beings *qua* human beings (*EE*, II, 1, 1119b 25-1120a 5).

As for Aquinas, preceding his treatment of ethics in the *Prima-Secundae*, he takes his time to develop in depth what must be said about human beings in general (*ST*, I, qq. 75-102). One needs to know what *man* is to know what man's *good* is, what human beings are called to be. Thus Aquinas, for instance, explicitly includes the study of man, as "an agent voluntarily acting for an end", into the subject of *philosophia moralis* itself (*In NE*, I, 1). Because, as he puts it, "the virtue of a thing consists in its being well disposed *in a manner befitting its nature*" (ST, I-II, q.71, a. 2, my italics). But if this is the case, man needs to have some sense of what his nature *is* before he can judge if something *befits* it or not. To judge some human action, disposition, or life as *good*, as convenient for someone *qua* human, one needs to know first (roughly, at least) what kind of being man is. In McInerny's words, "knowledge of the kind of agent we are will provide a criterion for distinguishing among the things we seek those that are truly perfective of us from those that are not".[45]

So, it is clear now how *essentialism* is also a central building block of the Aristotelian Foundation. Human beings, like any other substance, have a nature or essence concerning which they can be judged as being good or bad and acting well or wrong. If there were no real essences or kinds of things in the world, and more specifically, if human beings

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[43] See M. R. Johnson, *Aristotle on Teleology*, p. 222; E. Stump & N. Kretzmann, "Being and Goodness", in *Being and Goodness: The Concept of the Good in Metaphysics and Philosophical Thought* (Ithaca, Cornell University Press, 1991), pp. 98-128; E. Stump, *Aquinas*, p. 68; E. Feser, *Five Proofs of the Existence of God* (San Francisco, Ignatius Press, 2017), pp. 217-218; "Being, the Good, and the Guise of the Good", in *Neo-Scholastic Essays* (South Bend, St. Augustine's Press, 2015), pp. 297-320; J. A. Aersten, "Thomas Aquinas on the Good", in *Aquinas's Moral Theory*, p. 239.

[44] See T. H. Irwin, "The Metaphysical and Psychological Basis of Aristotle's Ethics", in A. Oksenberg (ed.), *Essays on Aristotle's Ethics* (Berkeley, University of California Press, 1980), pp. 36 and 50-51.

[45] R. McInerny, *Ethica Thomistica*, p. 13.

had no essential nature, then an Aristotelian virtue ethics would collapse into nothing but a hopeless fiction, just as if there were no natural human end. Hence, to make full rational sense of Aristotelian ethics, both essence and intrinsic teleology must be accepted as real features of the world. Ethics, then, flows or follows from (philosophical) psychology, which in turn is metaphysics applied to human beings.

3. On Dialectic and the Autonomy of the Sciences: Roche v. Irwin

I have been arguing until now that, for Aristotle and Aquinas, *ethics depends on and is grounded in metaphysics* —specifically, in an essentialist and teleological metaphysics. Without such a metaphysical underpinning, Aristotelian ethics simply collapses. This metaphysical grounding of ethics in Aristotle and Aquinas is widely acknowledged in the literature.[46] A case in point is Terence Irwin, who called attention to how Aristotle's *ergon* argument, central to his whole ethical enterprise, is deeply connected to several of his more metaphysical theses (as I've already explored above). As Irwin writes:

> Aristotle is a systematic philosopher. […] His ethical theory is based on his psychology and therefore on his metaphysics; the starting point of ethics is a feature of human agents which is part of their soul and essence, as understood in Aristotle's general theory of substance.

[46] For Aquinas, see P. V. Spade, "Degrees of Being, Degrees of Goodness", in *Aquinas's Moral Theory*, p. 254; E. Stump, *Aquinas*, p. 63; B. Davies, "Happiness", pp. 229-232; E. Feser, "Being, the Good", p. 297; M. O'Brien & R. Koons, "Objects of Intention: A Hylomorphic Critique of the New Natural Law Theory", *American Catholic Philosophical Quarterly*, 2012 (86, 4), pp. 678-679; S. T. Pinckaers, *Les sources de la morale chrétiene* (Fribourg-Paris, Éditiones Universitaires-Cerf, 1982), ch. 2; T. Hsiao, "Consenting Adults, Sex, and Natural Law Theory", *Philosophia*, 2016 (44), p. 515; T. M. Osborne, Jr., *Aquinas's Ethics*, p. 7. For Aristotle, see F. Copleston, *History of Philosophy*, vol. 1 (New York, Double Day, 1993), pp. 333; R. A. Gauthier, *La morale d'Aristote* (Paris, Presses Universitaires de France, 1958), p. 18; J. D. Monan, "Two Methodological Aspects of Moral Knowledge in the *Nicomachean Ethics*", in *Aristote et les problems de méthode* (Louvain, Publications Universitaires de Louvain, 1961), pp. 261-271; *Moral Knowledge and its Methodology in Aristotle* (Oxford, The Clarendon Press, 1968), pp. 107-115; J. R. Moncho-Pascual, *La unidad de la vida moral*, pp. 162 and 314; C. Vicol, *La filosofía moral de Aristóteles en sus etapas evolutivas* (Madrid, Consejo Superior de Investigaciones Científicas, 1973), p. 17; F. J. Thonnard, *Précis d'histoire de la philosophie* (Paris, Desclée, 1941), pp. 115-116; W. F. Hardie, *Aristotle's Ethical Theory* (Oxford, Clarendon Press, 1968), pp. 38-45; J. Cooper, *Reason and Human Good in Aristotle* (Cambridge, Harvard University Press, 1975), 155-180; T. H. Irwin, "The Metaphysical and Psychological Basis of Aristotle's Ethics", pp. 50-51; A. MacIntyre, *After Virtue*, p. 148; D. Oderberg, "All for the Good", p. 72-94. J. P. Moreland and W. L. Craig recognize a commitment to both teleology and essentialism as included in classical virtue ethics: see their *Philosophical Foundations for a Christian Worldview* (Downers Grove, InterVarsity, 2005), p. 455. An Aristotelian leaning author such as Larry Arnhart also admits the dependence of his view on these two pillars: "Someone could challenge my idea of Darwinian natural right by denying the objective reality of natural kinds and natural ends"; L. Arnhart, *Darwinian Natural Right*, p. 231.

> […] The argument of the *Ethics* depends on more than common sense. It depends on the whole view of natural substances outlined in Aristotle's metaphysics and psychology.[47]

One author, though, begs to differ. Timothy D. Roche, reacting to Irwin's arguments, attempted to put into question this dependence of Aristotle's ethics on his metaphysics.[48] According to Roche, at least from Aristotle's point of view, ethics and metaphysics should be seen as separate and autonomous sciences, and his appeals to metaphysical theses in the context of ethical arguments should be understood as dialectical maneuvers. Roche contends that Aristotle's method in the *Ethics*, as in his other inquiries, is that of dialectic, specifically "a purely autonomous dialectic",[49] as he puts it.

What is, however, a purely autonomous dialectic? A method of inquiry that starts from established and reputable beliefs (τά ἔνδοξα) about the topic of investigation. Such are opinions "accepted by everyone or by the majority or by the philosophers (i.e., by all, or by the majority, or by the most notable and illustrious of them)" (*Top.*, 100b 21-22). From said starting point, the inquiry works itself upwards to the true principles the reputable beliefs contain, solving inconsistencies and difficulties (ἀπορίας). In a last step, the method moves from the principles to the reputable beliefs to see whether the former help explain the prevalence of the latter.

Roche calls attention to the fact that this is the methodology Aristotle *explicitly* claims to be following in his *Ethics*. Nowhere does Aristotle make the methodological claim that one should go first to the conclusions of another discipline like metaphysics in search there of the principles of moral philosophy. Instead, he repeatedly characterizes the path of his investigation thus:

> Here as in all our other discussions, we must first set out the evidence [τά φαινόμενα], and then, after calling attention to the difficulties, proceed to establish, if possible, all the received opinions [τά ἔνδοξα] about these affections [vice, incontinence, and brutality], or failing that, as many as we can of those that are best supported. For if the discrepancies are resolved and received opinions left validated, the truth will be sufficiently demonstrated (*NE*, VII, 1, 1145b 2-7).[50]

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47 T. H. Irwin, "The Metaphysical and Psychological Basis of Aristotle's Ethics", pp. 50-51.

48 See T. D. Roche, "On the Alleged Metaphysical Foundation of Aristotle's *Ethics*", *Ancient Philosophy*, 1988 (1), pp. 49-62.

49 *Ibid*., p. 49.

50 David W. Hamlyn considers this passage key to understanding Aristotle's dialectical method. See D. W. Hamlyn, "Aristotle on Dialectic", *Philosophy*, 1990 (65), p. 468. Roche also provides the following parallel passages (in "On the Alleged", p. 53): *NE*, I, 4, 1095a 30-1095b 8; I, 7, 1098b 9-12; X, 8, 1179a 20-23; *EE*, 1216b 26-35; 1235b 13-18.

If Aristotle hadn't conducted himself this way, Roche says, appealing instead to his metaphysics (and philosophical psychology) to establish his moral principles, he would have contradicted his cherished view of the autonomy of the sciences, something which one would not expect Aristotle to do. According to such a view, "each rational discipline, or science, has its own special principles which function as explanations or 'reasons' for the *phainómena* 'appropriate' to that discipline".[51] If Aristotle went to his metaphysics to supply his ethics with its principles, he would be violating the autonomy of ethics as a rational discipline. To uphold it, instead, he should work towards his moral principles dialectically from moral *éndoxa*. Since that's precisely the methodology Aristotle explicitly endorses, with no hint of conscious inconsistency, one should presume that is precisely what he does.

Roche illustrates his point with Aristotle's *ergon* argument, which Irwin considered a clear-cut case of Aristotle going into his metaphysics in search of a foundation for his ethical conclusions. Instead, Roche shows how the argument possesses the typical dialectical structure, solving the difficulties generated by the clash between two kinds of *éndoxa* about the nature of the good. First, Aristotle identifies several deep-rooted *éndoxa* (things that "are said") about the good, which enjoy wide agreement and are not easily rejected. These are, for instance, that the good is "that at which all things aim" (*NE*, I, 1, 1094a 3), that it is a perfect end, chosen by itself and not for the sake of another thing (*NE*, I, 7, 1097a 25-34) and that it is self-sufficient, requiring nothing else (*NE*, I, 7, 1097b 6-21). These are all things that "are said" about the good: "The good *has been rightly defined* [καλώς απεφήναντο] as 'that at which all things aim'" (*NE*, I, 1, 1094a 2-3); "Now *we call* [λέγομεν] an object pursued for its own sake more final [complete: τελειότερον] than one pursued because of something else" (*NE*, I, 7, 1097a 30-31); "A self-sufficient thing, then, *we take to be* [τίθεμεν] one which by itself makes life desirable and in no way deficient" (*NE*, I, 1, 1097b 15-16), and so on.

Second, these deep *éndoxa* are confronted with some superficial *éndoxa* about the good (such that it is found in pleasure, honor, riches…), neither of which fully satisfies the conditions for the good required by the more entrenched and reputable *éndoxa*. Here, that Aristotle brings forth his *ergon* argument to try to arrive at a definition of the human good that would solve this problem. The idea that the good is found in the *ergon* of a

[51] T. D. Roche, "On the Alleged", p. 53. Roche produces the following relevant places: *PoAn*, 72a 5-7; 74b 24-26; *Met.*, XI, 8, 1064b 17-23; *GA*, II, 8, 748a 8-12; *Rhet.*, I, 2, 1358a 3-32.

thing is introduced via an inductive generalization based, once more, on several *éndoxa*: "If we take a flautist or a sculptor or any artist, or in general any class of men who have a specific function or activity, his goodness and proficiency *are considered* [δοκεῖ] to lie in the performance of that function; and the same will be true for man" (*NE*, I, 7, 1097b 25-28). A simple comparison of man to other living beings reveals reason to be man's *ergon*, his distinctive and defining characteristic. Because "*we hold* [φαμέν] that the function of an individual and of a good individual of the same kind […] is generically the same" (*NE*, I, 7, 1098a 8-9), the difference between a man and a good man must be that the good man performs *excellently* his *ergon* as a man, just like "the function of the harpist is to play the harp, but that of the good harpist is to play it well" (*NE*, I, 7, 1098a 12). And thus, finally, it follows that "the good for man is an activity of the soul in accordance with virtue [excellence: ἀρετή], or if there are more kinds of virtue than one, in accordance with the best and most perfect kind" (*NE*, I, 7, 1098a 16-18).

What Irwin took as evidence of Aristotle buttressing his moral claims by appealing to his metaphysical conclusions, Roche argues, is in fact no such thing. He writes: "The premises of the *ergon* argument are explicitly linked to *what we say* or *what we believe*. And the conclusion of the argument follows deductively from premises reached through inductions based upon reputable opinions".[52] What some take as Aristotle basing his ethics in his metaphysics is, in fact, just Aristotle following his explicit dialectical methodology. Sure, he might appeal to propositions that are metaphysical in nature, "but he does so *for the reason that* it is a received opinion of a certain kind […] *not because* it expresses *a pre-established metaphysical truth* or *metaphysical knowledge*".[53]

Does Roche's view threaten my thesis that Aristotelian ethics is grounded in Aristotelian metaphysics? First, it is important to note that Roche is not claiming that it is impossible for Aristotle to rely on his metaphysics to support his moral theory. Neither is he necessarily denying that Aristotle's ethics, as Irwin puts it, "requires an appeal outside ethics", specifically in metaphysics, "for the justification of ethical principles".[54] All that Roche is claiming is that *Aristotle himself* did not think his ethics required a

[52] T. D. Roche, "On the Alleged", p. 59. Roche also adds there that the corresponding argument in the *Eudemian Ethics* is prefaced by Aristotle (*EE*, 1218b 38-1219a 6) telling us the argument follows the pattern of induction, ἐπαγωγή, and that in *Top.*, 105a 13-14 he writes that ἐπαγωγή is one of the main forms of dialectical argument.

[53] T. D. Roche, "On the Alleged", p. 55. For an interesting counterargument that Aristotle is not being entirely consistent with his dialectical methodology, see B. Finnigan, "The Dialectical Method in Aristotle's *Nicomachean Ethics*", *Phronimon*, 2006 (7, 2), pp. 1-15.

[54] T. H. Irwin, "The Metaphysical and Psychological Basis of Aristotle's Ethics", p. 223.

metaphysical foundation nor felt the need to rely on his metaphysics to construct and defend his ethical arguments.

With this qualification in mind, the defender of a metaphysical foundation for Aristotle's ethics has an easy way out of Roche's argument. He can claim that Aristotle was simply inconsistent with his declared methodology, or otherwise unaware of how his ethics required his metaphysics, and *amicus Aristotelis sed magis amica veritas*. This, however, is not necessary. I think one can accept Roche's argument (which I find pretty persuasive) and still hold to the "reputable belief" that Aristotle's ethics depends upon his metaphysics, granted one is aware of a distinction between two senses of dependence.

To this effect, I propose distinguishing *methodological* dependence from *background* dependence (or *grounding* in the proper sense). One science or rational discipline is *methodologically dependent* on another when it needs to search for its own principles directly in the conclusions of this other science or when it cannot satisfactorily defend its own conclusions without appealing to theses established elsewhere. One science or rational discipline is, instead, *background dependent* (or *grounded* proper) in another when its subject of study could not be real, or its conclusions true, if the general framework laid out by the other science was actually false.

An example may prove helpful. Take the relationship between biology and physics. Biology, as a science, has its own starting-points and principles, and does not need to go into physics to derive them or satisfactorily justify its own conclusions. In this sense, biology is *methodologically independent* of physics. But still, it is true that the phenomena studied by biology deeply depend on the phenomena studied by physics: there could not possibly be living beings if the general framework laid out by physics was, in fact, false, if the laws of physics were not in place. And in this other sense, biology is *background dependent* or *grounded* in physics.[55]

The relationship I identify between ethics and metaphysics is like that between biology and physics. Ethics *as a science*, as a rational enterprise, does not strictly and methodologically require a metaphysical foundation. As Aristotle apparently aims to do,

[55] For more on grounding, see A. Wilson, "Metaphysical Causation", *Noûs*, 2017 (52, 4), pp. 723-751; J. Sijuwade, "Grounding and the Existence of God", *Metaphysica*, 2021, pp. 1-53; F. Correia and B. Schnieder (eds.), *Metaphysical Grounding: Understanding the Structure of Reality* (Cambridge: Cambridge University Press, 2012), pp. 186-213; J. Schaffer "On What Grounds What," in *Metametaphysics: New Essays on the Foundations of Ontology* (London: Oxford University Press, 2009), 347-383 and M. Raven, "Is Ground a Strict Partial Order?", *American Philosophical Quarterly*, 2013 (50, 2), pp. 191-199.

it can achieve its principles starting from reputable beliefs about its subject matter. Methodologically, this is a fine way to proceed: whoever refuses to grant the *éndoxa* in question simply opts himself out of the moral conversation, in a way analogous to how the skeptic of the principle of non-contradiction destroys discourse itself. There's no point in engaging in rational discourse about something with him who directly denies the subject matter in question. And given that one does not need to persuade the skeptic for a conclusion to be sufficiently justified, granted a specific audience, ethics can work just fine as a science without going into metaphysics. In this sense, ethics is *methodologically independent* of metaphysics.

Still, it is evident that if the general framework laid down in Aristotelian metaphysics was not true (or if its application to human beings in philosophical psychology was flawed), the reality and objectivity of ethics as a rational enterprise would be put into question. If man, as a matter of metaphysical fact, had no nature and were oriented to no end, no talk about the good of man would make real sense, as I showed above. Thus, in this other sense, ethics is *background dependent* or *grounded* in metaphysics.

And so, we arrive at the following. There is a sense (methodological dependence) in which ethics, as a rational discipline, does *not* require metaphysics, and in this, Roche is correct. But there is another sense (background dependence or grounding) in which ethics *does* require metaphysics, and in this, Irwin is correct. One does not strictly need metaphysics to *do* ethics (though it may prove handy), but one does need metaphysics for ethics *to make sense*. This is, after all, to be expected, since there can be no ethics and no moral *éndoxa* free of metaphysical assumptions (the mere fact that an agent persists through change as an individual is a metaphysical assumption, without which the concept of moral responsibility makes no sense). Just as biology is grounded in the physical facts, in physical truth, moral truth could not be there, as the Aristotelian understands it, were not for the underlying (background) presence of certain key metaphysical facts. And given that Aristotle never touches on the question of whether ethics is *in this sense* grounded or not in metaphysics, everything he says about the autonomy of sciences is consistent with the position that I am defending.

Hence, to recapitulate, ethics does not strictly *require* a metaphysical foundation to be persuasive and demonstrative as a science in its own right. But it *does* require a metaphysical foundation to make sense as a rational inquiry. And in this sense, the Aristotelian Foundation explains how ethics is possible as an objective investigation and why it is true.

4. Five Key Benefits of the Aristotelian Foundation

Let's repeat it once more, *ethics depends on and is grounded in metaphysics*. Surely, one can act morally and even engage in moral philosophy without explicitly doing metaphysics. But ultimately, the whole edifice of moral truths and discourse raised by Aristotle and Aquinas depends on a quite specific metaphysical grounding, such that if this foundation were to be revealed as empty or vacuous, the entire project would have to collapse. Some have argued this has been proved by the History of moral philosophy since the modern rejection of Aristotelian-Scholastic thought.[56] If an Aristotelian understanding of ethics depends so heavily on the foundation I have outlined, it is hardly surprising that the modern ostracism of formal and final causes carried with it the dissolution of a genuinely Aristotelian approach to ethics and caused the increasing proliferation of alternative and mutually incompatible moral theories. There was no way Aristotelian ethics could have survived besides a mechanistic understanding of the world, at least not without being hopelessly incoherent.

But many centuries have passed since the so-called Modern "revolution", from Thomas Hobbes's scorn for teleology and Immanuel Kant's dismissal of metaphysics. The logical positivism of the first half of the 20th Century, which considered both ethical and metaphysical propositions meaningless, has since been almost unanimously rejected. The truth is that, since Willard Quine and David Lewis, Saul Kripke and Alvin Plantinga, *philosophers are once again doing metaphysics*, and unashamedly so, as is evident by the flourishing of such disciplines as the philosophy of science, the philosophy of mind and the philosophy of religion.

Indeed, from a historical point of view, we may be close to saying that anti-metaphysical prejudices are now tenets of a bygone age, if not because prejudice of any kind, once born, refuses to die but slowly. In any case, and as shall be discussed further on, many contemporary trends and arguments have been developed in the last half-century that lend credence to the Aristotelian Foundation. Aristotelianism may have

[56] This is MacIntyre's whole argument in *After Virtue* (see, for instance, pp. 54-55, 256), and he repeats it in *Whose Justice? Which Rationality* and *Three Rival Versions of Moral Enquiry*. See also C. Upham, "The Influence of Aquinas", in *The Oxford Handbook of Aquinas*, pp. 515-526; E. Feser, *The Last Superstition* (South Bend, St. Augustine's Press, 2008), pp. 166-228 (especially 226), and for the modern rejection of formal and final causes, *Aristotle's Revenge* (Seelscheid, Editiones Scholasticae, 2019), pp. 42-64. For some qualifications, see also M. R. Johnson, *Aristotle on Teleology*, pp. 25-30. A thorough account of the modern revolution should trace its roots back to the conceptual shift induced into Western thought by the nominalists of the late Middle Ages.

seemed like a dead end back in 1980 when MacIntyre wrote *After Virtue*. Still, since then, it has gathered an increasing amount of academic attention, becoming once more a live philosophical option if it ever actually ceased to be one.[57]

But before diving into that, let's explore what are the benefits with respect to ethics of adopting the Aristotelian Foundation, so that the motivation behind this endeavor is clear and solid. I shall point to five.

4.1. No Aristotelian virtue ethics without the Aristotelian Foundation

The first has already been noticed, and though it may seem trivial, it is of some dialectical importance. I mean, of course, that there does not seem to be a way to properly ground an Aristotelian virtue ethics apart from an Aristotelian metaphysics. This is the main lesson to be learned from MacIntyre's philosophical development between *After Virtue* (1981) and *Dependent Rational Animals* (2001). In *After Virtue*, MacIntyre framed his entire project as a recovery of Aristotelian virtue ethics *without* Aristotle's "metaphysical biology", which he considered philosophically problematic and outmoded. 20 years later, in *Dependent Rational Animals*, he had made a complete turn on this point and explicitly built his ethical case on such a metaphysical biology.[58] MacIntyre, hence, finally came to see that ethical enquiry into the good, virtue, and flourishing of human

[57] For a taste of the last decades' Aristotelian metaphysical comeback, see T. Tahko (ed.), *Contemporary Aristotelian Metaphysics* (Cambridge, Cambridge University Press, 2012); J. Greco & R. Groff (eds.), *Powers and Capacities in Philosophy: The New Aristotelianism* (New York, Routledge, 2014); A. Marmodoro, *Aristotle on Perceiving Objects* (Oxford, Oxford University Press, 2014); D. D. Novotný & L. Novák, *Neo-Aristotelian Perspectives in Metaphysics* (New York, Routledge, 2014); W. R. Simpson, R. C. Koons & N. J. Teh (eds.), *Neo-Aristotelian Perspectives on Contemporary Science* (New York, Routledge, 2018).

[58] For the contrast, see A. MacIntyre, *After Virtue*, pp. 162-163 and *Dependent Rational Animals*, p. 155; and for his own acknowledgment of this shift, see the "Prologue" to the 3rd edition (2007) of *After Virtue*, pp. X-XI. There he writes that he learned from Aquinas "that my attempt to provide an account of the human good […] was bound to be inadequate until I had provided it with a metaphysical grounding" (p. X). There's also a case to be made that MacIntyre's proposal of a "social teleology" in *After Virtue* (p. 197) was as bit as metaphysical as Aristotle's account. It at least would have to presuppose that human beings have a certain nature oriented to a certain end, such as social life and practices. See D. Achtenberg, "On the Metaphysical Presuppositions of Aristotle's *Nicomachean Ethics*", *The Journal of Value Inquiry*, 1992 (26), pp. 335-337 and M. Kuna, "MacIntyre's Search for a Defensible Aristotelian Ethics and the Role of Metaphysics", *Analyse & Kritik*, 2008 (30), pp. 103-119. Also, any ethics that approached the individual as a unity of life and action, as MacIntyre's did, would have to be metaphysical in nature. In *Three Rival Versions* (p. 54), MacIntyre himself claimed that this was the core of his internal critique to Genealogy: that for all its anti-metaphysical postures, it had to remain in its core metaphysical to be intelligible even to the genealogist himself.

beings needs to be informed by a third-person metaphysical account of what kind of being humans are (namely, for MacIntyre, dependent rational animals).

Hence, anyone that has found a compelling moral theory in Aristotelian virtue ethics —and indeed many have, as is evident by its growth in adherents over the years— should also be interested in properly establishing such an Aristotelian metaphysical foundation. Contemporary virtue ethics has sometimes been criticized for being exclusively reactionary, in the sense of having an entirely negative motivation in the failures of the available alternative moral theories.[59] Focusing instead on the rational defensibility of the Aristotelian Foundation can help give Aristotelian virtue ethics the positive ontological motivation that would contribute to raise it above its competing theories. MacIntyre first attempted to recover Aristotelian ethics without Aristotelian metaphysics. That such a project had to fail gives anyone interested in vindicating the former a reason to also vindicate the latter. MacIntyre's evolution should be seen as marking the way into the future for Aristotelian ethical inquiry —any attempt to recover an Aristotelian virtue ethics seems bound to work its way back to an Aristotelian metaphysics.

In the context of the Thomistic tradition, a recent influential (though minority) movement attempting, as MacIntyre in *After Virtue*, to develop an Aristotelian-Thomistic ethics without direct connection to an Aristotelian-Thomistic metaphysics is the so-called New Natural Law Theory developed by Germain Grisez, John Finnis and Joseph Boyle.[60] This theory, as one of its adherents says, purports to develop a "purely first person account of human action",[61] that is, without appeal to any third person perspective of human nature (such as MacIntyre's in *Dependent Rational Animals*), to build up a moral philosophy that could be mostly neutral with respect to metaphysics. Part of the motivation behind this movement seems to be to avoid the accusation of the naturalistic fallacy —invalidly inferring statements of good and value ("ought") from factual descriptive propositions about human nature ("is")—, which these thinkers consider to be accurate and fatal with respect to the more traditional Aristotelian-Thomistic

[59] See R. Louden, "On Some Vices of Virtue Ethics", *American Philosophical Quarterly*, 1984 (21), p. 227.

[60] See G. Grisez, "The First Principle of Practical Reason"; J. Finnis, *Natural Law and Natural Rights* (Oxford, Clarendon Press, 1980) and G. Grisez, J. Finnis & J. Boyle, "Practical Principles, Moral Truth, and Ultimate Ends", *American Journal of Jurisprudence*, 1987 (32), pp. 99-151.

[61] C. Tollefsen, "Is a Purely First Person Account of Human Action Defensible?", *Ethical Theory and Moral Practice*, 2006 (9), pp. 441-460.

approaches.[62] Now, if there is ample reason —as will be discussed in Chapters 2 and 3— to appeal once more to an Aristotelian-Thomistic metaphysical framework to properly ground morality, and if MacIntyre's evolution does indeed mark the way for the Aristotelian-Thomist, such a project of a metaphysically neutral moral philosophy seems doomed to fail from the start.[63] But, as I shall argue ahead, if undertaken to avoid the naturalistic fallacy, it is utterly unnecessary and pointless. Why? Because the Aristotelian Foundation allows the Aristotelian virtue ethicist to sidestep such criticism completely. To see this, though, I must first address its second benefit.

4.2. Categorical Imperatives Cease to be Mysterious

The second benefit I want to ascribe to the Aristotelian Foundation is that it can explain the categorical force of moral norms without having to posit anything more than hypothetical imperatives.[64] A hypothetical imperative is one of the form "If you want X, you ought to do Y"; for instance, "If you want to remain healthy, you ought to eat your vegetables". Its force depends on the acceptance of the condition, such that if someone were not to care about remaining healthy, he would likewise feel no obligation to eat his or her vegetables. Categorical imperatives are supposed to be somewhat different, of the non-conditional form "You ought to do Y", *full-stop* —for instance, "You ought to tell the truth". Its normative force is felt as unconditioned, such that it should be obeyed no matter what.

Now, the Aristotelian Foundation can explain why imperatives of this kind have such a categorical force without having to posit that they are, in essence, anything different from a special type of hypothetical imperative. If humans, as any other beings, are naturally oriented to their own good or perfection (*ST*, I, q. 5, a. 1), such that they necessarily desire and aim at it in everything that they do, the force of a categorical imperative really stems from an implicit necessary condition, of the kind "If you want

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62 See, for instance, J. Finnis, *Natural Law and Natural Rights*, pp. 33-48 and G. Grisez, J. Finnis & J. Boyle, "Practical Principles", p. 101.

63 Strong critiques of the New Natural Law Theory, contesting both its truth and its fidelity to Aristotle and Aquinas, can be found in D. Oderberg, "The Metaphysical Foundations of Natural Law", pp. 44-75; E. Feser, "In Defense of the Perverted Faculty Argument", in *Neo-Scholastic Essays*, pp. 409-413 and M. O'Brien & R. Koons, "Objects of Intention", pp. 655-703. Matthew O'Brien and Robert Koons argue that the New Natural Law theorists fail at their own project of providing a metaphysically neutral framework for ethics, being implicitly committed to a Cartesian view of the self (see p. 675).

64 For this third benefit, see E. Feser, "Being, the Good", pp. 314-315; A. MacIntyre, *After Virtue*, p. 60 and R. Koons, *Realism Regained*, p. 272.

what is good, perfective, flourishing for you, then…". Given that everybody *does* want *and cannot but want*, by nature, what is good, perfective, flourishing for him, the necessary truth of this implicit antecedent carries on to the consequent "you ought to do Y" whenever they are truly connected, giving it its characteristic categorical and seemingly unconditioned force.

From a theoretical point of view, this represents a double advantage. First, the Aristotelian Foundation can *explain* the perceived categorical force of many moral imperatives. They are felt as categorical and unconditioned because they are perceived as directly connected to a necessary and natural desire which is always there, as an unconditional condition, so to speak. An author like Kant, on the contrary, can offer *no* explanation as to why categorical imperatives are categorical: they just *are*, full-stop. Hence, the Aristotelian Foundation enjoys greater explanatory power on this point.

But second, it also allows for greater simplicity, allowing the Aristotelian to reduce theoretical complexity by explaining the sense of moral obligation in a way that unifies categorical and hypothetical imperatives. This gives us a simpler account of practical reason than if we had a brute distinction between two radically different kinds of imperatives and no clue as to the source of the categorical force of one of them. The Aristotelian Foundation shows that, in truth, *all imperatives are hypothetical* but that some have categorical force *because* the condition of the antecedent is necessary for any human being. As Aquinas himself puts it:

> Man has a natural inclination to this, that he might know the truth concerning God, and to this, that he might live in society. *In accordance with this inclination, those things relating to an inclination of this sort fall under natural law*. For instance, that man should avoid ignorance, that he should not offend those among whom he must live, *and other points relevant to this inclination* (*ST*, I-II, q. 94, a. 2; my italics).

Moreover, additional benefits follow from this one. For instance, in unifying hypothetical and categorical imperatives, the Aristotelian Foundation also avoids the rule/interest dichotomy, sometimes said to follow from the clash between the selfless nature of moral demands and the selfish nature of man's interests.[65] Granted that a moral rule is true, it is in everybody's *true* interest as a human being to follow and obey it. One finds this implicit in Aquinas's idea that the good has the *ratio* of convenient: "Among natural things, the good act is that which is convenient [*conveniens*] to the nature of the agent; the bad that which is not" (*De Malo*, q. 2, a. 4, co.). But that which is convenient

[65] See A. MacIntyre, *Three Rival Versions*, pp. 192-194.

to something is profitable or useful to it in some sense. Hence, and to put it simply, the moral good is *good* for man: it is in man's *truest* interest. Moral evil, on the other hand, though maybe "good" or convenient in some partial respect, is actually *bad* for man: it harms man in the deepest possible way. This way, ethics can be, in Robert Koons's words, "an investigation into what it is we truly want".[66]

For the same reason, the Aristotelian Foundation makes nonsense of the question "Why should I do what is good?", that in other moral frameworks may seem unanswerable.[67] I should do what is good *because* it is in my true interest to do so: rule and interest are brought together in the Aristotelian Foundation as two sides of the same coin. Pursuing a life of virtue *just is* an act of (true) self-love, as Aristotle himself realized:

> For if anyone made it his constant endeavor to set an example in performing just or temperate or any other kind of virtuous actions, and in general always claimed the prerogative of acting honorably, certainly nobody would reproach him with being a self-lover. Yet such a person might be considered to have a better title to the name. At any rate he assigns to himself what is most honorable and most truly good (*NE*, IX, 8, 1168b 25-30).

4.3. Avoiding the Naturalistic Fallacy

Now it should be clear how the Aristotelian Foundation helps to sidestep the so-called naturalistic fallacy, according to which an unbridgeable fact/value distinction invalidates any normative derivation of "oughts" from descriptive statements about what something "is". With the previous exploration into the nature of categorical imperatives, the process of deriving an "ought" from an "is" appears quite straightforward, natural, and unproblematic. Consider the following reasoning:

(1) Murder is contrary to human flourishing. / Love of neighbor is a necessary component of human flourishing.
(2) All human beings necessarily want their own flourishing (*eudaimonia*).
(3) I am a human being.
(4) I ought not to murder. / I ought to love my neighbor.

Premises (1), (2), and (3) are premises of fact, *is*-statements, but from them, one can derive an *ought*-conclusion, (4). As a practical reasoning, this is perfectly legitimate *because* it is mediated by a necessary desire that any human being, *qua* human being, has:

[66] R. Koons, *Realism Regained*, p. 262.
[67] See R. McInerny, *Ethica Thomistica*, pp. 5-6.

the desire for his own flourishing.[68] In the strictest of senses, what man *ought to do* is not to be found in what man *is* but in what man *wants*. However, given that there is a necessary desire in man connected or grounded in what man *is*, such a desire serves as a bridge that closes the gap between "is" and "ought". This is the reason why all imperatives are, in essence, hypothetical, as explored above. If (i) I necessarily *want* my own flourishing, and (ii) given the *facts* of human nature, murder is contrary to human flourishing (or love of neighbor a necessary condition of it), then (iii) I *ought* not to murder (or I ought to love my neighbor). And so, once the Aristotelian Foundation is in place and its effects on the understanding of categorical imperatives made clear, no fallacy is to be found in is-ought reasoning.

Another problem with the idea that one can't derive an "ought" from an "is" is that it is not metaphysically neutral. With a teleological view of nature in place, the *fact* that someone, as a human being, has a certain nature oriented towards a certain end carries with it a normative implication, an *ought*-dimension, since it points to what is the good for him. For instance, human beings ought to pursue truth because that is what their good (partially) consists of, *given their nature as rational animals*, and because they cannot but want what is good for them. Within a teleological view of nature, what is objectively good and valuable for some X depends on the specifics of X's nature: the *oughts* that apply to X depend on facts about what X *is*. Given its teleological orientation, the nature of a thing constitutes a criterion (*the* criterion, in fact) for evaluating it.[69]

Hence, from an Aristotelian-Thomistic point of view, as Edward Feser puts it, "there is no 'fact/value dichotomy' in the first place. More precisely, there is no such thing as a purely 'factual' description of reality utterly divorced from 'value', for 'value' is built into the structure of the 'facts' from the start".[70] Such an unbridgeable gap between *is* and *ought* can only exist once the Aristotelian Foundation is taken out of the picture, once one

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[68] See, for instance, P. Simpson, "St. Thomas on the Naturalistic Fallacy", *The Thomist*, 1987 (51, 1), pp. 65-67. Also, see R. Koons, *Realism Regained*, p. 272 for a similar point and illustration.

[69] See R. McInerny, *Ethica Thomistica*, p. 53. As MacIntyre notes, "evaluative judgments are a species of factual judgment concerning the final and formal causes of activity of members of a particular species"; A. MacIntyre, *Three Rival Versions*, p. 134. Also, Koons: "We can, therefore, derive 'ought' from 'is', so long as the 'is' includes the specification of the teleological structure of the agent. Oughts are, in fact, a part of what is"; R. Koons, *Realism Regained*, p. 272.

[70] E. Feser, "Being, the Good", p. 298. See also J. R. Moncho-Pascual, *La unidad de la vida moral*, p. 160; L. Arnhart, *Darwinian Natural Right*, p. 11; T. Hsiao, "Consenting Adults", p. 522 and H. McCabe, *The Good Life*, pp. 17-20.

denies essences and intrinsic teleology as real features of the world. But otherwise, normativity is "built into the very fabric of reality itself".[71]

Thus, it is no surprise that the fact/value distinction had to be a modern "discovery". It is not, as so often modern philosophers seem to assume, that their predecessors were so obtuse as to miss such an obvious philosophical problem. Instead, it is that such a problem *did not* and *could not* arise given their predecessor's metaphysical commitments. Only once the Aristotelian Foundation was called into question and removed could something as the naturalistic fallacy be envisaged and is-ought reasoning become perplexing and mysterious.

Now, given that people *do* in fact act as if "ought" could be derived from "is"[72] and that the Aristotelian Foundation explains *why* this is possible, I take it that this is (some) evidence in its favor. As Ralph McInerny says, "that this problem did not arise for St. Thomas [and, we should add, neither for Aristotle] is a strength, not a weakness, of his moral theory".[73] Simply, human nature is teleologically oriented to a certain number of goods, perfective of its several essential tendencies (and to an ultimate good perfective of its whole being). And because of this, there is no is-ought gap to be filled, no fact/value distinction to be contemplated. Plainly put, being carries value within its own ontological structure.

4.4. Morality Itself Ceases to be Mysterious

Now to the fourth benefit. I have said that the Aristotelian Foundation explains how it is possible to bring together moral and non-moral evaluation, giving both the same basic essentialist-teleological underlying structure. But if this is so, the Aristotelian Foundation avoids mystifying morality altogether, placing it into a more general context. This is preferable to treating it as a brute phenomenon, radically separate and novel with respect to everything else. If Kant, in his *Critique of Practical Reason*, had to postulate man as belonging to two worlds (the sensible and the intelligible),[74] the Aristotelian Foundation removes any need for such baffling dualism, understanding morality as a particular

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[71] D. Oderberg, "The Metaphysical Foundations of Natural Law", p. 45. As Carlos Casanova puts it, commenting on Feser, "describing what *is* includes *oughts*"; C. Casanova, "The underlying assumptions of Germain Grisez's critique of the perverted faculty argument", *Espíritu*, 2020 (69, 159), p. 97.

[72] See L. Arnhart, *Darwinian Natural Right*, pp. 123-210 for examples of common is-ought reasoning regarding matters such as sexism and slavery.

[73] R. McInerny, *Ethica Thomistica*, p. 37.

[74] See, for instance, I. Kant, *Critique of Pure Reason*, A 541 / B 569.

expression of one and the same universal phenomenon: the orientation of every being to its own essential good.

By getting rid of the Aristotelian Foundation and adopting a mechanistic picture of nature, the modern man threw away the tools he had to understand himself in continuity with the natural world. Unable to set aside the unshakeable intuition that he himself was not a purely mechanistic object —eliminativism being a looming shadow still in the distant future—, the modern philosopher then had to go on to perform a radical break between the natural world and the human or moral world. In opposition to this, the Aristotelian Foundation makes ethics a part of a unified and elegant picture of reality, painting "an overall metaphysical picture of the nature of moral behavior that links moral and non-moral senses of 'good'".[75] It brings together our understanding of nature in general with our understanding of human beings, who become, in a sense, *one more entity* among others, albeit special, without breaking the law of continuity.

Indeed, it is true that the human good exhibits new content compared to the good of other beings. Still, instead of representing a radical split regarding the comprehension of non-human realities, it is placed within a *continuum* alongside them. Goodness has the same core meaning throughout the whole natural world: "obedience to nature —the actualization of a thing's essential potencies, the fulfillment of its appetites".[76] Instead of "an utterly autonomous realm that transcends nature",[77] morality is just the application of this same principle to beings capable of rational deliberation and free choice. In Feser's words, "the moral order is a part of the larger natural order".[78] *Natura non facit saltus*.

4.5. A Naturalist-Friendly Foundation for Morality

Lastly, the fifth benefit of the Aristotelian Foundation is that it gives us a *prima facie* pretty solid naturalistic grounding for the objectivity of moral claims without having to appeal to God or anything supernatural. Why do I say *prima facie*? Because, as I shall argue in Chapter 4, Aristotle and Aquinas depart from each other at this point. While

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75 D. Oderberg, "All for the Good", p. 73.

76 D. Oderberg, *The Metaphysics of Good and Evil*, p. 44. See also E. Stump, *Aquinas*, p. 63.

77 L. Arnhart, *Darwinian Natural Right*, p. 83.

78 E. Feser, "The Thomistic Dissolution of the Logical Problem of Evil", *Religions*, 2021 (12, 4), p. 272. This fourth benefit is already present in Philippa Foot's account, which links human moral evaluation with other kinds of biological evaluation of living organisms. But it becomes even stronger if one were to vindicate, as Oderberg does, the phenomenon of inorganic goodness. See D. Oderberg, *The Metaphysics of Good and Evil*, ch. 3 for such a defense, which I will not pursue here. The key idea is that something can be the good *of* X without being good *for* X.

Aristotle seems largely content with grounding morality in an essentialist-teleological view of nature and does not feel the need to keep on searching for any deeper explanation, Aquinas could be seen as going one step further and, so to speak, *grounding the grounding itself* in God.

To sum up the basic idea, Aquinas follows Aristotle all the way in saying that there would be no objective moral values and duties if essence and teleology were not real features of the world. Hence, he wholeheartedly embraces the Aristotelian Foundation. However, he still insists that there would be no Aristotelian Foundation, no real teleologically oriented natures of any kind if God did not exist to grant them their being, essence, and orientation. Hence, for Aquinas, Aristotle arrives at the *proximate* foundation of morality, but only in God one can find its *ultimate* ground. This said, one could argue the naturalist has enough maneuverability to stick with the *proximate* Aristotelian Foundation and resist following Aquinas into his *ultimate* Thomistic one.

5. In Conclusion

I have explained how Aristotle and Aquinas, despite all their differences, share a basic philosophical agreement about the immediate metaphysical foundation of ethics. Goodness, in general, is relative to the nature of a given being, consisting in the attainment of its end or function, the realization of its essential tendencies. Moral goodness is this same phenomenon applied to human beings, who are capable of free choice and rational deliberation. Humans have a certain nature and aim, as all creatures do, to their own perfection or completion (actualization). Something is *truly* good, then, if it *truly* meets this natural inclination to realize man's essential tendencies. Conversely, something is truly bad or evil when it goes against it.

With this metaphysical foundation in place, both Aristotle and Aquinas can draw an objective distinction between *real* and *apparent* goods, on the one hand, and virtue and vice, on the other. On the contrary, if there were no human nature whose realization was propitiated or hindered by any given action, there would be no objective moral good, no objectively good or evil choices, habits, lives, or persons.

Given this dependency of Aristotelian virtue ethics in the Aristotelian Foundation, anyone interested in the vindication of the former should also pursue the vindication of the latter. The Aristotelian Foundation also contributes to avoid a significant number of problems that have haunted moral philosophy since the modern "revolution". Some of these are the naturalistic fallacy, the gap between rule and interest, the difficulty to answer

the question "Why be good?", and the brute and radical dualism of having to place man as belonging to two worlds to make sense of his moral experience. Finally, we have also hinted at the main differentiating feature between Aristotle and Aquinas's accounts: that while Aristotle seems to find this metaphysical foundation satisfying enough, Aquinas feels the need to explain it further with reference to God.

It is typical for works on virtue ethics to take what I've called the Aristotelian Foundation somewhat for granted. Foot, for instance, in her *Natural Goodness*, did not argue for an essentialist and teleological view of the world. Neither did MacIntyre in *Dependent Rational Animals* but assumed it as proven. This is understandable enough, given that a thorough defense of any of its pillars would merit a book-length treatment of its own. Nonetheless, what I wish to do in the following two chapters is to lay out how such a defense might go, appealing both to what Aristotle and Aquinas had to say about it and to several contemporary trends in analytic philosophy that point us in that direction. How can the Aristotelian Foundation be rationally vindicated *today*, amid the 21st Century, against its old-time critics? With essentialism I shall start.

CHAPTER 2. NATURE OR ESSENTIALISM

> The short answer to the question 'Why real essentialism?' is that it is the metaphysical system that captures the reality of things.
>
> David Oderberg, *Real Essentialism*, p. 20

1. Essentialism in Aristotle

Aristotle argued that it was within the responsibilities of the natural philosopher to answer, concerning his or her object of study, the question "What is it?" (*Phys.*, II, 7, 198a 14-21). To give a *complete* explanation of some thing, it is not enough to say what made it, what it is made *of*, and what it is made *for* —one also needs to say what it *is*. In other words, in addition to its efficient, material, and final causes, one also needs to know its *formal cause*, and to explain something in terms of its formal cause is to explain it in terms of its nature or essence, its *quidditas* or τὸ τί ἐστι. A legitimate answer from an Aristotelian perspective to the question "Why is X capable of language?" is "Because X is a human being". *What* a thing is, then, is a crucial part of what one needs to understand to make it fully intelligible. In other words, the essence or nature of something plays an important explanatory role with respect to its properties, powers, and behavior, grounding them from a metaphysical point of view.

As Aristotle says, "the nature of a thing […] is a certain principle and cause of change and stability in the thing" (*Phys*., II, 1, 192b 20-22). It is a principle *of change* because the essence or nature of a given thing dictates, so to speak, both its unfolding or development and the range of its natural powers or capacities. It is also a principle *of stability* because it accounts for its unity amid change: it is what metaphysically guarantees that some thing is *the same thing*, albeit having changed in a certain other respect. Identifying the formal cause or essence of something also allows us to classify it as pertaining to a determinate kind of thing instead of another, serving as a principle of unity in multiplicity. And, lastly, it is a principle that is *in the thing* in the sense that it is intrinsic to it instead of extrinsic —it dwells in the thing itself, rather than in a sort of third Platonic realm.

Man acts and talks all the time as if things in the world of experience had real essences independently of human minds. To borrow an example from Crawford Elder,[1] scientists judge that chromium, of its very nature, has atomic number 79 —that any sample of chromium *cannot but have* atomic number 79—, but they do not judge that all samples of chromium *must* come from Zimbabwe, even if it were to turn out that they did. Having-atomic-number-79 is *of the essence of* chromium, coming-from-Zimbabwe is not. People easily recognize and accept that a cat can get off the couch and continue to be not only *a* cat, but *the same* cat, though if it were to be hit by a truck, it would cease to be the kind of thing it is. This signals a primitive and pre-reflective recognition of a distinction between essential and accidental properties. A cat can lose *some* properties (being-in-the-couch) and continue to be the same thing, but it can't lose others (being-alive) without ceasing to be what it is and becoming something else altogether. Essentialism, to put it bluntly, is just the philosophical expression of this basic common-sense intuition that some things have real essences or natures: intrinsic metaphysical principles that determine what they are, their identity or definitional content, which we can discover, rather than invent.[2]

Consistent with his dialectical methodology, Aristotle does not explicitly argue for this thesis and against its negation. Instead, he seems to take it as self-evident, or at least as more evident than any premises that could be used in an argument in support of it. As he states in the *Physics:*

> It would be absurd […] to try to prove that nature exists, since it is evident that there do exist many things of this sort [which have an intrinsic principle of change and stability]. To rely on the non-obvious to establish the obvious is a sign of being incapable of distinguishing between what is and what is not intelligible in itself (*Phys*., II, 1, 193a 1-5).

This general attitude notwithstanding, essentialism in general and Aristotle's account of it in terms of substantial forms play such a significant explanatory role in his overall metaphysical picture of reality that I believe one can point to at least three facts or phenomena which, to him, require the recognition that things have real essences or natures. These, in turn, could be taken as dialectical starting points that, either individually or cumulatively, reveal the high intellectual price tag of denying the reality of essences or natures. The three phenomena I'll point to are the following: (1) the fact

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1 See C. Elder, *Real Natures and Familiar Objects* (Cambridge, The MIT Press, 2004), p. 4.

2 See D. Oderberg, *Real Essentialism* (Nueva York, Routlegde, 2007), p. X and G. Kerr, *Aquinas's Way to God*, pp. 44-45.

of generation and corruption (i.e., substantial change), (2) the radical ontological distinction between natural kinds and artifacts, and (3) the illegitimacy of anthropocentrism.[3]

If, as I shall argue, rejecting essentialism and substantial forms makes man unable to challenge anthropocentric abuses, collapses natural kinds into artifacts, or leads to a denial of death itself, then the price of such a rejection may be too high to reasonably bear. I contend that had Aristotle been forced into trying to "establish the obvious", very plausibly, he would have taken such a dialectical route, if not a similar one.

1.1. Substantial Changes, Substantial Forms

It is widely recognized that act and potency are the cornerstones of Aristotle's metaphysics. To deal with the Parmenidean challenge and account for change as a real feature of the world, Aristotle proposes to acknowledge a real difference between two kinds or modes of being: being-in-act and being-in-potency. The first relates to what a given thing is *here and now*, simpliciter; the second refers to what a thing *can* be.[4] With this doctrine in place, everything in the natural and changing world of our experience becomes thus a metaphysical mixture or composite of act and potency, being in act in some respects and in potency in others, being actually some thing or other and potentially many other things. What change amounts to, then, is for a potency to become actualized —or to put it in other words, change occurs when something acquires or receives in actuality a *form* that it previously had potentially:

> Change, then, is the actuality of the changeable, *qua* changeable, and this happens as a result of contact with the agent of change […]. The agent of change will always bring with it

[3] One could point to more phenomena like these, such as the recognition of normative facts and privations when it comes to living beings. To say of a blind person, "He/She *should* be able to see", requires one to acknowledge in him a real nature or essence which, because of a certain defect, anomaly, or privation, is not actualized as it should be. Another theoretical benefit of postulating real essences or natures is that they eliminate the problem of induction, which seems unsolvable with non-essentialist categories, as Brian Ellis argues: see B. Ellis, *The Philosophy of Nature* (Chesham, Acumen, 2002), pp. 134-137. So, I think the dialectical argument could be expanded (see, for instance, F. van Steenberghen, *Thomas Aquinas and Radical Aristotelianism*, p. 47 for more starting points that could be used). I'm focusing, however, on the three phenomena noted for simplicity and because, to my knowledge, I find they are the ones that are easier to identify in Aristotle's work.

[4] My purpose here is not to defend the doctrine of act and potency, though what will be said presupposes its truth. A very solid contemporary defense can be found in E. Feser, *Scholastic Metaphysics* (Heusenstamm, Editiones Scholasticae, 2014), pp. 31-87. There's a very common objection to the effect that Einstein's theory of relativity, with its implication of a Minkowskian block-universe, has put the act-potency distinction to rest. For a refutation, see E. Feser, "Actuality, Potentiality and Relativity's Block Universe", in *Neo-Aristotelian Perspectives on Contemporary Science*, pp. 35-60.

> some form, which will either be 'such-and-such a thing' or 'such-and-such a quality' or 'such-and-such a quantity', and this form will be the principle and cause of any change that the agent of change produces (*Phys*., III, 2, 202a 7-12).

But, as Aristotle notices and as can already be seen in the quoted passage, not all changes are of the same category. Sometimes a thing changes in superficial or incidental features —in quality, quantity, place, etc.—, and in such cases, it is typically acknowledged that what results after the change is *the same one thing* as before, despite the said change. This can be called an *accidental change* because the thing has acquired an accidental form, undergoing alteration in some respect but remaining the same individual entity as before. However, other times a thing changes *in substance*: the form that the agent of change brings is of the kind "such-and-such a thing", and then it is said that something is produced (generated) or destroyed (corrupted). What one gets after such a kind of change is a different thing or substance altogether than before, so it can be labeled, with the tradition, a *substantial change*.

Such is, generally, how people claim to know that a property X is essential to a given thing Y: that if Y were to lose X, it would cease to be the kind of thing it is. As Oderberg characterizes the overall reasoning:

> If I took away this or that quality of the thing in question, would its nature remain the same? Would it continue to display the characteristic properties, functions, operations and behavior that it does when it possesses the quality that I remove in thought? If so, the quality is no part of the essence. If, on the other hand, removal of the quality would cause a general disturbance or radical change in the thing's operations, functions, and so on —then the quality would be part of the essence.[5]

Hence, severe, radical, and almost immediate changes to a thing's overall structure and behavior would signal something more than a merely accidental change. They would signal a *substantial* change, the loss of an essential property, a property without which the object in question ceases to be and something else begins to exist in its place, with an entirely different intrinsic principle of change and stability.

As can already be noticed, this distinction between accidental and substantial changes, so basic to man's pre-philosophical understanding of the world, demands a parallel distinction between accidental and substantial forms.[6] As Crawford Elder asks after giving some examples, "in virtue of what are these occurrences *destructions* —ceasings-

[5] D. Oderberg, *Real Essentialism*, pp. 50-51.

[6] Admittedly, this is traditional terminology not found *verbatim* in Aristotle, but it still faithfully captures what he is trying to convey.

to-exist— instead of mere *alterations* in something that continues?".[7] The answer in Aristotle is clear: in virtue of that distinction between accidental and substantial forms. While an accidental form will be that formal principle that accounts for why a given thing exhibits one incidental attribute rather than another, a substantial form will be that formal principle that accounts for why something is the kind of thing it is, period.[8]

Now, as Edward Feser notes, an argument for substantial forms is also indirectly an argument for real essences or natures. Why? Because the substantial form of a thing is that internal metaphysical principle that determines it to be what it is, and from where its characteristic causal powers and other essential properties flow. He writes:

> If a thing really has a substantial form, if by virtue of that substantial form it really has irreducible causal powers, if these powers really are directed at the generation of certain effects as to a final cause, and so forth, then it is hard to see how it could intelligibly be denied that it has an essence. What could it mean to say that a thing has an intrinsic principle of operation, that its operations are intrinsically ordered to certain ends, etc., but that there is no mind-independent fact of the matter about what kind of thing it is?[9]

Could a skeptic deny the reality of substantial forms to avoid essentialism? We shall revisit this below when treating Crawford Elder's *reductio* argument against conventionalism,[10] but for now notice that a total denial of substantial forms seems metaphysically impossible and incoherent. That this is Aristotle's sentiment can be deduced from the following remarks:

> If substance, quality, and quantity all exist, there is a plurality of existing things, whether or not they are separate from one another. On the other hand, if everything is quality or quantity, then whether there is or is not such a thing as substance, the situation is absurd —if an impossibility can be called absurd. Why is it absurd? Because nothing except substance can exist by itself: everything else is an attribute of an underlying substance (*Phys*., I, 2, 185a 27-32).

If everything is an accident ("quality or quantity"), if all we had were accidental forms, then "the situation is absurd —if an impossibility can be called absurd". For it is impossible for there to be only attributes without ever reaching anything that is the substratum of attributes and not the attribute of something else. Given that substance is that which exists by itself, that of which "everything else is predicated" but that "is not

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7 C. Elder, *Real Natures and Familiar Objects*, p. 9.

8 See M. Rota, "Causation", in *The Oxford Handbook of Aquinas*, p. 112, note 2.

9 E. Feser, *Scholastic Metaphysics*, p. 215. Aristotle himself also links form to nature: "form is a more plausible candidate for being nature than matter is because we speak of a thing as what it actually is at the time, rather than what it is then potentially" (*Phys*., II, 1, 193b 6-8).

10 See Section *2.1* below.

predicated of some underlying thing other than itself" (*Phys*., I, 7, 190a 34-190b 1), to say that there are no substantial forms (and hence, no substances) really amounts to saying there is nothing at all.

With this in mind, the very idea of a formless or essenceless object is metaphysically incoherent. What would such an essenceless entity be? It would be something that was nothing in particular. But surely, if something exists, it must be *something*, it can't be anything at all. And if it *is* something, that's all the essentialist needs, it seems to me, to affirm that it has an essence or nature, whether one presently knows it or not.[11] Hence, it just takes the recognition that something exists to see that, if something exists, it has to be *something*, and thus possess some kind of nature or essence conferred to it by its substantial form. Nothing can be nothing at all, it is impossible for there to be something that is not anything, and so it is impossible that *all* forms are accidental —which is why the form of water, or air, or fire, or the atoms are not accidental to the presocratic, but substantial.

So, either all forms are substantial forms —and hence, all changes, substantial changes, which goes against man's intuitions about change—[12] or there are accidental forms *and* substantial forms. There could be no such thing as *only* accidental forms all the way down, so to speak. But then, could the skeptic deny substantial forms to the ordinary objects of our experience and limit real essences and natures to the lowest level of reality (maybe fundamental particles)? This he could, at least in principle, but at the high dialectical price of denying substantial changes altogether, which is the point in this

[11] For a similar argument, see D. Oderberg, *Real Essentialism*, pp. 26-227. Oderberg also claims that we do not observe or encounter formless or amorphous reality anywhere around, no matter how far or deep we look, and that this provides evidence for essentialism (see D. Oderberg, *Real Essentialism*, pp. 86-87). However, if what has been said is correct, properly speaking it is not that we do not, as a matter of fact, have yet encountered any formless reality —it is that we *could not* encounter it, for it could not exist. It even seems that we could go a step further. Suppose, *per impossibile*, that there could be a formless object. If "formless" actually meant something at all (and it surely would have to, for otherwise the one proposing it would be speaking nonsense), one could in turn just consider *that* to be the essence in question. There would be an object whose essence was to be formless and that would behave as formless objects behave (again, granting that this really meant something). Hence, either the very notion of a formless or essenceless reality means nothing and is unintelligible, or it does not conflict with essentialism. So, at the end of the day, it really seems that it is a matter of metaphysical or rational necessity to accept that some things in the world have real essences or natures.

[12] If all changes were substantial changes, nothing could survive the slightest change. Any change in an object would imply its destruction and the production of a different entity altogether. It is enough to apply these implications to the skeptic to see its absurdity.

section.[13] The skeptic should say that, properly speaking, in the world of experience nothing is ever produced or generated, destroyed or corrupted. What the common person thinks of as substantial changes would be thus reduced to mere accidental alterations of the only existing substances.[14]

Now, on the face of ordinary experience, this is an absurd result. At least I have begun to exist, for instance, not to speak of the rest of the people I know. Also, such a position will ultimately blur the radical ontological distinction between living and non-living beings, leading to a denial of death itself. To talk about the death of something or somebody would just be a *façon de parler*. In reality, there would be no such thing as the death, destruction or ceasing to be of a living being, but only the alteration or incidental rearrangement of some other underlying substantial "stuff". Dialectically speaking, given how problematic it is to deny that the objects of experience undergo substantial change, reason compels the philosopher to recognize that they have substantial forms, and by extension, real essences or natures.

1.2. Natural Kinds and Artifacts

Maybe the clearest and most direct way in which Aristotle takes natures to be explanatorily efficacious is when comparing natural kinds and artifacts. There seems to be a radical ontological distinction, which nearly all recognize, between things that come from nature (i.e., natural kinds) and things that come from human art (i.e., artifacts). Aristotle contrasts them in several places in the *Physics*, and nearly always to illustrate his thesis of nature as an intrinsic principle of movement, change, and stability. For instance:

> Some things exist by nature, others are due to other causes. Natural objects include animals and their parts, plants and simple bodies like earth, fire, air, and water; at any rate, we do say that these kinds of things exist naturally. The obvious difference between all these things and things which are not natural is that each of the natural ones contains within itself a source of change and of stability, in respect of either movement or increase and decrease or alteration. On the other hand, something like a bed or a cloak has no intrinsic impulse for change —at least, they do not under that particular description and to the extent that they are a result of human skill, but they do in so far as and to the extent that they are coincidentally made out of stone or earth or some combination of the two (*Phys*., II, 1, 192b 8-20).

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[13] Given that reductionist essentialism falls short of a metaphysical foundation for Aristotelian ethics, we will explore some arguments against reductionism below. See Sections *2.4*, *2.5* and *2.6*.

[14] See D. Des Chenes, *Physiologia. Natural Philosophy in Late Aristotelian and Cartesian Thought* (London, Cornell University Press, 1996), p. 69.

In this passage, Aristotle contrasts natural objects like animals, plants, and simple bodies (earth, fire, etc.) with artifacts or objects of human art, such as a bed or a cloak. And, as has been noticed by M. R. Johnson, the contrast is drawn on the emphasis that natural objects, unlike artifacts, possess a principle of change that is *internal* or *intrinsic* to them and not incidental.[15] While the first contain in themselves some principle or source "of change and of stability" which seems to regulate and dictate their movements and alterations, the second don't have such a thing, such an "intrinsic impulse for change". Artifacts exhibit no intrinsic principle of development —in any case *not as artifacts*. Beds *do* indeed possess, in a sense, an intrinsic principle of change. Still, the point is that they do not do so *as beds* —recall, "not under that particular description and to the extent that they are a result of human skill"— but as made up of something which does possess such a principle, namely wood.

Hence, it is more appropriate to say that such a principle, concerning the bed, is external and not intrinsic because it is incidental to its being a bed. A dog, for instance, develops *as a dog* according to an internal principle that fits its description as such. A bed, in contrast, if it can be said to develop or to have any natural tendencies at all, does not do so *as a bed*, but as something made of wood. As Aristotle notes, "men come from men, but beds do not come from beds. That is why people say that the wood, not the shape, is the bed's nature, because any offshoot that occurred would be wood, not a bed" (*Phys*., II, 1, 193b 8-12). Artifacts, then, are derivative realities: they are not substances, properly speaking, but accidental configurations of underlying substances. In other words, there is no substantial form of bed: *bedness* is an accidental form that happens, because of human skill, to something with its own substantial form (namely, wood).

Given this analysis, if one were to deny essence or nature as an intrinsic metaphysical principle of natural objects, he would be collapsing the distinction between natural kinds and artifacts. If natural objects did not have substantial forms, they would be just like artifacts —if not direct products of human *skill*, at least products of human perception or convention, entirely derivative entities with no consistency of their own. Conventionalism about essences, then, makes everything artefactual and every form accidental.

It is noteworthy that Aquinas seems to pick up on this implication in his *Commentary to the Physics*. There he writes:

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[15] See M. R. Johnson, *Aristotle on Teleology*, pp. 100-101.

> It is known that the ancient philosophers of nature, incapable of understanding prime matter, […] postulated some sensitive body as the prime matter of all things —be it fire, or air, or water— and hence concluded that all forms happen to matter as it exists in act, like it is with artifacts, as the form of the knife happens to iron as it exists in act. *Thus, they had a similar opinion about natural forms and artificial forms* (*In Phys.*, II, lect. 2, n. 1; my italics).

He who denies substantial forms to natural objects, then, ends up thinking about them as a kind of artifacts, as Antiphon, according to Aristotle, thought about a bed: "that the arrangement and design of the bed, which are due merely to human convention, are coincidental attributes, and that the substance is that which persists throughout, however it is affected" (*Phys*., II, 1, 193a 9-17). Now, it will be noticed that this does not amount to a straightforward denial of substantial forms altogether, but merely to their relocation to a lower level of reality, which is supposed to be more fundamental. Natural objects do not, in this picture, have substantial forms, but are merely accidental configurations of some underlying "stuff", which is, in turn, the true substance, the true *locus* of the substantial form. After all, as I argued above, a complete denial of substantial forms seems impossible and incoherent.

However, it goes on to show that, though upon reflection substantial form may be an unavoidable metaphysical principle, to deny that natural objects such as those encountered in experience possess real essences or natures comes at a very heavy cost: the loss of the ability to distinguish them from artifacts, which are derivative entities with merely accidental configurations.[16] But in such a case man loses the ability to explain how it is that the natural kinds he ordinarily regards as substances exhibit causal powers and characteristics that are, to all he knows, irreducible to those of their parts, precisely unlike artifacts. And it also leaves the door open to a kind of anthropocentrism that Aristotle seemed to regard as illegitimate and ill-educated.

1.3. Against Anthropocentrism

In his *Nicomachean Ethics*, Aristotle clearly states that "what is wholesome or good is different for human beings and for fish" (*NE*, VI, 7, 1141a 22-23) and that, hence, wisdom (σοφία) cannot coincide with knowledge of what is beneficial, for in such a case "there will be more than one wisdom, because there is no one wisdom that is concerned

[16] See E. Stump, *Aquinas*, p. 38 and E. Feser, *Scholastic Metaphysics*, pp. 164-171 for an analysis of artifacts in terms of accidental forms. Notoriously enough, this reduction of natural kinds to artifacts is precisely what happens in Modern philosophy, once substantial forms have been expelled from the scientific picture of the world and living beings become complex *machines*.

with the good of all animals, but a different kind for each species" (*NE*, VI, 7, 1141a 30-32). According to this, Aristotle's picture of reality seems to be one in which each natural substance has its own good proportionate to its nature and no being exists exclusively for the sake of another.

M. R. Johnson has perspicuously argued for this point. As he has shown, almost nowhere in his theoretical treatises does Aristotle describe some being or part of a being as existing for the sake of another different being altogether. Instead, he always seems to limit teleological explanations to the benefit or good of the specific entity in question.[17] For instance, when explaining why the external and internal organs of different animals are themselves also different, Aristotle states that "each animal is equipped with those external parts which are necessary to it for its manner of life and its motion" (*PA*, III, 3, 665b 2-5). Any given being is how it is for the sake of its own special good, its own mode of life and motion, and not for the sake of any other kind of being, such as humans.

In a sense, one could say that natures are there to prevent teleological explanations from going astray. As Johnson writes, "the motions of the cow are for the sake of its own good (finding grass to eat, or shade to lie under). I cannot explain why a cow moves in a certain way by referring to its usefulness to humans for food or clothing or labor".[18] In this same spirit, Aristotle also claims that "it is absolutely ridiculous to demand from everything some benefit besides the thing itself, and to ask 'What's the payoff for us?' and 'What's the use?'" (*Protr.* 82.20-83.34),[19] cautioning thus against a kind of anthropocentrism that, in order to subordinate everything to human interest, loses sight of the value of scientific knowledge, which is always of the thing as it is *in itself*.

Now, the postulation of nature as an intrinsic principle of change and stability in natural things allows Aristotle to distinguish between what we may call the *intrinsic features or ends* of a thing (those which follow from its nature) and its *incidental uses* (those which are imposed or added to it by other beings like man).[20] For instance, the

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[17] The same general point is made by Philippa Foot: "Features of plants and animals have what one might call an 'autonomous,' 'intrinsic,' or as I shall say 'natural' goodness and defect that may have nothing to do with the needs or wants of the members of any other species of living thing"; P. Foot, *Natural Goodness*, p. 26. For Johnson's overall case, see *Aristotle on Teleology*, chapters 7-9. Admittedly, there are some difficult passages, such as *HA*, VIII, 2, 591b 23-30; *PA*, IV, 13, 696b 24-34 and *Pol.*, I, 8, 1256b 6-26, but Johnson is able to interpret them in continuity with Aristotle's general aim of explaining each being's constitution in light of its own individual benefit (see pp. 208-210 and 229-237, respectively).

[18] M. R. Johnson, *Aristotle on Teleology*, p. 62.

[19] Johnson's translation in *Ibid*., p. 63.

[20] "That which happens to something else because of that thing's own nature I describe as intrinsic to it, and that which happens to it not because of its own nature, as incidental, e.g. if lightning strikes while a

intrinsic end of a horse includes its sensitive life, proper pleasure, and reproduction. But it is incidental to the horse's nature, as Johnson notes, that it be used in agriculture, war, transportation, or entertainment.[21] This is why these several other ends do not appear in a scientific explanation of what a horse is and why it is how it is. In Johnson's words, "Aristotle considers each natural substance to have its own principle of motion, and its own good, and this is always to be contrasted with the incidental motions that can be imposed on it from outside, or goods or uses that it can be said to have in relation to other things".[22]

But now, recall that, as I have argued, the denial of nature as an intrinsic principle of natural beings equates them to artifacts. But artifacts, *considered as artifacts*, lack any intrinsic or natural tendencies: they have ends by convention and can be used in a myriad of different ways. In that case, the denial of natures and essences deprives man of any principled way to distinguish what is natural to something and what is incidental or violent to it.

A severe consequence of this would be that there's no way for there to be scientific or theoretical knowledge about something. All knowledge gets reduced to practical knowledge, to knowledge about the uses man can put a given thing to. In this sense, essentialism is a precondition actual scientific knowledge about things. If there were no natures, the anthropocentric man would be in the right to refuse to measure and value anything except against the bar of his own benefit. No exhortation to overcome such a tendency in order to appreciate things as they are in themselves could be legitimate, for there would be no "in itself" to anything. In Johnson's words, "if there is no nature, but only technology, the value of everything exists only in the creator or user of the technology".[23]

An example from Kathleen V. Wilkes is helpful to illustrate the point. Wilkes asks us to compare a sheepdog to a dog *qua* dog. Compared to the dog as such, the sheepdog is described by a new *ergon* or function, a new characteristic activity (herding sheep), which is, in a sense, added in an incidental way by man to its nature as a dog. As she writes:

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man is walking, that is a coincidence. But if because of itself, then intrinsically, for example, if an animal dies while being sacrificed" (*PoAn*, I, 4, 73b 10-15), Johnson's translation in *Aristotle on Teleology*, p. 62.

[21] See *Ibid*., p. 203.

[22] *Ibid*., p. 280. This is also pertinent to the distinction between scientific and practical knowledge (see p. 62).

[23] *Ibid*., p. 124.

> From this activity there is no feedback onto the other capacities; the activities of running, turning, crouching, and so on feed back onto nutrition and circulation but themselves subserve the herding capacity that per se generates no extra feedback. All the capacities a dog has qua dog are subordinated to this new one. The new capacity is justified by quite external grounds (the needs of the shepherd) and not by its contribution to the dog's own good. Hence what the good sheepdog does and what it is good *for* the sheepdog to do have no necessary correlation.[24]

Expanding on this, if natural objects lack any real essence or nature, they become just like artifacts, with no essential attributes or capacities apart from the ones man might want to superimpose on them to suit his practical interests or needs. Objects would have no "nature" apart from that dictated by their utility with respect to man's desires. There would be no such thing as that which is good *for* the sheepdog (considered as a dog). There would be no such thing as a true explanation of what a dog is apart from human consideration and benefit. There would be no intrinsic value in the dog nor any possibility of real theoretical or non-practical knowledge of it.

If, as I contend, the distinction between incidental and non-incidental ends or uses depends on recognizing the nature of a given thing, the denial of natures or essences would amount to the denial, so to speak, of the dog beneath the sheepdog. That such a result appears preposterous —indeed, the existence of sheepdogs presupposes the existence of dogs and is unintelligible without it— is evidence of how necessary the metaphysical posit of essences or natures is to make sense of man's experience of the world.

A side-remark by Johnson only worsens the situation. As he notes, because artifacts *per se* have no natural tendencies,

> all functions of artifacts are ultimately incidental. That is why it is possible to construct for any artifact incidental functions that have an equivalent explanatory status to any purported 'essential' function they may have. For example, a chair can be used to prop open the door, or a pencil to scratch my ear.[25]

Suppose this is so and we deny real essences or natures to ordinary entities. In that case, the range of possible incidental functions or ends for any given thing is virtually infinite, limited only by imagination, and leaving the door wide open to anthropocentric abuse. This may seem irrelevant when considering innocuous "super-added" uses to natural objects as that of the sheepdog, but it becomes more troubling when considering

[24] K. V. Wilkes, "The Good Man and the Good for Man in Aristotle's Ethics", in *Essays on Aristotle's Ethics*, p. 346.

[25] M. R. Johnson, *Aristotle on Teleology*, p. 70, note 16.

other possible uses or activities, such as that of a fighting dog. If one denies natures or essences as real metaphysical principles of natural substances, then —to paraphrase Wilkes— there very well may be something like a *good* fighting dog, entirely determined by the purposes of its owner. But there would be no such thing as that which is good *for* the dog that is being pushed into the fighting.

1.4. Recapitulation

If what I have been arguing is correct, then, despite Aristotle's initial reservations on whether it is wise to try to "prove" natures, these are so explanatorily powerful from a metaphysical point of view that their denial is bound to generate unbearable philosophical problems. As I have shown, denying real essences or natures to the objects of experience forces one to deny the experience of substantial change, to collapse the distinction between natural beings and artifacts and leave man helpless against the anthropocentric mentality of those who seek only the practical benefit in everything.

To put it in reverse, anyone who wants to hold up to his or her intuitions about how objects begin and cease to exist (sometimes tragically in death) and about how natural beings are not like artifacts and cannot be treated as such, will do well to hold to a kind of Aristotelian essentialism. The more things one ends up denying or rejecting because of the denial of the reality of essences, the more the intellectual price tag of such a rejection rises, and the more unreasonable it becomes to make such a rejection.

Now, it is a matter of historical fact, however, that Aristotelian-style essentialism, if not essentialism altogether, suffered major drawbacks due to the spread of nominalism in the Late Middle Ages, going on to be critically discredited and discarded in the so-called Modern scientific revolution. The anti-essentialist tendencies of the likes of W. O. Quine and K. Popper seemed to most to be hammering the last nails of the essentialist coffin,[26] and, as expected, this anti-essentialism was also bound to open its way into anthropology and, through it, ethics itself. Jean-Paul Sartre declared man to have no nature, his existence preceding his essence, each individual having to create his own values with no

[26] See, for instance, W. O. Quine, *Word and Object* (Cambridge, The MIT Press, 1960) and K. Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge* (New York: Harper and Row, 1968), p. 105. For thorough refutations of such anti-essentialist arguments, see E. Feser, *Scholastic Metaphysics*, pp. 216-223; D. Oderberg, "How To Win Essence Back From Essentialists", *Philosophical Writings*, 2001 (18), pp. 27-45 and *Real Essentialism*, pp. 21-43. For the nominalist influence in modern empiricist philosophers such as Hobbes and Hume, see L. Arnhart, *Darwinian Natural Right*, p. 233.

previous objective standard to refer to.[27] Giorgio Agamben wrote: "The fact that must constitute the point of departure for any discourse on ethics is that there is no essence, no historical or spiritual vocation, no biological destiny that humans must enact or realize".[28] Natures became fictions of language, and morality transformed into an always revisable agreement between individuals.

However, it is also true that essentialism has experienced a revival in the last century, regaining philosophical attention thanks to the work of Saul Kripke and Alvin Plantinga.[29] At the same time, many lines of argument have been developed in the last decades in support of the broadly Aristotelian essentialism that, as I've argued in Chapter 1, is one of the key components of the Aristotelian Foundation of ethics.[30] Having seen, then, how real essences or natures could have been argued for by Aristotle himself, let's now turn to such a contemporary revival and defense of essentialism.

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[27] See J. P. Sartre, *L'existentialisme est un humanisme* (Gallimard, Paris, 1996) p. 26.

[28] G. Agamben, *The Coming Community* (London, University of Minnesota Press, 2007), p. 42. One can find this skepticism of human nature also in Hannah Arendt, who wrote: "The problem of human nature […] seems unanswerable in both its individual psychological sense and its general philosophical sense. […] Moreover, nothing entitles us to assume that man has a nature or essence in the same sense as other things. In other words, if we have a nature or essence, then surely only a god could know and define it, and the first prerequisite would be that he be able to speak about a 'who' as though it were a 'what'. […] [T]he fact that attempts to define the nature of man lead so easily into an idea which definitely strikes us as 'superhuman' and therefore is identified with the divine may cast suspicion upon the very concept of 'human nature'"; H. Arendt, *The Human Condition* (London, The University of Chicago Press, 1998), pp. 10-11. Also, José Ortega y Gasset: "Man has no nature, he has… history"; J. Ortega y Gasset, "Historia como sistema", in *Obras Completas*, vol. VI (Madrid, Revista de Occidente, 1964), p. 41 (my translation); see also pp. 24 and 32. Mortimer J. Adler condemned the denial of human nature as one of Modernity's philosophical mistakes: see M. J. Adler, *Ten Philosophical Mistakes*, ch. 8.

[29] See A. Plantinga, *The Nature of Necessity* (Oxford, Clarendon Press, 1974) and S. Kripke, *Naming and Necessity* (Cambridg, Harvard University Press, 1980). These philosophers, and others following them, developed a contemporary form of essentialism called "modal essentialism" that stems from the need of grounding modal claims and intuitions. The modal essentialist frames modal claims in terms of possible worlds, where object O is said to have an *essential* property P if and only if O exhibits P in every possible world where O exists. Though the Aristotelian will largely welcome this resurgence of essentialism and celebrate the recovery of the distinction between essential and accidental properties, there has been major pushback against the modal approach to essence from Aristotelian philosophers. See, for instance, G. Klima, "Contemporary 'Essentialism' vs. Aristotelian Essentialism", in J. Haldane (ed.), *Mind, Metaphysics, and Value in the Thomistic and Analytical Traditions* (Notre Dame, University of Notre Dame Press, 2002), pp. 175-194; J. Ross, "The Clash of Modal Metaphysics", *Review of Metaphysics*, 1989 (43), p. 264; G. Kerr, *Aquinas's Way to God*, pp. 46-48 and D. Oderberg, *Real Essentialism*, pp. 1-20. Oderberg argues that the root of the problem comes from having given priority to semantics over metaphysics. At the same time, Brian Ellis notes that the way Aristotelian essentialism simplifies modal semantics by avoiding any appeal to "possible worlds", "counterparts" and "similarity relations" between worlds may be taken as evidence in its favor. See B. Ellis, *The Philosophy of Nature*, p. 132.

[30] See, for instance, B. Ellis, *The Philosophy of Nature*, pp. 6-7, where Ellis notes that this essentialist revival is mainly motivated by the pilling up of challenges to the mainstream Humean metaphysics.

2. Essentialism in Contemporary Philosophy

2.1. Essentialism as Unavoidable, or How Conventionalism Yields Paradoxes

Crawford Elder has developed a powerful argument that serves as a *reductio* of anti-essentialism or conventionalism.[31] Conventionalism about essences is supposed to hold that there are no real mind-independent essences or natures in the world. Instead, what man considers as such are just a product of his mind, brain, cultural and linguistic conventions, and so on. Quine, for instance, famously claimed that man's fondness for identifying natural kinds is but a by-product of evolution by natural selection.[32]

The problem, Elder argues, is that conventionalism about essences is self-defeating. Carried over to its last consequences, it amounts to an incoherent and paradoxical position which must be avoided on pain of irrationality. For the conventionalist to intelligibly maintain that essences are a product of human minds, he has at least to accept that human minds have a real mind-independent essence or nature. If human minds are the source of human conventions, they can't simultaneously be one of their products. To claim so would amount to saying that the mind causes itself, that human minds are both logically prior to human conventions *and* logically posterior to them, which is absurd.

Human minds can't be a result of themselves: to be so, they would have to exist already as mind-independent objects. And so, "on pain of paradox, we must allow that at least human minds have mind-independent existences".[33] But in that case, conventionalism about essences defeats itself, since it only makes sense granted its own falsehood, that is, granted that there really are in the world some objects with real mind-independent essences or natures —namely, human minds.

The argument goes through whether one opts for a dualistic view of the mind as an immaterial substance or a materialistic one that identifies it with or makes it supervene on the brain. Either way, the conventionalist runs into the problem of having to grant the nature or essence of something to make his point, in which case he contradicts himself. As Elder writes:

> Conventionalists who are materialists must say: the existence in the world of human brains is logically prior to the occurrence in the world of human mental events, and the occurrence in the world of human mental events is logically prior to the existence in the world of human

[31] See C. Elder, *Real Natures and Familiar Objects*, pp. 3-20.

[32] W. O. Quine, "Natural Kinds", in S. P. Schwartz (ed.), *Naming, Necessity, and Natural Kinds* (New York, Cornell University Press, 1977), p. 171.

[33] C. Elder, *Real Natures and Familiar Objects*, p. 20.

> brains. This is a paradox. And by "paradox" I do not mean a pleasant puzzle about which to spin articles. It is a paradox in the original sense —it is *para doxa*, beyond belief.[34]

Hence, conventionalism about essences can't be complete or total, on pain of irrationality. The conventionalist must grant the mind-independent existence of at least *one* thing with a real essence or nature, *the* thing that generates the conventions of individuation on which the illusion of essence lies —namely, man himself, or man's mind, or man's brain. Now, once one gets to this point, it is really hard to avoid reintroducing into one's ontology human bodies and the rest of the material objects that surround man and affect him in many ways. As Oderberg writes, in what could be labeled the 'Why So Special' Argument: "If we exist as a real natural kind independently of the application by us of principles of classification, why not others? What is so special about us in *this* regard?".[35]

This will be even harder to deny for the conventionalist who wants to claim, *à la* Quine, that man's essentialist inclinations are a by-product of evolution by natural selection. For evolution itself, as a scientific theory, very plausibly requires the mind-independent existence of a plethora of beings with distinctive essences and natures. These were in existence long before any human brains and have been interacting and evolving in a material world through a very long temporal process until natural selection has produced a being with brains that exhibit such essentialist tendencies.[36] Conventionalists who want to claim that essences are a product of human linguistic or social conventions will find themselves in a similar situation. They will have to admit into their ontologies enough of the objects of human experience to make possible linguistic communication and social spheres.[37] Hence:

> It follows that the austere ontologist cannot *merely* allow that "minds exist" is objectively true of the world. […] Minds are by nature entangled with too many other elements and

[34] C. Elder, *Real Natures and Familiar Objects*, pp. 12-13.

[35] D. Oderberg, *Real Essentialism*, p. 45. See also D. Oderberg, "The Metaphysical Foundations of Natural Law", p. 61. Human beings are certainly *special* in that they exhibit novel causal powers and capacities compared to other beings, and thus can enjoy superior goods such as the life of virtue and the contemplation of truth. But it is absurd to suppose that they are *so special* that they are the only beings in the world with a real essence or nature, everything else being a product of our conventions. This also ends up clashing with the conventionalist motivations, which are likely to avoid positing in human beings any "special" ability to access reality "in itself". The upshot of Elder's argument is that some philosophical theories end up making us extremely special, many times contrary to their own initial purposes.

[36] See, for instance, D. Walsh, "Evolutionary Essentialism", *British Journal for the Philosophy of Science*, 2006 (57), pp. 425-448 and L. Arhnart, *Darwinian Natural Right*. We will revisit this argument from evolution down below, in Section *2.5*.

[37] See C. Elder, *Real Natures and Familiar Objects*, p. 177.

> structures in the world. You cannot just pluck minds from the manifest image, and place them on the ground floor of reality, if your intention is to declare significant other elements of the manifest image (e.g., familiar medium-size objects) to be mere projections of the minds: the other elements will cling to the minds during the move, or else the minds you end up with will be eviscerated, "minds" in name only.[38]

Elder's *reductio* argument against conventionalism shows how essentialism is an unavoidable metaphysical hypothesis, which is why some kind of essentialism *must* be true, on pain of incoherence. The next step is to realize that, forced to decide between essentialist theories, it is more reasonable to opt for one which does not condemn the philosopher either to a radical mind-matter dualism or to a position in which, unintelligibly, man is so special that he is the only non-conventional being in an entirely conventional world.

2.2. From Modern Scientific Practice to Natures

The work of somebody who has been extremely decisive and influential in the revival of Aristotelian-style essentialism is that of philosopher of science Nancy Cartwright. Cartwright has argued convincingly that the actual practices of modern science make the most sense under the assumption that science aims "to discover the natures of things".[39] Though the modern scientific revolution is often credited with replacing natures with laws, Cartwright claims that "our most wide-ranging scientific knowledge is not knowledge of laws but knowledge of the *natures* of things".[40] This she argues by drawing attention to how the modern scientific practice, especially in the area of physics, mainly consists in carefully designing highly artificial experimental settings to generate "ideal" circumstances that would allow the nature of the object or process or feature in question to manifest or express itself unimpeded. She writes:

> The key here is the concept *ideal*. On the one hand we use this term to mark the fact that the circumstances in question are not real or, at least, that they seldom obtain naturally but require a great deal of contrivance even to approximate. On the other, the "ideal" circumstances are the "right" ones —right for inferring what the nature of the behavior is, in itself.[41]

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38 *Ibid*., pp. 166-169.

39 N. Cartwright, *The Dappled World* (Cambridge, Cambridge University Press, 1999), p. 138. See Also N. Cartwright, *Nature's Capacities and Their Measurement* (Oxford, Oxford Univerity Press, 1994) and X. Lanao / N. J. Teh, "Dodging the Fundamentalist Threat", in *Neo-Aristotelian Perspectives on Contemporary Science*, pp. 15-34 for an overview of Cartwright's thought.

40 N. Cartwright, *The Dappled World*, p. 4. See also pp. 79-80.

41 *Ibid*., p. 84. Cartwright refers to these ideal experimental settings as "nomological machines" (p. 50).

To borrow her example, when scientists design an experiment to test how two charged particles would interact if their masses were equal to zero, what they are really testing is how two charged particles behave and interact *qua* charged. That is, they are looking for that special and "ideal" set of circumstances "where the feature under study [in this case, the charge, or the particles *as charged*] operates […] without hindrance or impediment [without interference from other factors], *so that its nature is revealed in its behavior*".[42]

The laws we obtain when we achieve this —to keep on with our example, Couloumb's Law— are not, properly speaking, descriptions of how the object in question *actually* behaves outside the laboratory. "Laws are true", Cartwright writes, "but not universal",[43] because the circumstances that give rise to law-like regularities are so special and contrived that, in the real world, they commonly only happen within the artificially controlled boundaries of an experiment. The resulting laws are an expression of how the object "tries" or "tends" to behave given its nature, even when other interfering causes prevent it from doing so. In other words, the laws express what it is in the nature of a given object to do. As Cartwright notes:

> When a force is exerted on an object, the force will be relevant to the motion of the object even if other causes for its motion not renderable as forces are at work as well, and the exact relevance of the force will be given by the formula $F = ma$ […]. For cases like this, the older language of *natures* is appropriate. It is in the nature of a force to produce an acceleration of the requisite size. That means that *ceteris paribus*, it will produce that acceleration. But even when other causes are at work, it will "try" to do so.[44]

The strong essentialist assumptions that back up the whole modern scientific enterprise also allow for very confident generalizations based on a strikingly low number of experiments. Cartwright notes:

> For anyone who believes that induction provides the primary building tool for empirical knowledge, the methods of modern experimental physics must seem unfathomable. Usually, the inductive base for the principles under test is slim indeed, and in the best experimental designs, where we have sufficient control of the materials and our knowledge of the requisite background assumptions is secure, one single instance can be enough.[45]

For instance, suppose a scientist successfully measures the mass of an electron. "Now we think we know the […] mass of all electrons", Cartwright writes, "we need not go on

[42] *Ibid*., p. 84 (my italics).
[43] *Ibid*., p. 37.
[44] *Ibid*., p. 28.
[45] *Ibid*., p. 85.

measuring hundreds of thousands".[46] But there is an "essentialist assumption" beneath this reasoning, namely that "the charge or mass of a fundamental particle is not a variable quantity but is characteristic of the particle so long as it continues to be the particle it is".[47] It is precisely such an essentialist assumption that is needed to make these features of the scientific practice intelligible. Such a practice of generalization makes sense only on the assumption that the kind of situation we have artificially generated with the experimental setting is the right one for disclosing the nature or essence of the object under study, allowing it, so to speak, to "break free", to act unimpeded and without outside interference. "When we have such a situation", says Cartwright, "we are entitled to generalize from even a single case".[48]

To illustrate this, Cartwright appeals to Isaac Newton's famous *experimentum crucis*. In this experiment, a beam of white light goes through a prism and gets separated into the colors of the spectrum. In a second step, one of these colors is isolated and goes through an additional prism, with the result that the colored beam gets deviated with a certain angle, instead of a second color spectrum getting formed.

Newton took this experiment to decisively demonstrate some magical property of the prism does *not* produce the colors of the spectrum, but that white light is naturally constituted of all the colors, which are distinguished by their corresponding degree of refractability. And the point here is that there is no need to invent *other* experiments with white light —this one already establishes the results. While Goethe faulted Newton for not being empiricist enough, for not subjecting light to more experiments, circumstances, perspectives and observations, Newton and the scientific community took this sole experiment to decisively reveal the nature of white light, what white light was in itself. Cartwright writes:

> I claim that this study of the inner constitution [of light] is a study of an Aristotelian-style nature and that Newton's use of experiment is suited to just that kind of enterprise, where the *experimentum crucis* is an especially striking case. […] Through the experiment with the two prisms, the underlying nature expresses itself in a clearly visible behavior: the colors are there to be seen, and the purely dispositional property, *degree-of-refrangibility*, is manifested in the actual angle through which the light is bent. The experiment is brilliantly constructed: the connection between the natures and the behavior that is supposed to reveal them is so tight that Newton takes it to be deductive.[49]

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46 *Ibid*.
47 *Ibid*.
48 *Ibid*., p. 89.
49 *Ibid*., pp. 102-103.

So, to sum up, modern scientific practice seems to be operating under the methodological assumption that its objects of study possess a real essence or nature that governs their behavior and that they will clearly display if put under the right conditions, in which interfering forces are removed and the only (or nearly the only) factor left in the equation is precisely such a nature and its innate tendencies. In other words, "we, like Aristotle, are looking for 'a cause and principle of change and stasis in the thing in which it primarily subsists', and we, too, assume that this principle will be 'in this thing of itself and not *per accidens*'".[50] Hence, modern scientific practice strongly supports the thesis that things have real mind-independent essences or natures.

2.3. Laws of Nature, Laws of Natures

Another related line of reasoning that several authors —such as Nancy Cartwright, Brian Ellis, Edward Feser and David Oderberg—[51] have put forward starts from the notion of the laws of nature and argues its way back to real natures or essences as their best metaphysical grounding. The question here is: What is a law of nature? We can point to five major competing theories: theism, Humean-style empiricism, Platonism, instrumentalism and Aristotelian essentialism.[52]

Now, it is widely known that the notion of the laws of nature has a theological origin. They were supposed to be the regular ways in which God had antecedently decreed the world to behave, and they were understood in this way by the first who applied them to the scientific enterprise, like Newton and Descartes. After all, laws of nature were the

[50] *Ibid*., p. 81.

[51] See N. Cartwright, "No God, No Laws", in S. Moriggi / E. Sindoni (eds.), *Dio, la Natura e la Legge* (Milan, Angelicum, 2005); B. Ellis, *The Philosophy of Nature*, pp. 81-102; E. Feser, *Scholastic Metaphysics*, pp. 69-72 and D. Oderberg, *Real Essentialism*, pp. 143-151. Also, for a similar account, see G. Molnar, *Powers* (Oxford, Oxford University Press, 2003), p. 199.

[52] Given that laws of nature were also mentioned in the previous section, some may wonder exactly how this new line of reasoning differs from the preceding one. The answer is that above I argued, following Cartwright, that modern scientific *practice* is most consistent with an essentialist metaphysics. In other words, it was how scientists *look* at the world that was at issue: "How we choose to look at the world is just as sure a clue to what we think the world is like as what we say about it. Modern experimental physics looks at the world under precisely controlled or highly contrived circumstance; and in the best of cases, one look is enough. That, I claim, is just how one looks for natures"; N. Cartwright, *The Dappled World*, p. 102. What was at stake was a connection between *methodology* and *metaphysics* and how scientific methodology can inform us about the underlying metaphysical assumptions that make it possible. Instead, the point in this new section is to argue that the laws of nature that science uncovers are best accounted for in terms of the real essences or natures of objects, independently of how science methodologically arrives at them.

theoretical device with which the modern thinkers sought to sidestep and overcome the Aristotelian appeal to natures and substantial forms.[53]

The problem here is that while the *theistic account* of laws of nature may have strong appeal among theists of various stripes, it is not a theory that any non-theist would be willing to embrace, at least not without further argument. And though theism was the standard philosophical position among scientists and philosophers at the beginning of the Modern revolution, nowadays it is not so. Without entering to consider the objective merits of theism as a metaphysical picture of the world, what is needed is an account of laws of nature that can be largely neutral with respect to the theism-naturalism debate and that can be an open space of encounter between people independently of their belief in God. So, I set aside the theistic account of laws of nature.

The second candidate I mentioned was a Humean empiricist theory. According to the Humean philosopher, laws of natures are mere regularities found in the world. The problem here, as Feser notes, is that "on this view, laws tell us only *that such-and-such* a regularity exists, and not *why* it exists. That is to say, on this view a law of nature (or at least the ultimate laws of nature) don't *explain* a regularity, but merely *re-describe* it in a different jargon".[54] But then, on the Humean account, we are forced to abandon the idea that laws of nature *explain* the regularities we find in the world. This seems counterintuitive given the implication that, in such a case, science is not in the business of *explaining* anything, but simply of *cataloging* unexplained (and maybe unexplainable) regularities. As Cartwright rightly points out, "Laws of Nature are *prescriptive*, not merely descriptive, and —even stronger— they are supposed to be *responsible* for what occurs in Nature".[55] That on the Humean paradigm laws of nature can't be either of these things goes on to show that it hardly provides for them a satisfactory metaphysical grounding.

Thirdly, we could understand laws of nature as Platonic objects akin to Plato's Ideas or Mathematical Objects: as abstract objects or propositions that subsist in a sort of third realm distinct from the physical and the mental. The trouble here is that abstract objects are taken to be causally inert, so they are not the kinds of things that can *do* anything.

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[53] See N. Cartwright, *The Dappled World*, p. 79; E. Feser, *Scholastic Metaphysics*, p. 21 and B. Ellis, *The Philosophy of Nature*, p. 1.

[54] E. Feser, *Scholastic Metaphysics*, p. 22.

[55] N. Cartwright, "No God, No Laws", pp. 1-2. References correspond to the on-line version, available here: <http://www.isnature.org/Files/Cartwright_No_God_No_Laws_draft.pdf> [Accessed: 22/02/2023].

Hence, if Laws of Nature are Platonic entities, we are once more left with the conundrum of how exactly they can be said to *explain* or *govern* what happens in the world. To put things worse, very plausibly, *other* possible Laws of Nature would equally exist in this picture, so one would also need to explain *why* the world obeys *this* particular set of Subsistent Laws of Nature and not any other.[56] With this in mind, it is no surprise that Plato himself, in the *Timaeus*, needed to appeal to a God-like figure, the Demiurge, to solve this conundrum.

The fourth alternative, instrumentalism, "gives up on Laws of Nature altogether"[57] and amounts to a rejection of scientific realism. Instrumentalists understand laws of nature simply as human tools or constructions useful to make predictions, but that's it. On this view, laws of nature don't govern phenomena, nor are they responsible for what happens in the world. Instead, they are merely instruments of human devising that help man navigate Nature. As is obvious, the problem here lies in the rejection of scientific realism, which may well be a very high price to pay. After all, "this faces the Putnamesque objection that it makes a miracle of the success of science's use of the notion of a law of nature. We need an explanation of why laws are such useful instruments if they are not real".[58]

Thus, the last alternative remains: Aristotelian essentialism. On this view, the laws of nature that science uncovers are grounded in the natures of things; or, in Oderberg's words, "*the laws of nature are the laws of natures*".[59] Now, laws of nature *do* explain and govern the events that happen in the world precisely because they describe and are grounded in the natures of things and their natural powers and capacities. A given thing *obeys* and follows a given law of nature uncovered by science because it is in its nature to do so. That the Aristotelian account hands over to laws of nature the explanatory power that the others stripped them of, and that it does so without direct appeal or commitment to God, is a powerful reason to prefer it over its competitors. And so, as Cartwright notes, in reality, "we have not replaced *natures* by *laws of natures*. For our basic knowledge — knowledge of capacities— is typically about natures and what they produce".[60]

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56 See E. Feser, *Scholastic Metaphysics*, p. 77 and N. Cartwright, "No God, No Laws", p. 14.
57 N. Cartwright, "No God, No Laws", p. 14.
58 E. Feser, *Scholastic Metaphysics*, p. 77.
59 D. Oderberg, *Real Essentialism*, p. 144.
60 N. Cartwright, *The Dappled World*, p. 80. See also "No God, No Laws", p. 23.

Brian Ellis has gone even deeper into this line of reasoning, identifying three problems that any candidate for a successful metaphysical theory of laws of nature should aspire to solve.[61] First, there is a *necessity problem* that represents the need to explain the peculiar sort of non-logical, non-analytical necessity the laws of nature are supposed to have. Second, there is an *idealization problem*, which demands an account of the idealized character of said laws, which "seem to describe only the behavior of ideal kinds of things, or of things in ideal circumstances".[62] Third, the *ontological problem*: how to account for the objectivity of laws of nature, the fact that they are discovered, rather than invented.

Ellis evaluates Humeanism, instrumentalism —which he labels "conventionalism"— and essentialism and concludes that an essentialist account is the best option at a theory of laws that can overcome the three problems listed. A Humean theory of laws, for instance, while it accounts for their objectivity —given that, on this view, laws describe *actual* regularities found in Nature—, does away with the necessity problem. The Humean can't allow laws of nature to be necessary, given that it understands them as mere brute regularities between events without any necessary link between them. But then the Humean theory can't account either —at least not without great difficulty— for the modal character of many laws, such as Pauli's exclusion principle, which states that it is *impossible* for two electrons in an atom to be in the same quantum state. As Ellis notes, "if the laws of nature are just universal generalizations about the world, as Humeans believe, then there is no place for the modalities of necessity or possibility to occur in their expression".[63]

It is also tricky, Ellis says, for a Humean to account for the idealized character of the laws. Why should we think that the laws of nature describe regularities found in Nature, if the regularities they so describe are of such an idealized character that they hardly *ever* occur in Nature? There are no regular patterns in Nature befalling a frictionless surface, a massless particle, or a volumeless planet, and yet laws of nature tend to be framed in such terms.

A way out of this problem for the Humean is what Ellis labels the "approximation defense": the idea that laws of nature are a sort of compromise "between the competing

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61 See B. Ellis, *The Philosophy of Nature*, pp. 90-124. Ellis also talks about a fourth problem, the structural problem (how to account for the apparent hierarchy of laws), but I omit it in the benefit of simplicity.

62 *Ibid*., p. 91.

63 *Ibid*., pp. 115. For the example of Pauli's exclusion principle and many others, see p. 116.

demands of accuracy and comprehensibility".[64] The real laws of nature, the real regularities, are so massively complicated that scientists must settle for idealized simplifications. However, the fact that the most fundamental laws of nature, such as the law of conservation of energy, are still highly idealized gives this response an unsatisfactory flavor. As Ellis writes, "the regularity theorist must be able to explain how the conservation laws can apply locally, *even though none of the open and interactive systems we find in nature actually obeys them*".[65] Additionally, suppose the laws of nature science describes are mere simplified versions of the *real* more infinitely complex laws. In that case, it makes little sense to take them, as scientists do, to explain and govern phenomena. In actuality, they do neither of these things.

Instrumentalism fares a little better, for it can solve at least the necessity and the idealization problems. It is easy, for instance, to explain the idealized character of laws if one considers them merely useful conventions: their idealization is part of their usefulness. At the same time, the instrumentalist can say that the special kind of necessity the laws of nature enjoy stems from the fact that they are true, so to speak, by convention:

> Conventionalists would say, for example, that the law of conservation of energy is a convention —one that serves (at least partly) to define the concept of a closed and isolated system. Therefore, they would say, there cannot be any exceptions to the law of conservation of energy. If we come across a system for which energy is not conserved, then this only shows that it is either not closed or not isolated.[66]

Nevertheless, these advantages come at the price of giving the laws "the status of theorems in an abstract theoretical system",[67] thus doing away with scientific realism altogether. By rejecting the claim that laws accurately describe any deep natural reality or structure, they become unable to explain, as was said before, how some conventions are more useful than others, leaving unsolved the ontological problem.

However, an essentialist theory of laws can quite easily solve the three problems. Take the necessity problem. Under the essentialist view, the laws of nature are *metaphysically* necessary because they are grounded in the essential properties of things (i.e., those without which the things in question would not exist). Let's suppose, for instance, that the essential properties and behavior of object O are captured by law L. Law L, then, is *metaphysically necessary* because object O can't act in a way contrary to its nature, and

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[64] *Ibid*., p. 93.
[65] *Ibid*., p. 94.
[66] See *Ibid*., pp. 95-96.
[67] *Ibid*., p. 96.

hence, law L holds in any world in which object O exists. If an object O', superficially resembling O, did not follow law L, that would mean that O' would not be of the same nature as O, despite superficial resemblance.[68]

In the second place, by postulating laws of nature refer to the natures of things, the essentialist is also able to solve the ontological problem: a law of nature is true and objective *because* it accurately represents or describes the nature of a given thing. Lastly, the essentialist is also ready to give an explanation of the abstract and idealized character of laws because (as I have shown above with Cartwright's argument) "in order to describe the essential properties of anything, it is necessary to abstract from any external forces that may be acting upon it to say how it would be or behave in the absence of such forces".[69]

Thus, essentialism fares better than its competitors as a theory of laws of nature, providing evidence that the best way to account for them is in terms of the real essences or natures of things, which ground their essential powers and capacities. Laws of nature should simply be taken as "a shorthand for a description of how things act *given their natures*".[70]

2.4. Essentialism in Biology: Substantial Form as the Great Unifier

Another area where the Aristotelian account of real essences and natures has been put to great use is the philosophy of biology, arguably the one place Aristotle had in mind when developing his account of substances and substantial forms. For a start, there seems to be a radical ontological distinction between living beings and non-living or inanimate beings. Living beings exhibit causal powers and properties unbeknownst to in the inanimate realm. Non-living beings don't feed, they don't reproduce, they don't *die*. More to the point, they don't exhibit that kind of self-serving reflective homeostatic or immanent causality that is the mark of the living. As Oderberg puts it:

> Homeostasis clearly exemplifies immanence: organisms work to regulate themselves and preserve their stability both internally and with regard to changes in the environment. […] Metabolism is probably the paradigmatic example of immanence: the organism takes in matter/energy, uses it for its sustenance, growth and development, and expels what is noxious or surplus to requirement. […] Biological splitting of the kind found in binary fission

[68] See B. Ellis, *The Philosophy of Nature*, pp. 100-102 and D. Oderberg, *Real Essentialism*, p. 144. Significantly, this implies that the laws of nature are both *necessary* and *a posteriori* since they are disclosed only after empirical investigation.

[69] B. Ellis, *The Philosophy of Nature*, p. 101.

[70] E. Feser, *Scholastic Metaphysics*, p. 106 (my italics).

> (prokaryotes) and mitosis (eukaryotes) involves processes that are *regulated by the organism* for its integrity and proper functioning as an organism. This kind of immanent activity is completely absent from the inorganic realm.[71]

But in such a case, we need some metaphysical principle to account for this categorical distinction between the living and the non-living. Given that they are both made up of the same fundamental matter, the distinction must be accounted for in terms of a distinction of forms, more specifically, substantial forms. This is consistent with the fact that death seems to be, as was noted before, the paradigm case of a substantial change or *destruction* of a certain being. As Aristotle himself writes: "A corpse has the same shape and fashion as a living body; and yet it is not a man" (*De Anima*, I, 1, 640b 34-36).

Indeed, if death is not a substantial change, it is difficult to see what could count as such. But then, if a living organism undergoes substantial change when it ceases to be alive it, this must mean that it (or, more specifically, its prime matter) loses the substantial form of a living being and adopts the substantial form of an inanimate object, a corpse. So, the ontological novelty of living organisms with respect to the inorganic realm must be accounted for in terms of a novel substantial form —that is, in terms of a real essence or nature distinct from that of an inanimate object.

Another phenomenon that, though universal across all being, is more manifest in living organisms and that also cries out for an explanation in terms of real essence or substantial form is their *unity*, which is why Oderberg has called substantial form "the great unifier".[72] We can point to at least two aspects of unity. First, there is the aspect of unity *in multiplicity*: Peter is, in a sense, united to Paul in a way he is not united to his cat or a tree. The Aristotelian essentialist can easily explain this unity between different individuals in terms of a unity of essence: some things *share* or *instantiate* the same nature or substantial form. As Edward Feser writes:

> [B]iologists group organisms according to common traits and treat them *as if* they reflected some common intrinsic nature […]. They do this whatever views they explicitly hold on the question of essentialism, and this approach is fruitful. We find that organisms within these groupings really do reliably tend to manifest certain common properties, to exhibit certain common characteristic behaviors, and so on. We need an explanation of why this is so, and

[71] D. Oderberg, *The Metaphysics of Good and Evil*, pp. 87 and 90.

[72] D. Oderberg, "The Great Unifier. Form and the Unity of Organisms", in *Neo-Aristotelian Perspectives on Contemporary Science*, pp. 211-234.

> the best explanation is that there *really is* an essence intrinsic to organisms of the same kind —that it is not just a useful fiction.[73]

Another aspect of unity is the one that a given organism exhibits with itself through different stages of development. The very fact that people recognize that something undergoes a process of *development* is evidence that they recognize that it is, in each stage of it, the same one thing of which they are talking about. Let's call this the aspect of unity or identity *through change*. What is it that, metaphysically speaking, guarantees that I am the same being, the same organism, as the fetus that was starting to develop in my mother's womb so many years ago or as the little child I see in my parent's family album? Christopher Austin and Anna Marmodoro present the problem in pretty stark terms:

> Each biological denizen that populates our humble neighborhood of the cosmos is a veritable world unto itself whose complex construction autonomously navigates the development and maintenance of its own intricate machinery. And although composed of an uncountable number of constituents, each of these multi-layered microcosms is a fundamentally unified being —each is in some way *one*, rather than *many*. But in virtue of what, metaphysically, are organisms more than merely bundles of biological bits whose diachronically disparate collections are continually washed away in a Heraclitean flux? In other words, what secures, metaphysically, an organism's continued persistence *as one* over time?[74]

Again, the Aristotelian essentialist argues that such diachronic unity through change must be accounted for in terms of substantial form. What makes the organism *one* and *keeps it unified*, what explains its displaying "a unified, characteristic repertoire of behavior, operations, and functions indicative of a single, integral entity",[75] is its essence or nature, which remains numerically one and the same at every stage in which the organism in question exists, dictating its proper development. Thus, the Aristotelian can give a satisfactory resolution to the age-old problem of identity through change: "The acorn and the oak tree are two very different objects. Nevertheless, they may be just different stages of what is essentially one and the same thing".[76]

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[73] E. Feser, *Aristotle's Revenge*, p. 401. See also M. Devitt, "Resurrecting Biological Essentialism", *Philosophy of Science*, 2008 (75), pp. 344-382; D. Oderberg, *Real Essentialism*, p. 45 and S. MacDonald and E. Stump, "Introduction", in *Aquinas's Moral Theory*, p. 9.

[74] C. J. Austin and A. Marmodoro, "Structural Powers and the Homeodynamic Unity of Organisms", in *Neo-Aristotelian Perspectives on Contemporary Science*, p. 169.

[75] D. Oderberg, *Real Essentialism*, p. 45.

[76] B. Ellis, *The Philosophy of Nature*, p. 10.

Additionally, Oderberg has convincingly argued that substantial forms can account for a fundamental biological truth: the radical ontological distinction between organs, organisms, and collectives. In his words:

> An organ has a similar unity to the organism of which it is a part —call it, for now, *tight*. Yet the organ is *subservient* to the organism in a way that the organism is not subservient to anything. […] By contrast with the organ, however, a collective has a similar unity to the organism that is a member of it inasmuch as neither are subservient to anything in the way the organ is subservient to the organism. But the collective's unity is *loose*. So the organ's unity is tight but subservient, the collective's is loose but not subservient, and the organism's is tight but not subservient.[77]

Any philosophical hypothesis that was to collapse such a distinction —understanding organisms, for instance, as collectives or collectives as organisms— would run counter to the most basic intuitions in biology, for all understand that neither a heart nor an entire beehive are individual living organisms. But then, what accounts, metaphysically speaking, for this distinction, what *explains* it? Again, the notion of substantial forms provides a helpful metaphysical tool in this area. As Oderberg writes, "the central idea is that only an organism has a substantial form *simpliciter*: organs and collectives have them only *secundum quid*, or in a manner of speaking".[78]

Here Oderberg proposes to distinguish between (i) *having* or *possessing* a substantial form, (ii) *containing* a substantial form, and (iii) *abtaining* a substantial form (a neologism of his own coining). Organisms would be the only ones that, properly speaking, *have* or *possess* a substantial form, "inasmuch as this is its unifying principle as an individual substance of its essential kind".[79] In contrast, collectives, without having or possessing a substantial form *per se*, *contain* one or more substantial forms because they consist "of one or more individual organisms in some systemic combination".[80] Lastly, an organ *abtains* the substantial form from the organism of which it is part because, ontologically speaking, it is completely dependent on it:

> [The organ] is thoroughly *permeated* by the substantial form in the sense that every part and property of the organ is co-opted to the service of the whole (barring damage or disease). The organ has *no life of its own*: it is the metaphysical slave of the whole, forming just one

[77] See D. Oderberg, "The Great Unifier", p. 213.
[78] *Ibid*., p. 218.
[79] *Ibid*., p. 218.
[80] *Ibid*., p. 219.

> part, however important, of the organism's total organization, which is dictated by the substantial form.[81]

Hence, in biology, substantial forms help explain not only the different aspects of an organism's unity, but also "its different metaphysical status from the organ and the collective",[82] proving once more essentialism's great explanatory power as a metaphysical theory.

This power notwithstanding, biological essentialism has proven to be a controversial thesis, even among committed essentialists.[83] Two main difficulties or problems oppose biological essentialism, one from the theory of evolution and another from vagueness. I'll leave the objection from evolution for the next section, but tackling the second one here will be useful.[84]

The biological realm is said to be a messy space with no clear-cut distinctions, where the boundaries between species are as fuzzy as those between the colors of the spectrum.[85] There seem to be many instances, both in current times and in the fossil record, in which we can't adjudicate whether an animal belongs to one species or another, given that it shares characteristics with several of them.[86] And in evolutionary history, usually there is no clear-cut discontinuous rupture between succeeding individuals to which we can point as the beginning of a new biological species.

How can the defender of biological essences or natures resolve this difficulty? I follow David Oderberg in proposing a 3-step answer. First, recognize that the fact that we encounter some indeterminate and vague cases *presupposes* the existence of determinate and non-vague ones, with respect to which we judge the former's indeterminacy:

> If this is so, then what do we say about the non-vague species? If we say they are really vague too, this destroys the possibility of identifying vagueness at all: if nothing is

[81] *Ibid*., p. 220.

[82] *Ibid*., p. 222.

[83] Brian Ellis, for instance, hesitates to extend the notion of natural kinds to biological species, especially because they lack the categorical distinctness we find among natural kinds in the physico-chemical realm. See B. Ellis, *The Philosophy of Nature*, pp. 29-31.

[84] See C. Elder, *Real Natures and Familiar Objects*, pp. 119-128 for a helpful discussion of an objection from vagueness that is not directed specifically to biological essentialism, but to essentialism about macroscopic objects in general.

[85] See, for instance, B. Ellis, *The Philosophy of Nature*, p. 31. Even Aristotle acknowledges that "nature passes in a continuous gradation" from one class of beings to another, and hence "one class is so close to the next that the difference seems infinitesimal" (*PA*, IV, 4, 681a 10-15).

[86] The extinct *Archaeopteryx* and *Ambulocetus* are cases at hand, the first exhibiting features both of reptiles and birds and the second of whales and land mammals. See D. Oderberg, *Real Essentialism*, p. 231 and 234.

> determinate, how can we plausibly say that anything is indeterminate? But if everything is neither determinate nor indeterminate, we end up in absurdity. So we must say that the apparently determinate cases really are determinate if we want to hold to the vague cases' really being vague.[87]

Hence, the very phenomenon of vagueness depends, epistemologically speaking, on recognizing the real essences or natures of non-vague entities. But in such a case, the suggestion that vagueness somehow precludes biological essentialism is a non-starter. Since vagueness itself presupposes essentialism, it can hardly be used as a reason to deny it. As Oderberg writes:

> That there must be *some* determinate species is knowable a priori, given that there are any indeterminate ones. For if there are indeterminate species —in particular, where the indeterminacy is supposedly a case of intermediacy or transitionality— there must be determinate ones relative to which the indeterminacy is measured.[88]

The second step consists in carefully distinguishing ontological and epistemic indeterminacy. Essentialism only precludes ontological indeterminacy because, as I argued above, if something exists, it must be some thing or other, it can't be anything in particular. Hence, the arguments for essentialism are at the same time arguments for ontological determinacy.[89] But nothing in essentialism *per se* precludes *epistemic* vagueness, for "it is no part of the real essentialist worldview that humans can always achieve complete, adequate knowledge of the essences of things".[90]

Thus, given all the arguments I have put forward for essentialism and the explanatory benefits of extending it to the biological realm, it must be that the vagueness and indeterminacy in question are not ontological in nature. Instead, they must be the result of combining an arena of explosive rich diversity and a lack of knowledge, evidence, or cognitive penetration on our part (which is not entirely surprising or unexpected, given our limited intellects). In other words, "belief in metaphysical vagueness is no more than a projection onto the world of our incomplete grasp of essence, and […] this incomplete grasp is itself a function of finite minds operating on partial evidence".[91]

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87 *Ibid*., p. 228. Also, notice how this objection would end up undermining biology itself as a rational discipline. For "life" is also a somewhat vague concept that admits of unclear or indeterminate cases. But because of this, no one would (or should, in any case) deny that there really and determinately are things that are alive and things that are not, and that the distinction between them is substantial or essential in nature.

88 *Ibid*., p. 227. See also E. Feser, *Aristotle's Revenge*, p. 405.

89 See also D. Oderberg, *Real Essentialism*, pp. 226-227.

90 *Ibid*., p. 19.

91 *Ibid*., p. 234.

Finally, the third step is to adopt a methodological tool for dealing with vague cases: "*when in doubt, divide*", or what Oderberg calls the method of partition, following Richmond Thomason. Such a method consists in the following:

> According to this procedure, when the taxonomist is faced with an indeterminate case, being unable on best inquiry to classify organism *O* as belonging to species *S1* or *S2* (or some other species), he should simply classify it as belonging to a new species *Sn*, and only reclassify it as belonging to an already-recognized species if further inquiry makes postulation of the new species unnecessary.[92]

With such a method in place, the biologist can resolve indeterminate cases through a defeasible judgment open to future revision in the light of new evidence. Note that the method of partition does not violate Occam's razor, but instead follows it thoroughly. Indeed, the placement of indeterminate cases in new intermediate species is always made on the grounds of serious reasons and is opened to be corrected if new research shows the postulation of a new species unnecessary.

To sum up, I have shown there are good grounds for extending Aristotelian essentialism to the biological realm, for it helps to make sense of several distinctively biological phenomena: (i) the radical ontological distinction between living and non-living beings, (ii) the special kind of unity organisms exhibit both in multiplicity and within themselves, through change and development, (iii) and the metaphysical differences between organs, organisms, and collectives. On the contrary, we've seen that one of the most common objections against biological essentialism (the one from vague and indeterminate cases) can be easily resolved through a 3-step answer: (1) recognizing that indeterminate cases presuppose determinate ones, (2) carefully distinguishing between ontological and epistemic indeterminacy, and (3) applying the method of partition whenever it is necessary and reasonable to do so. Let's now turn to the second major objection against biological essentialism, the one from Darwinian evolution.

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[92] *Ibid*., p. 230. See also R. H. Thomason, "Species, Determinates and Natural Kinds", *Noûs*, 1969 (3), p. 98, quoted there. Oderberg shows how the method of partition would work by applying it to the cases of *Archaeopteryx* and *Ambulocetus* mentioned above. As he writes, "if we plausibly take *Archaeopteryx* as a typical case of indeterminacy as between reptiles and birds, the method of partition recommends placing it into a different species —neither reptile nor bird. […] *Archaeopteryx* cannot have both an avian substantial form and a reptilian one. Hence it must have neither, given that there is no overwhelming reason to place it in either class" (D. Oderberg, *Real Essentialism*, p. 231) and "*Ambulocetus* does not prove metaphysical vagueness in the essence of whales or land mammals. All it proves is that there is a kind of animal that is like both but essentially neither" (p. 234).

2.5. From Essentialism to Evolution and Back Again

Another major objection against Aristotelian-style biological essentialism is that it is incompatible with the Darwinian theory of evolution.[93] Part of the problem essentialism is supposed to have with evolution is a variation of the vagueness objection that has just been discussed above: that evolution implies the boundaries between species are vague and fuzzy, while under essentialism what should be expected is that they are sharply distinct.[94] I have already addressed the objection from vagueness, and the same said above applies here. The crucial point is that, given the arguments for essentialism, the vagueness between succeeding species in the evolutionary history must be epistemic and not ontological. As Feser writes:

> Evolution simply doesn't require [ontological] vagueness in the first place. Lead and gold have certain properties in common (they are both metals, after all), but it doesn't follow that there is no sharp boundary between them. Similarly, that a species S1 and its descendent species S2 will have certain traits in common doesn't entail that there is no sharp difference between their essences. Even if, among the intermediary groups of organisms in between S1 and S2, it is hard to determine where one ends and the other begins, it doesn't follow that these intermediary groups lack essences.[95]

From an ontological point of view, the intermediary cases will either be limit cases of S1, limit cases of S2, or members of a third intermediate species. Again, the fact that human beings can't adjudicate which is the case will just be a matter of either lack of evidence, cognitive limitation, or both.

Another objection from evolution, though, claims that essentialism can't account for the transformation of one species into another that takes place in the evolutionary process. But this seems to me to confuse Aristotelian essentialism with Aristotle's fixism about essences. The latter, though, does not appear to be a logical or necessary entailment of the former but merely an additional thesis associated with it simply as a matter of historical contingency. As Oderberg notes:

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[93] See, for instance, B. Ellis, *The Philosophy of Nature*, p. 5. Darwin himself seemed to think that his theory led to a rejection of essentialism in favor of some kind of nominalism about species: "We shall have to treat species in the same manner as those naturalists treat genera, who admit that genera are merely combinations made for convenience. This may not be a cheering prospect; but we shall at least be free from the vain search for the undiscovered and undiscoverable essence of the term species"; C. Darwin, *The Origin of Species* (New York, Random House, 1936), p. 371 (quoted in L. Arnhart, *Darwinian Natural Right*, p. 233).

[94] See, for instance, D. Hull, "The Effect of Essentialism on Taxonomy: Two Thousand Years of Stasis", in M. Ereshefsky (ed.), *The Units of Evolution: Essays on the Nature of Species* (Cambridge, The MIT Press, 1992).

[95] E. Feser, *Aristotle's Revenge*, p. 405.

> That an essence is fixed means that nothing that possesses it can cease to possess it without ceasing to exist, and that when something comes to possess it that thing begins to exist. It does not mean that nothing possessing an essence can ever be created, destroyed, or substantially changed into something with a different essence. There is no reason in principle why the same could not apply to biological species.[96]

For a start, the Aristotelian notion of substantial change seems to provide a fitting philosophical model for understanding how an individual of a kind K could arise out of a previous individual of a different kind K':

> Chemical transformation is an example of one kind of individual's giving rise, through substantial change, to a new kind of individual. Biological evolution also involves an individual of one kind giving rise to an individual of a distinct kind —not through substantial change but through reproductive activity. The processes are different, but the outcome is the same.[97]

Suppose substantial change is not precluded by the belief in real essences or natures. In that case, there does not seem to be any solid reason to think that, somehow and inexplicably, evolutionary change would be. Edward Feser, following philosopher Henry J. Koren, even proposes several views of how the evolutionary process could be accounted for under Aristotelian principles, depending on whether a given Aristotelian wants to affirm that some steps in the evolutionary history are metaphysically impossible without direct divine intervention.[98] The most theistically neutral of his proposals is the one he labels *Aristotelian natural evolutionism*:

> On this view, even the most complex kinds of sensory or animal life are contained at least *virtually* in the simplest kind of vegetative life —and indeed, contained virtually even in the simplest inanimate substances. […] The idea here would be that the nature of the elementary kinds of inanimate matter is such that, when they exercise their causal powers in concert in the right sort of way, the eventual result will be simple kinds of vegetative organic substances; and that the nature of these simple vegetative substances is such that, when they together with the inorganic substances that make up their environment all exercise *their* causal powers in concert in the right sort of way, the eventual result will be simple kinds of sensory or animal substances. The properties and causal powers of the simplest inorganics substances are on this

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[96] D. Oderberg, *Real Essentialism*, p. 204. As Oderberg notes, other philosophers that have argued in the same vein include D. Walsh, "Evolutionary Essentialism", pp. 425-448; S. Okasha, "Darwinian Metaphysics: Species and the Question of Essentialism", *Synthese*, 2002 (131), pp. 191-213 and E. Sober, *Philosophy of Biology* (Oxford, Westview Press, 2000). Sober, for instance, writes: "Essentialism regards species as perennial categories that individual organisms occupy; evolution just means that an ancestor and its descendants sometimes fall into different categories" (p. 149).

[97] D. Oderberg, *Real Essentialism*, p. 205.

[98] Such as the transformations between genera (from inanimate to vegetative and from vegetative to animal) or the appearance of rational and intellectual (human) beings. See E. Feser, *Aristotle's Revenge*, pp. 428-432 and H. J. Koren, *An Introduction to the Philosophy of Animate Nature* (St. Louis, B. Herder Book Co., 1955).

> view naturally sufficient to generate this outcome, just as purely natural processes can produce water out of hydrogen and oxygen and lead out of uranium.[99]

After all, in Aristotelian metaphysics, the prime matter that underlies all living substances is pure potentiality to receive any form, so there shouldn't be any *a priori* problem for a novel form to be educed from matter by the power of several actual agents. Hence, there doesn't seem to be any insuperable difficulty from evolution that essentialism cannot deal with. But now consider further that the objection from evolution can be turned on its head. For, arguably, several key tenets of the theory of evolution *presuppose* biological essentialism.

For instance, Stephen Boulter notes that biologists often explain biological diversity through speciation and extinction events, thus acknowledging that some species begin to exist, while others cease to exist. As he writes: "Once ancestral species A has cleaved into two new daughter species B and C, ancestral species A no longer exists, and daughter species B and C have come into existence […]. Moreover, B is not C, and neither is a continuation of A".[100] But, he argues, this standard account is permeated with essentialist assumptions, for "only if species have distinct essences can one say in a principled fashion that one species no longer exists and that two new distinct species have arrived on the scene".[101]

Additionally, as Denis Walsh has argued, adaptive evolution requires a careful equilibrium between the mutability and stability of organisms for they to adjust responsively to a changing environment and maintain a well-functioning homeostatic state.[102] Now, the degrees and ranges of such mutability and stability "are consequences of the distinctive capacities of organisms",[103] specifically their phenotypic plasticity,

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[99] E. Feser, *Aristotle's Revenge*, p. 430. Some may think this account commits the Aristotelian to a kind of panpsychism, but it does not. As Feser notes: "The problem with panpsychism is precisely that it really seems to make a kind of conscious awareness *actually* present in vegetative and inorganic substances, rather than merely virtually present. By contrast, when the Aristotelian holds, for example, that the parts of a substance are only virtually present in the whole, he means precisely that they are *not actually* there, but rather may *potentially* be drawn out of it" (pp. 431-432). Also, as an interesting aside, Feser argues (pp. 424-425) that Aquinas's acceptance of spontaneous generation, though scientifically erroneous, actually shows Aquinas did not see any metaphysical impossibility in the thesis that inanimate natural substances could give rise to living beings.

[100] S. Boulder, *Metaphysics from a Biological Point of View* (Basingstoke, Palgrave Macmillan, 2013), pp. 108-109.

[101] *Ibid*., p. 109.

[102] See D. Walsh, "Evolutionary Essentialism", pp. 425-448. Oderberg comments favorably on Walsh's argument, with some critical remarks, in *Real Essentialism*, pp. 212-214.

[103] D. Walsh, "Evolutionary Essentialism", p. 438.

which limits and constrains what kinds of mutations and adaptations a given organism is capable of withstanding. But it seems plausible that such phenotypic plasticity that "underwrites novel adaptations, the suppression of harmful mutations, and the constancy of traits across a population"[104] needs to be grounded in or explained with reference to something very much like an organism's nature or essence, a "principle and cause of change and stability in the thing" (*Phys*., II, 1, 192b 20-22). Indeed, why should there be any objective fact about the range of an organism's plasticity and the kind of mutations and adaptations it can withstand, if there is no objective fact about what that same organism's nature or essence *is*?[105] Thus says Walsh:

> In order to understand how changes in populations of genes explained by the modern synthesis theory of evolution are realized as adaptive changes in populations of *organisms*, we must understand the role that the natures of individual organisms play in influencing the trajectory of evolutionary change.[106]

So, once more, it seems the theory of evolution must be predicated on the assumption that there really are biological essences. If this is so, the biological anti-essentialist can only escape these essentialist assumptions either by adopting an instrumentalist interpretation of the theory of evolution —denying that it tells us any objective facts about the history and origin of species—, or abandoning the scientific autonomy of biology altogether. Thus, anyone that would not want to go down these paths would have here, from evolution itself, another strong argument for Aristotelian essentialism.

2.6. Against Reductive Essentialism

Given Elder's *reductio* argument against conventionalism and the fact that essentialism in many areas seems to be a straightforward consequence of scientific realism, I take it that the most comfortable position to adopt for someone who had initially rejected essentialism but ends up feeling moved by the force of these arguments would be a kind of reductive essentialism. He would acknowledge essences and natures as real features and principles of the world but limit them exclusively to the fundamental objects studied by the hardest of the hard sciences —maybe to fundamental particles themselves, but no more.

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[104] D. Oderberg, *Real Essentialism*, p. 213.
[105] See E. Feser, *Aristotle's Revenge*, p. 406 and D. Oderberg, *Real Essentialism*, pp. 212-213.
[106] D. Walsh, "Evolutionary Essentialism", p. 444.

Such a concession may indeed be considered progress from an Aristotelian point of view but remains extremely wanting as a metaphysical foundation for Aristotelian virtue-ethics, given how the latter requires a strong concept of human nature as a biological reality (i.e., as rational animality). Of course, the fact that there are good arguments for essentialism in general already raises the plausibility of biological essentialism, but this may not be enough. So, sections *2.4* and *2.5*, taken together with the arguments from Aristotle explored at the beginning of this chapter, were intended to supply the additional reasons to extend essentialism into the biological realm, acknowledging there too, in individual organisms themselves, the presence of that Aristotelian principle of change and stability that is their essence or nature.

What I want to do now, though, to end this chapter, is to explore one more independent argument against reductive essentialism, also presented by Crawford Elder,[107] to advance another reason to take at face value the contents of our experience. Elder asks us to picture a man, Max, running down the street to catch a bus. His hair looks wet because of the gel, his glasses are bouncing on his nose, and he is trying not to sneeze due to a severe cold he is undergoing. Suddenly, a lightning bolt strikes Max and kills him instantly: "I omit details, but Max is partly vaporized".[108]

Now, the reductive essentialist will have us believe that what anybody would take as a clear-cut case of destruction and substantial change, the death of Max, is really nothing more than an alteration of the real underlying substances, Max's fundamental particles, which have gone from being "human-wise arranged" to being arranged in a different way. Elder shows that it is astonishingly difficult, not to say impossible, to spell out what this reductive proposal means, such that it remains plausible only under the condition that we don't do this spelling out.

For what does it mean for a group of physical simples or fundamental particles to be "human-wise arranged"? The reductive essentialist can't say it means that the fundamental particles are *contained within the boundaries of a human being*, because "if there are in the world no such familiar objects as humans, there is in the world no such property as *being contained within the boundaries of a human*".[109] He can't say either that a plurality of microparticles is "human-wise arranged" if it coincides with that region

[107] See, for the argument in its length, C. Elder, *Real Natures and Familiar Objects*, pp. 47-72, and for a positive endorsement, D. Oderberg, *Real Essentialism*, pp. 66-67.
[108] C. Elder, *Real Natures and Familiar Objects*, p. 47.
[109] *Ibid*., p. 52.

of space where someone *imagines* a human to be. For in such a case, he is not only bringing back human beings into the picture to make the imagining but in fact denying that there has been any sort of real alteration *of the underlying plurality of microparticles*. Instead, it is common sense that is doing all the imaginary work here. Hence:

> The real answer must point not to a relation that each microparticle in a plurality so arranged bears to a common familiar object, but rather to a relation (or a system of relations) that each microparticle in such a plurality bears to others in the plurality —ultimately, to a relation that each bears to *all* the others and *only* the others in the plurality.[110]

And the problem here is that there does not seem to be any way to even guess what this relationship might be. There is no way to specify a relation that joins one microparticle within Max's body "to all others within him, and to none that composes Max's clothes and coverings",[111] or his glasses, hair gel, the viruses that are giving him the cold, the microparticles of the air surrounding him or the floor beneath him, etc. As Elder writes:

> It seems hard to believe that events befalling an individual microparticle within, say, one of Max's hairs do exert some causal influence over what happens to some individual microparticle in Max's kneecap, while events befalling an individual microparticle in Max's hair *gel* do *not*.[112]

The truth is that "at the level of microphysics, the microparticle membership of a familiar medium-sized object is causally invisible".[113] But then there is no way for the reductive essentialist to claim that there is a real state of affairs of particles being *human-wise arranged* unless he quantifies over humans —that is, "unless he affirms that there are in the world humans".[114] The contrary would be analogous to claiming that fish in the ocean are really just water in a fish-wise arrangement. If there is, as a matter of strict ontological fact, only water in the sea, there can't be any phenomenon such as water being arranged in a fish-like way. Elder concludes:

> In the absence of familiar objects there will be nothing to constitute these groups as groups, nothing to set their membership conditions, nothing to make the difference between an individual microparticle's lying within such a group and its lying without it. Absent antelopes or persons or Max, there is no such property as lying within the boundaries of an antelope or

[110] *Ibid*., p. 54.
[111] *Ibid*., p. 55.
[112] *Ibid*., pp. 55-56.
[113] *Ibid*., p. 59.
[114] *Ibid*., p. 58.

> of Max; at the level of microparticles, there is no such phenomenon as microparticles' being human-wise arranged.[115]

So, the reductive essentialist is forced into a choice between two options. On the one hand, he can bite the bullet and accept that the way reality appears to man has literally no connection at all with what is actually happening in it. There are no *alterations* where he perceives substantial changes, neither *groups* of microparticles where he perceives ordinary objects. But in such a case he is unable to explain why and how reality *appears* to him as it does, seemingly being pushed either into eliminativism or an equally unreasonable radical mind-matter dualism. On the other hand, he can extend his essentialism beyond microparticles, acknowledging real essences and natures to the familiar objects of our experience and welcoming them into his ontology.[116] I take it that the most reasonable and natural option to adopt is, indeed, this second one.

3. In Conclusion

In this chapter, I have gone through several lines of argument, both old and new, in support of some kind of Aristotelian essentialism that can be utilized as a metaphysical support and motivation for Aristotelian virtue-ethics. In total, I have identified ten reasons to subscribe to Aristotelian essentialism, which are, in order of appearance, that:

(1) it accounts for the distinction between substantial change and accidental change;
(2) it accounts for the radical ontological distinction between natural beings and artifacts;
(3) it provides man with strong reasons to resist anthropocentric tendencies;
(4) it seems to be an unavoidable metaphysical thesis, given the paradoxical and incoherent nature of absolute conventionalism;
(5) it makes the most sense out of modern scientific practice, which is best understood under the assumption that it is looking for the natures of things;

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[115] *Ibid*., p. 110.

[116] How do both familiar objects and the microparticles that compose them enjoy existence at the same time? Mortimer Adler gives the Aristotelian solution: "Both the solid chair and the imperceptible particles have real existence, but their reality is not of the same kind, not of the same order or degree. […] The mode of being of the material constituents of a physical body cannot be the same when those constituents exist in isolation and when they enter into the constitution of an actual body. Thus, when the chair exists actually as one body, the multitude of atoms and elementary particles which constitute it exist only virtually. Since their existence is only virtual, so is their multiplicity; and their virtual multiplicity is not incompatible with the actual unity of the chair"; M. J. Adler, *Ten Philosophical Mistakes*, pp. 187-189.

(6) it provides the best metaphysical grounding for the laws of nature that science discovers;
(7) it helps to explain the several aspects of the unity of organisms, specifically, their unity in multiplicity and their unity through change;
(8) it accounts for the radical distinction between organisms, organs, and collectives;
(9) it seems to be a core assumption of the theory of evolution;
(10) and, finally, it is the natural position to adopt once the project of reductive essentialism is acknowledged to lead to absurdities or unsolvable difficulties.

With this picture in place, I think it is safe to say that, from a philosophical point of view, the first pillar of the Aristotelian Foundation is as secure as it can be. Let's move, hence, to probing the safety of its second pillar: natural and intrinsic teleology.

CHAPTER 3. END OR TELEOLOGY

It is said that the end is the cause of causes, for it is
the cause of the causality of all causes.
Thomas Aquinas, *De principiis naturae*, c. 4.

1. What Aristotelian Teleology is and What it is Not

Among the four causes Aristotle puts forward to give a complete explanation or account of natural things, he reserves a special place for the one he calls "that for the sake of which" (τὸ οὗ ἕνεκα) or "the end" (τέλος).[1] This has come to be known in the tradition as "the final cause". For example, he writes: "Clearly the first [cause] is that which we call for the sake of which [ἕνεκα τινός], since that is the *logos* of the thing [the reason for its existence], and the *logos* is always the beginning for products of Nature as well as for those of Art" (*PA*, I, 1, 639b 15-17).[2] Aquinas succinctly follows Aristotle on this point, calling the final cause "the cause of causes" (*In Met.*, V, l. 3, n. 782; *ST*, I, q. 5, a. 2, ad1; *In Phys*., II, l. 5, n. 120) and encapsulating its relevance in axiomatic form in what can be called the Principle of Finality: "Every agent acts for an end" (*ST*, I-II q.1 a. 2; *DPN*, c. 3; *SCG*, III, q. 2; *In Phys*., II, l. 13-14, among other places).

But maybe the best way to understand what Aristotelian teleology *is* is to start seeing what it is *not*. This is fitting, given how badly this tenet of Aristotle's thought has been misunderstood and mischaracterized in the History of philosophy since the Modern era. Final causes have been taken to imply such obscure and pre-scientific notions as animism, panpsychism, absolute cosmic teleology, mysterious backwards causation, and anthropocentrism. They have been said to be incompatible with mechanical explanations and to necessitate theism or, more specifically, Intelligent Design theory. Unsurprisingly, all these challenges deeply miss the point of Aristotelian teleology, being aimed instead at a hollow caricature of it. Let's see how Aristotle's true thought fares against some of these objections.[3]

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1 See, for instance, *Met.*, V, 2, 1013a 33 and *Phys*., II, 3, 194b 32.

2 I've slightly altered Peck's translation, which takes some liberties with the text.

3 Space considerations don't allow me to tackle them all. I won't have much to say, for instance, about the supposed incompatibility of teleology and mechanical explanations, apart from the fact that Aristotle himself explicitly stated and defended the contrary (see, for instance, *PA*, I, 1, 642a 31-35 and *GA*, II, 6, 743b 16-18). Also, I delay the discussion about whether final causality involves backwards causation to the

1.1. Aristotelian Teleology is Not Panpsychism

Probably, the most repeated objection against the notion of final causality in the natural world is that it implies panpsychism: the attribution of mind and desire to unconscious and even inanimate beings. Arguing against the "vain philosophy" of the Scholastics, Thomas Hobbes complained that they spoke "as if stones and metals had a desire, or could discern the place they would be at, as man does; or loved rest, as man does not; or that a piece of glass were less safe in the window, than falling into the street".[4] More recently, Theodor Gomperz has spoken of Aristotle's "atavistic tendency to assume the animation of all nature",[5] and Lowell Nissen has argued that teleological explanations "might presuppose either reverse causation or minds".[6] But surely, the most blatant form of this accusation comes from Burrhus F. Skinner, in a now rather (in)famous quote: "Aristotle argued that a falling body accelerated because it grew more jubilant as it found itself nearer home".[7]

That this could *not* possibly be in any way, shape, or form Aristotle's view on the matter should be obvious to anyone mildly familiarized with his work, which is aggravated in Skinner's case given his failure to provide any supporting quote or reference for such a bold statement.[8] What one finds, instead, in Aristotle's philosophy is a nuanced notion of natural teleology, where directedness does not require consciousness or awareness of any kind, and surely not animation or desire. For the most part, Aristotelian final causes represent a kind of teleology without phenomenology. Inanimate

following chapter for reasons that will be stated there. Those interested in thorough refutations of all the mentioned objections (and more) should see M. R. Johnson, *Aristotle on Teleology*; R. Sorabji, *Necessity, Cause and Blame: Perspectives on Aristotle's Theory* (Duckworth, London, 1980) and D. Oderberg, "Finality Revived: Powers and Intentionality", *Synthese*, 2017 (194), pp. 2387-2425.

4 T. Hobbes, *Leviathan*, XLVI, 24 (as translated by J. C. A. Gaskin (ed.), Oxford, Oxford University Press, 1998). The accusation is reminiscent of Descartes' "little souls". See his letter to Mersenne (26 April 1643), in R. Descartes, *Philosophical Letters* (Oxford, Oxford University Press, 1970), p. 135.

5 T. Gomperz, *Greek Thinkers: A History of Ancient Philosophy*, vol. 4 (London, John Murray, 1909), p. 171.

6 L. Nissen, *Teleological Language in the Life Sciences* (Lanham, Rowman & Littlefield, 1997). Other similar critics include Alexander Bird, *Nature's metaphysics: Laws and Properties* (Oxford, Clarendon Press, 2007), p. 120-121 and Stephen Mumford, "Intentionality and the physical: A new theory of disposition ascription", *The Philosophical Quarterly*, 1999 (49), pp. 215-225.

7 B. F. Skinner, *Beyond Freedom and Dignity* (Bungay, Penguin Books, 1976), p. 14.

8 Skinner takes the idea, rather uncritically, from Herbert Butterfield, *The Origins of Modern Science* (New York, The Free Press, 1965), p. 18, who (equally unsurprisingly) also fails to provide any quote from Aristotle himself.

objects, for instance, exemplify "natural dispositions", but they "act *without knowing* what they do, like how fire burns" (*Met.*, I, 1, 981b 1-5; my italics). Moreover, when discussing natural and forced motion in heavy and light bodies, Aristotle is quick to emphasize: "we cannot say that they are moved by themselves, *because this is a special property of animals and living things*" (*Phys.*, VIII, 4, 255a 5-7; my italics).[9] He is also sharp in criticizing his predecessors for having attributed soul to the elements. Indeed, "saying that fire or air are living is among *the most unreasonable of things*; and not to call something living when there is soul in it is strange" (*De Anima*, I, 5, 411a 15; my italics).

One cannot, therefore, fault Aristotle for blurring the distinction between the living and the non-living, attributing to him a naïve animism or panpsychism. In fact, he is adamant in stating that of things which come to be for something "some are chosen *and some are not*" (*Phys*., II, 5, 196b 18; my italics), and that "it is ridiculous for people to deny that there is purpose [that for the sake of which] if they cannot see the agent of change doing any planning" (*Phys*., II, 8, 199b 26-27). The truth is that, for Aristotle, intentionality is simply not necessarily tied to deliberation or minds: this is just so in the case of the rational animal. One can even point to the fact that, as Boris Koznjak notes, Aristotle is careful to use metaphorical or analogical language when speaking of end-directedness in nature, with phrases such as "it is *as though* [ὥσπερ] nature had foreseen the result" (*On the heavens*, II, 9, 291a 24), and "nature *seems* [to act] deliberately [ὥσπερ ἐπιτηδές]" (*On the heavens*, II, 9, 290a 33-34).[10]

It becomes clear, then, that Aristotle's understanding of teleology is detached from the attribution of mind to mindless things. As Feser writes, "for the Aristotelian the existence of teleology does not by itself entail *conscious awareness* of the end toward which a thing is 'directed'. […] Only in human beings and other animals is there such awareness".[11]

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[9] About this, Johnson categorically writes: "This passage shows how false is the notion that Aristotle believed all the elements to be living or even intelligent agents"; M. R. Johnson, *Aristotle on Teleology*, p. 135.

[10] My italics on both quotes. See B. Koznjak, "Aristotle and Quantum Mechanics: Potentiality and Actuality, Spontaneous Events and Final Causes", *Journal for General Philosophy of Science*, 2020 (51), p. 462. See also L. Arhnhart, *Darwinian Natural Right*, p. 239.

[11] E. Feser, *Aristotle's Revenge*, p. 38. See also, E. Feser, "Teleology: A Shopper's Guide", *Philosophia Christi*, 2010 (12, 1), pp. 142-159, where he distinguishes five levels at which intrinsic and irreducible teleology could exist: most of them have nothing to do with any conscious or semi-conscious "striving" or "aiming" on the part of the thing in question. See also D. Oderberg, "Teleology: Inorganic and Organic", in A. M. González (ed.), *Contemporary Perspectives on Natural Law. Natural Law as a Limiting Concept* (Hamsphire, Ashgate, 2008), pp. 259-278; and D. Ross, *Aristotle*, p. 186.

While the Aristotelian is usually charged with anthropomorphizing natural and inanimate objects, it is really, as Johnson has emphasized, an "anthropocentric assumption that only humans can accomplish end-oriented activities or processes"[12] that is driving the criticism. Only by assuming, in a question-begging fashion, that the only way of acting for an end is to consciously intend for the end, as humans do, can the charge of panpsychism or animism have any plausibility to it.[13] In reality, "it is the fact that end-oriented activities are performed by beings […] that are incapable of human deliberation, inquiry, and skill that forces [for Aristotle] the conclusion that these ends exist naturally, independent of deliberate human activity".[14]

Aquinas, in turn, closely follows Aristotle on this point and can hardly be accused of anthropomorphism or panpsychism. Sure, Aquinas speaks of natural beings acting for several ends. Still, he is careful to note that *only in humans* is this teleological orientation accompanied by knowledge of the end *qua* end. Non-human animals, on the other hand, are usually aware of the end they seek, but properly speaking don't *know* it as such. Even more forcefully, plants and inorganic beings have a natural tendency or inclination or disposition towards their respective ends but no knowledge, awareness, or psychological desire of any kind:

> Those beings which lack reason are oriented to the end by natural inclination, as if they were moved by another and not by themselves, *for they lack the notion of end* and, hence, they can direct nothing to the end. […] It is of the rational nature to pursue an end moving or directing itself, while it is of the non-rational nature to pursue the end as if it were moved or directed by another, be it towards an end known in some way, like in animals, be it towards and end *totally unknown*, like in those beings who lack cognition (*ST*, I-II, q. 1, a. 2; my italics).[15]

More explicitly, in *De principiis naturae*, he clearly makes a distinction between voluntary and natural agents based on whether they possess or lack knowledge of the end towards which they are oriented:

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[12] M. R. Johnson, *Aristotle on Teleology*, p. 207.

[13] And this, indeed, appears to be the unquestioned starting point of the Modern enemies of Aristotelian teleology. Descartes, for instance, wrote in a letter to Mersenne (28 October 1640): "I cannot conceive of such [natural] inclinations in things that lack understanding"; R. Descartes, *Philosophical Letters*, p. 79. And likewise, Hobbes: "A final cause has no place but in such things that have sense and will"; T. Hobbes, *Elements of Philosophy*, X, 7. Both quoted in J. Johnson, *Final Causality in the Thought of Thomas Aquinas* (Thesis, Purdue University, 2018), p. 101.

[14] M. R. Johnson, *Aristotle on Teleology*, pp. 206-207.

[15] See also *ST*, I, q. 18, a. 3; I-II, q. 6, a. 2; q. 11, a. 2; *DPN*, 3, 16; *SCG*, III, q. 16; *In Phys.*, II, l. 13, n. 176; *De Veritate*, q. 25, a. 1.

> It must be noted that every agent, natural or voluntary, tends towards an end [*intendit finem*], *but from this it does not follow that every agent knows the end, or deliberates about the end*. For knowledge of the end is only necessary in those beings whose actions are not determined but related to opposites, just as it is so in voluntary agents […]. But actions in natural agents are determined, and so it is not necessary to choose the things that are oriented to the end. […] So, it is possible for a natural agent to tend towards an end [*intendere finem*] without deliberation, and this tendency [*hoc intendere*] is nothing more than having a natural inclination towards something (*DPN*, c. 3; my italics).

Finally, in his *De Veritate*, he even shows himself to be aware of this objection against natural inclinations in beings which lack cognition. He writes: "In animals, cognition precedes appetite [*appetitum*], but cognition does not extend in any way to non-living creatures […], and hence, neither will appetite" (*De Veritate*, q. 22, a. 1, obj. 2). His answer, once more, makes evident Aquinas does not attribute mind to inanimate objects:

> Some answer by saying that, just as everything has natural appetite, so everything has some natural cognition. *But this cannot be true:* since given that cognition is by assimilation, likeness in natural being does not give rise to cognition but impedes it. […] Which is why those things that cannot receive anything but materially cannot know. But they can tend [*appetere*], insofar as they are ordered towards some existent thing in nature. Appetite does not necessarily require spiritual being, as does cognition. And hence, there can be natural appetite without cognition (*De Veritate*, q. 22, a. 1, ad2; my italics).[16]

As even a critic of Aquinas like Anthony Kenny recognizes, "when Aquinas attributes ends or aims (*intentiones*) to inanimate objects, he is not being crudely anthropomorphic. He is not attributing to sticks and stones ghostly half-conscious purposes".[17] It is clear, then, that the Principle of Finality must be understood, as Garrigou-Lagrange points out, analogically, according to each being's nature.[18] Every agent acts for an end, true, but each one does so in a manner fitting its nature. Every agent has a natural tendency or inclination to some end, but whether such an inclination is accompanied by or comes in the form of a conscious "striving" or "aiming" will depend on the nature of the agent in question. Regarding non-voluntary agents, this tendency is "nothing more" than a natural

[16] Previously he had written: "Natural appetite tends towards its object without apprehending the reason of its appetibility. For natural appetite is but some inclination of a thing, and an ordering towards something which is convenient to it, like the rock that is conduced to a lower place. Because a natural being is determined in its natural existence, and there is in it an inclination towards some determinate thing, there's no need of some apprehension through which it distinguishes, according to the reason of appetibility, that which is appetible from what is not" (*De Veritate*, q. 25, a. 1).

[17] A. Kenny, *The Five Ways* (London, Routledge, 2003), p. 100.

[18] R. Garrigou-Lagrange, *Le réalisme du príncipe de finalité* (Paris, Desclée de Brouwer, 1932), ch. 4.

inclination or disposition.[19] Hence, the ghost of panpsychism is there only for those who, in a typically Modern fashion, presuppose that intentionality is essential and exclusive of the mind. What Aristotle and Aquinas both do is precisely to challenge this assumption. Conscious intentionality is just *one* manifestation among others of a more general metaphysical phenomena: natural and intrinsic teleology.

1.2. Aristotelian Teleology is neither Absolute nor Anthropocentric

Sometimes, Aristotelian teleology is faulted for implying absolute or universal teleology, by which I mean an uncontrolled and naïve tendency to attribute purposiveness to absolutely everything that happens in the world. We saw above how Hobbes faulted the Scholastics for the idea that a glass fell to the floor because it "were less safe in the window, than falling into the street".[20] Some think, then, that if one allows teleological explanations for some things, he is forced to extend them universally to every single event. Indeed, "the assignment of purpose *to everything* is called teleology", says Richard Dawkins.[21]

But Aristotle clearly refrained from doing such a thing and limited teleological explanations in a reasonable manner. He did not extend them to absolutely everything, and least of all, mere events. For instance, in the *Metaphysics*, he writes:

> Things which exist by nature but are not substances have no matter; their substrate is their substance. For example, what is the explanation of an eclipse? What is its matter? It has none; it is the moon which is affected. What is the moving cause that destroys the light? The earth. *But there is probably no cause for the sake of which* (*Met*., VIII, 4, 1044b 8-12; my italics).[22]

Neither is Aristotle troubled by the suggestion that some things may serve no purpose or end at all, being instead like a residual concomitant of other things. In *Parts of Animals*, he writes:

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[19] This should impact the way the thesis of Aristotelian teleology is presented, given how even sympathetic authors have sometimes framed it in less than helpful terms. John M. Rist, for instance, has written that, according to Aristotelianism, "there is some kind of desire inherent in matter" and that "all informed matter […] in the sublunary world would seem to have a certain kind of desiring faculty, a desire for the achievement of its proper place and for the fulfillment of its potentialities", in J. M. Rist, "Some Aspects of Aristotelian Teleology", *Transactions and Proceedings of the American Philological Association*, 1965 (96), p. 342. If this is interpreted as *mere* goal-orientation, then there is no problem. Still, given its strong conative connotations, talk of "desire" or "desiring faculties" as a way of presenting the thesis of Aristotelian teleology should be altogether avoided, or its metaphorical character made clear.

[20] T. Hobbes, *Leviathan*, XLVI, 24.

[21] R. Dawkins, *The God Delusion* (London, Bantam Press, 2006), p. 181 (my italics).

[22] Johnson's translation in *Aristotle on Teleology*, p. 156.

> It seems probable that […] this bile around the liver is a residue *and serves no purpose* [ἕνεκά τινος] —like the sediment produced in the stomach and the intestines. I agree that occasionally nature turns even residues to use and advantage, *but that is no reason for trying to discover a purpose in all of them*. The truth is that some constituents are present for a definite purpose, and then many others are present of necessity in consequence of these (*PA*, IV, 2, 677a 13-20; my italics).

Even some external characteristics in living beings are attributed not to any final cause but to other factors in the formation process. And so, once more, Aristotle warns his readers against immediately supposing that a cause "for the sake of which" is operative in all and every animal condition:

> For there are certain conditions which are not characteristics belonging to nature in general, nor peculiarities proper to this or that particular class of animal; and whatever the quality of such conditions may be, *in no instance is either its existence or its formation "for the sake of something"* [ἕνεκά του]. Thus, the existence and the formation of an eye is "for the sake of something" [ἕνεκά του], but its being blue is not —unless this condition is a peculiarity proper to the particular class of animal (*GA*, V, 1, 778a 30-35; my italics).[23]

Finally, when discussing in the *Physics* chance events, which could so easily be read as having some mysterious and occult cosmic purpose, we see Aristotle teaching that "some events serve a purpose *and some do not*" (*Phys.*, II, 5, 196b 17; my italics). We attribute an event to chance or spontaneity "when it is the kind of event that, broadly speaking, serves some purpose, [but] what actually happened did not happen for the sake of that purpose. […] The stone fell on him, but the purpose of its falling was not to hit him" (*Phys.*, II, 6, 197b 18-30). And in the *Posterior Analytics* he is even more explicit in this regard: "No chance event takes place for an end" (*PoAn*, II, 11, 95a 9). Hence, absolute universal teleology need not be a part of an Aristotelian theory of final causality.[24] As T. Irwin writes:

> Aristotle recognizes that it may rain and spoil the crops on the threshing floor, but all the same that was not the goal of the raining (*Phys.*, II, 8, 198b 16-23). We are confident that the result of spoiling the crops "has nothing to do" with the rain's falling; and we are confident of this because the spoilage is causally irrelevant to the rain. In genuine natural teleology, then, the result must be causally relevant to the process it explains.[25]

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[23] M. R. Johnsons also calls special attention to the last two passages, in *Ibid.*, p. 197 and 59, respectively.

[24] Martha Nussbaum argued against this idea of universal teleology in Aristotle by implying that he restricted teleological explanations to living beings. This, however, is not true, since Aristotle had a teleological account of the elements, for instance. See M. Nussbaum, *Aristotle's De Motu Animalium* (Princeton, Princeton University Press, 1978), p. 60.

[25] T. H. Irwin, "The Metaphysical and Psychological Basis of Aristotle's Ethics", p. 39.

A related accusation is that Aristotelian teleology is anthropocentric: man would be the end to which the rest of the cosmos is oriented.[26] Indeed, the following passage from the *Politics* immediately comes to mind:

> It is clear that it is appropriate to assume that plants are for the sake of animals and the other animals for the sake of human beings, the tame ones both for use and for food, and if not all the wild ones, at least most, for the sake of food and other assistance, so that clothes and other kinds of gear might come from them. So if nature makes nothing incomplete and nothing useless, it is necessary that nature has made them all for the sake of human beings (*Pol*., I, 8, 1256b 15-20).

However, despite this and a couple of difficult passages,[27] the consistent thread in Aristotle's thought, especially as exemplified in his biological treatises, is to limit teleological explanations to what is good *for the individual or kind in question*. A "*complete* elucidation [*πάντως ἀποδοτέον*] of the question *Why?*" does not include, as one would expect from an anthropocentric teleology, to explain how the thing in question serves man's good, but to explain "that the thing is as it is because it is better that way — *not better in any absolute sense, but better given what that particular thing actually is*" (*Phys.*, II, 7, 198b 5-9; my italics). Accordingly, Aristotle rarely, if ever, explains a characteristic of a given being or species with respect to the good of *another* different being or species, let alone human beings. As Johnson writes:

> Aristotelian teleological explanations are exclusively oriented towards the good of the natural kind itself. For what determines the natural and intrinsic motion and good of the animal kind is the good of the animals or specimens of that kind, not the relationship of its species to something else, or some other kind of good. The latter kind of good is incidental to the animal's nature, and thus not an aspect of the teleological explanation of that kind of animal.[28]

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[26] See, for instance, D. Sedley, "Is Aristotle's Teleology Anthropocentric?", *Phronesis*, 1991 (36), pp. 179-196. Moncho-Pascual also interprets Aristotle this way, albeit approvingly: see *La unidad de la vida moral según Aristóteles*, p. 162.

[27] For instance, *Phys.*, II, 8, 198b 16-199a 8, where some have claimed that Aristotle argues that rain falls for the sake of crops. M. R. Johnson has, in my opinion, thoroughly dismantled the anthropocentric interpretations of these passages, in *Aristotle on Teleology*, pp. 150-157 and 229-237, respectively. Mariska Leunissen, in *Explanation and Teleology in Aristotle's Science of Nature* (Cambridge, Cambridge University Press, 2010), pp. 30-50 also deals with similar passages.

[28] M. R. Johnson, *Aristotle on Teleology*, pp. 202-203. In the whole Aristotelian corpus, there seem to be only two *prima facie* exceptions to this, in *HA*, VIII, 2, 591b 23-30 and *PA*, IV, 13, 696b 24-34, where Aristotle seems to assert that sharks have their mouth underneath and eat by turning over for the sake of other animals being saved. Johnson disputes this interpretation in *Aristotle on Teleology*, pp. 208-210, noting that, even if it were correct, the case "swims alone in a sea of individual kind-oriented teleological explanations" (p. 209). And in any case, they would not be instances of explaining some characteristic of animals in terms of human ends and needs. This begs the question: "we do not have a single passage in the whole of the biological works which describes the natural functioning of any animal for the sake of human

As I explained in Section *1.3* of the previous chapter, it is Aristotle's assumption of intrinsic natural teleology which allows him to resist anthropocentric tendencies in his scientific explorations. Only by allowing something to have a *natural* end can we recognize *other* ends or uses to which it may be put as *incidental* (and even detrimental) to its very being. Human beings can use dogs to guard sheep, but such an end or use is incidental to the dog's nature, it does not feature in the scientific explanation of what a dog *is*. But this is so only because there is another end of the dog that is *natural* to it, with respect to which the others are judged as incidental. Thus, the anthropocentric objection to teleology can be turned against the critic.

In the end, however, *even if* Aristotle held to an anthropocentric teleology (which he most probably did not), there is nothing in the idea of natural things being oriented towards certain ends that demands or necessitates that everything is ultimately subordinated to the good of human beings. One thing does not follow from the other, so both theses can be conceptually separated. And hence, this objection can be easily dealt with.

1.3. Aristotelian Teleology is not Necessarily Theistic

As Gilson recognized, maybe the driving worry behind contemporary resistance to natural teleology is the thought that it represents a direct pathway to theism, creationism, and Intelligent Design theory, which are taken to be incompatible with a respectable and "scientific" worldview.[29] Being "for the sake of something" is taken to imply design, and design implies a Designer. And hence, given that there is tension or even contradiction between evolution and Intelligent Design, there must be the same tension or contradiction between evolution and final causality. Bertrand Russell, for example, once wrote: "Teleology is ultimately at fault in being anthropomorphic *or theological*".[30] More recently, a straightforward expression of this has come in the words of Peter Coveney and Roger Highfield:

> [Aristotle] preferred a teleological chain of explanation to a causal one. […] Whereas we would explain the existence of the humpback whale by invoking a causal argument —

beings. Yet if this were the primary function of plants and animals, why all this discussion of their own survival and flourishing? Rather we should expect a book like that of the Stoic Chrysippus, which detailed the way in which every known species of animal exists for the benefit of humans" (p. 233).

[29] See E. Gilson, *From Aristotle to Darwin*, p. XIX.

[30] B. Russell, *Wisdom of the West* (New York, Crescent Books, 1959), p. 89 (my italics).

> Darwin's theory of evolution—, a teleological argument would ascribe it to the action of a beneficent creator (God) for the benefit of mankind.[31]

I have already shown that no knowledgeable understanding of Aristotle's actual thought on the matter would characterize his rendering of teleology as things being "for the benefit of mankind" in an anthropocentric fashion. But it is even more mesmerizing that anyone would think Aristotle's teleology ascribes things "to the action of a beneficent creator (God)", *given the sheer and complete absence of any such attribution in the whole Aristotelian corpus*. It is not just that Aristotle's God, the Unmoved Mover from the *Metaphysics*, is not a *creator* God, but that such a deity is nowhere said to be involved (or interested, for that matter) in the formation or "design" of natural beings, sublunar or otherwise. Aristotle's God is *not* Plato's Demiurge, nor the God of the Bible. The plain and simple truth is that "Aristotle's system was not creationist, nor was it intelligently designed by any anthropomorphic deity",[32] despite being seriously teleological through and through. As David M. Balme writes, "The novelty in Aristotle's theory was his insistence that finality is within nature: it is part of the natural process, not imposed upon it by an independent agent like Plato's world soul or Demiurge".[33]

So, the critics are conflating here two very distinct ways of understanding teleology in the natural world: *extrinsic* teleology and *intrinsic* teleology. The notion of teleology that is operative in Intelligent Design theory is an *extrinsic* one: the end, function, and directedness of things are given to them *from the outside*, by an external agent, in very much the same way human beings impose purpose and design onto artifacts. The several parts and mechanisms of a machine (a car, for instance) do not and cannot *of themselves* get to be arranged in that particular way, or function in that particular manner. Instead, they must be assembled by an intelligent agent according to some design he has in mind. Similarly, it is supposed that matter has *of itself* no capacity to self-organize in complex and seemingly purposeful manners, and so must be equally designed by some Intelligence.

But Aristotelian teleology is not extrinsic in this sense but wholly *intrinsic*. When dealing with natural beings, it is something immanent and internal to the being in question

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[31] P. Coveney & R. Highfield, *The Arrow of Time* (New York, Basic Books, 1990), p. 63. Quoted in M. Chase, "Teleology and Final Causation in Aristotle and Contemporary Science", pp. 514-515.

[32] M. Chase, "Teleology and Final Causation in Aristotle and Contemporary Science", p. 520.

[33] D. M. Balme, "Teleology and Necessity", in *Philosophical Issues in Aristotle's Biology* (Cambridge, Cambridge University Press, 1987), p. 275.

(namely, its form or essence) that directs it towards certain ends, not an external agent.[34] Unlike artifacts, natural beings don't have a teleology imposed *from the outside* but possess it *of themselves*. Sure, artifacts are for the sake of some end *because they are designed*, but in nature we find "that for the sake of which" *despite no design having happened*.

In fact, the key to breaking the analogy between artifacts and natural beings that lies at the heart of Intelligent Design theory is the asymmetry that arises between them when understood from an Aristotelian viewpoint. What makes design necessary in artifacts is the fact that their parts are *not* intrinsically oriented to the whole's (imposed) function. But if natural beings are fundamentally *not* alike artifacts, since they exhibit *intrinsic* and not *extrinsic* teleology, the fact that the latter need to be designed warrants no licit inference to the presence of design in the former. Hence, instead of abandoning teleology altogether, accepting *intrinsic* teleology in the natural realm may be "an element in a scenario that eliminates the need for Intelligent Design by any kind of anthropomorphic Creator, just as there was no need for them within Aristotle's original system".[35]

Having said this, it is only fair to acknowledge that Aquinas departs from Aristotle on this point. To Aquinas, the presence of intrinsic teleology in natural beings serves as a premise in an argument for the existence of God.[36] Indeed, that is the core of his famous Fifth Way: that to give a complete metaphysical grounding of a creature's intrinsic orientation towards ends we must appeal to a Divine Intelligence that orders it so (*ST*, I, q. 2, a. 3). I will revisit this discrepancy between Aristotle and Aquinas in the next chapter, where I will explore whether such an argument from natural teleology to God succeeds or not. But for now, suffice it to say that Aristotle himself doesn't seem to have felt the need to make such a leap nor to ground final causality in God. This should indicate that,

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[34] See, for instance, T. L. Short, "Darwin's Concept of a Final Cause: Neither New nor Trivial", *Biology and Philosophy*, 2002 (17), pp. 325-326.

[35] M. Chase, "Teleology and Final Causation in Aristotle and Contemporary Science", p. 528. Edward Feser has also argued convincingly in this line, by showing how an Aristotelian natural philosophy challenges the mechanistic assumptions that run through both Intelligent Design theory and the approach of its critics —namely, the idea that intentionality is exclusive of the mind and is nowhere to be found, intrinsically speaking, in matter or material things. See E. Feser, *Aristotle's Revenge*, pp. 432-442.

[36] Though radically unlike Intelligent Design reasoning, as Thomists past and present have been at pains to insist. See, for instance, all the references in E. Feser, "On Aristotle, Aquinas, and Paley: A Reply to Marie George", in *Neo-Scholastic Essays*, pp. 56-58.

at least in principle, Aristotelian teleology does not necessitate theism and can be, instead, a naturalist-friendly alternative to both the atheistic and theistic versions of mechanism.[37]

2. Some Motivations for Teleology in Aristotle's Philosophy

Once one does away with all the strawmen, Aristotelian teleology amounts to the rather simple idea that things are, because of their natures, intrinsically oriented, disposed, or inclined towards certain ends or outcomes. And so, we say that A is for the sake of B "whenever there is evidently an end towards which a motion goes forward unless something stands in its way" (*PA*, I, 1, 641b 25-26). Everything in the eye is directed to the act of seeing, not hearing, so a healthy eye always results in sight unless impeded. Likewise, salt has a disposition or tendency to dissolve in water under certain conditions, a human embryo is in a developmental pathway towards becoming an adult human being, a seed "points to" the tree it is directed to grow into, etc.

Despite being so unjustly treated in the past, the truth is that, since the second half of the 20th Century, Aristotelian-inspired forms of teleology have been making a comeback in contemporary philosophy, and unapologetically so. Growing from dissatisfaction with Humean accounts of causation, for instance, dispositionalist theories of causal powers have garnered increasing attention and interest from philosophers.[38] In the philosophy of biology, Aristotelian final causes have been proposed to make sense of "self-organization, spontaneous pattern formation, dissipative systems, and morphogenesis".[39] Following some ideas from Charles Taylor, for instance, Larry Wright developed an influential teleological account of biological functions.[40] Christopher J. Austin and Anna Marmodoro have coined the notion of a "structural power" to account both for the

[37] Even a committed atheist like Thomas Nagel has recently proposed just that, as I will explain below. See T. Nagel, *Mind and Cosmos* (Oxford, Oxford University Press, 2012).

[38] The most influential work being George Molnar, *Powers* (Oxford, Oxford University Press, 2003). See also S. Mumford, *Dispositions* (Oxford, Oxford University Press, 1998); A. Marmodoro (ed.), *The Metaphysics of Powers* (London, Routledge, 2010); A. Sophie Meincke (ed.), *Dispositionalism* (Cham, Springer, 2020).

[39] M. Chase, "Teleology and Final Causation in Aristotle and Contemporary Science", p. 512. See also A. Ariew, "Teleology", in *The Cambridge Companion to the Philosophy of Biology* (New York, Cambridge University Press, 2007), pp. 160-181; A. Bird, *Nature's Metaphysics: Laws and Properties* (Oxford, Oxford University Press, 2007); M. Bedau, "Can Biological Teleology Be Naturalized?", *The Journal of Philosophy*, 1991 (88), pp. 647-655; "Where's the Good in Teleology?", *Philosophy and Phenomenological Research*, 1992 (52), pp. 781-806.

[40] See C. Taylor, *The Explanation of Behavior* (London, Routledge & Kegan Paul, 1964); L. Wright, "Functions", *The Philosophical Review*, 1973 (82, 2), pp. 139-168 and *Teleological Explanations* (Berkeley, University of California Press, 1976).

diachronic unity of organisms over time and the "teleological directedness towards the *same* morphology" they manifest in development.[41] Plausible accounts of teleology as second or higher-order causation have been proposed,[42] and teleological theories of knowledge seem to thrive where others fail.[43] Teleology has even been argued to be a notion that can be useful to the philosophical analysis of quantum mechanics, illuminating "the dispositional nature of quantum interphenomena".[44] Hence, far from being an old relic from a less sophisticated age, teleology seems to have returned (or at least be returning) to the forefront of philosophical discussion as a nuanced and respectable metaphysical thesis.

But before we dive into a number of these new developments, let's explore some of the reasons, within Aristotle's own philosophy, for adopting teleology as a real feature of the world.

2.1. The Teleological Relation of Potency to Act

To avoid the Parmenidean challenge and account for change as a real feature of the world, Aristotle proposed to acknowledge a distinction between two kinds or modes of being: being-in-act and being-in-potency. Everything in the natural and changing world of experience becomes thus a metaphysical mixture or composite of act and potency, being in act in some respects and in potency in others, being *actually* some thing or other and *potentially* many other things. What change amounts to, then, is for a potency to become actualized, for something that is in potency to transition into being in act. From there, Aristotle goes on to apply the notions of act and potency to explain efficient causality and the relationship between matter and form, substance and accidents. Even the being at the culprit of the cosmos, his Unmoved Mover, is described as "a principle whose substance is act [ἐνέργεια]" (*Met.*, XII, 6, 1071b 20), while the rest of beings tend to become as actual as they can be.

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41 C. J. Austin & A. Marmodoro, "Structural Powers and the Homeodynamic Unity of Organisms", p. 174.

42 See, for instance, D. Oderberg, "Finality Revived" and R. C. Koons, *Realism Regained*, pp. 141-154.

43 The most influential of said accounts being Plantinga's theory of warrant. See A. Plantinga, *Warrant: The Current Debate* (Oxford, Oxford University Press, 1993) and *Warrant and Proper Function* (Oxford, Oxford University Press, 1993).

44 B. Koznjak, "Aristotle and Quantum Mechanics", p. 472. See also M. Dorato, "Dispositions, relational properties, and the quantum world", in *Dispositions and causal powers* (Aldershot, Ashgate, 2007), pp. 249-270.

Hence, it can hardly be controversial to say that the doctrine of act and potency is the cornerstone of Aristotle's metaphysics. But if this is so, teleology must share its same centrality and motivation, for the relationship between act and potency is of a teleological or goal-directed nature, because potency points to or is oriented towards act. As Aristotle himself writes: "The seed is potentially something. It is potential insofar as it is in a state *oriented towards* a state of completion [πρὸς ἐντελέχειαν]" (*PA*, I, 1, 641b 23-642a 1; my italics).[45]

And so, there is asymmetry and not symmetry between act and potency, for act is the end towards which a potency is directed, and not vice versa: "the *logos* of what has being in potential [ἔτι τοῦ δυνάμει ὄντος] is its being-fully-itself [ἡ ἐντελέχεια]" (*De Anima*, II, 4, 415b 21). To take a previous example, a human embryo is *potentially* an adult human being, but not an adult dolphin or elephant, nor a blooming tree. Having such a restriction of potentiality to a certain range of things and not others is what it is for human embryos (or any embryos, for that matter) to "point to" a certain outcome and not others, to instantiate finality or teleology. Their development is just the realization of such a tendency, their movement towards "the actuality of what they already possessed in potential" (*Phys*., VIII, 4, 255a 29).

But if this is correct, any argument for the act-potency distinction should be taken to be, in an indirect fashion, also an argument for teleology. Such a line of argumentation could take on many forms. One could argue for the distinction on the basis either of its necessity to avoid a Parmenidean denial of change (with its consequent skepticism about sense experience), or its fruitfulness as a metaphysical thesis, being able to illuminate a wide range of topics. Edward Feser, for instance, has argued recently that the theory of actuality and potentiality is one of the main philosophical assumptions of scientific practice, and hence something anyone interested in vindicating the latter cannot do without.[46] However one wants to proceed, what matters for our purposes here is that

[45] M. R. Johnson's translation in *Aristotle on Teleology*, p. 166.

[46] E. Feser, *Aristotle's Revenge*, pp. 13-20. Following Werner Heisenberg's first mention of this, others have pointed to the aptness of the notion of potency when applied to quantum phenomena. See, for instance, W. Heisenberg, "Planck's Discovery and the Philosophical Problems of Atomic Physics", in *On Modern Physics* (New York, Orion Press, 1961), pp. 9-28; B. Koznjak, "Aristotle and Quantum Mechanics", pp. 471-472; G. Jaeger, "Quantum Potentiality Revisited", *Philosophical Transactions of the Royal Society A*, 2017 (375, 2106), pp. 1-14. Interestingly, Abner Shimony challenged this interpretation precisely on the grounds that the doctrine of act and potency has a teleological flavor that scientific explanations, according to him, should avoid. See A. Shimony, "Conceptual Foundations of Quantum Mechanics", in *The New Physics* (Cambridge, Cambridge University Press, 1989), pp. 373-395, quoted in B. Koznjak, "Aristotle and Quantum Mechanics", p. 460.

establishing the act-potency distinction is likewise to establish teleology as a real underlying feature of the world.

2.2. Teleology in Substantial Forms

As I already explored in Chapter 1, there also seems to be, in Aristotle's mind, a close link between the substantial form or essence of a thing and its end. He claims, for instance, that they "should be regarded as almost one and the same" (*GA*, I, 1, 715a 4-6) or that "a thing's nature is a cause in the sense that it is a purpose [τῶν ἕνεκα]" (*Phys*., II, 8, 198b 10-11).[47] The rationale behind this idea is most evident when dealing with living beings. It appears to be that the substantial form of a thing governs, so to speak, its whole growth or development, directing the thing as it currently is in act towards a state in which it will exemplify its essence in a fuller and more mature way. Gilson puts it nicely: "the substantial form is a plastic energy operating in matter in order to realize there concretely the idea which it is".[48]

But this, in turn, means that to acknowledge that a living being has an essence or substantial form which is not at present fully realized in him is, by the same token, to acknowledge in it a teleological orientation towards the fulfillment of that form. In Robert Koon's words: "Final causation implies a real relationship between an individual and a form that is only partially or imperfectly realized in the present state of that individual".[49]

The Modern treatment of both substantial forms and teleology highlights this intimate connection between the two. Indeed, wherever Aristotelian forms and essences were denied, a denial of intrinsic natural teleology soon after followed sue.[50] And in reverse, the contemporary revival of essentialism has been accompanied by a growing interest in philosophical models of teleology, owing to the recognition that "the essential properties of things always include dispositional properties",[51] characteristic tendencies towards certain kinds of behaviors or outcomes. If essentialism, then, seems to go hand in hand with teleology, or at least considerably raises its plausibility as a metaphysical thesis, any

47 See also *Phys*., II, 7, 198a 25-35 and 198b 4.

48 E. Gilson, *From Aristotle to Darwin*, p. 101. See also L. Arnhart, *Darwinian Natural Right*, p. 242.

49 R. Koons, *Realism Regained*, p. 279.

50 See, for instance, E. Gilson, *From Aristotle to Darwin*, p. 17; M. Tugby, "Organic Powers", in *Dispositionalism*, p. 216; R. Koons, *Realism Regained*, p. 279; D. Garrett, "Teleology in Spinoza and Early Modern Rationalism", in *New Essays on the Rationalists* (New York, Oxford University Press, 1999); D. des Chene, *Physiologia*, ch. 10.

51 B. Ellis, *The Philosophy of Nature*, p. 59. See also D. Oderberg, "Teleology: Inorganic and Organic", p. 260.

arguments for the reality of essences and substantial forms, as those which were explored in the last chapter, should be taken to weigh in favor of teleology as well.

2.3. Teleology as the Precondition of Efficient Causation

Another motivation for teleology from Aristotle's philosophy is that it seems to provide an intelligible grounding for causal regularities. As witnessed by experience, cause C reliably produces the same set of effects E_1, E_2, E_3, instead of being followed each time by a different arbitrary result. Fire burns wood but it does not turn it into steel, a mammal, or a black hole. Dogs breed dogs, not cows, fishes, or human beings. Electrons repel electrons but don't make books appear from thin air. Now, such regularities are evidence, to Aristotle, of a natural orientation *within the cause* towards producing some effects and not others. He writes:

> The things mentioned turn out as they do either always or usually, and so does every other natural object, whereas no chance or spontaneous event does. […] So, if we assume that these things are either accidents or have some purpose, then, given that they cannot be either accidents or spontaneous events, they must have some purpose. But the things I have mentioned and everything else which is like them are natural things […]. It follows that purposes are to be found in natural events and natural objects (*Phys*., II, 8, 198b 32-199a 7).

To Aristotle's mind, attributing causal regularities to chance alone would be to refuse to explain such a phenomenon. Why would a cause reliably produce the same effects if this was just a matter of chance? An intelligible grounding, instead, can be offered by postulating, in the cause's very nature, an inclination towards those effects which reliably follow from its activity. One can find the same reasoning in Aquinas:

> An agent does not move except out of a tendency for the end [*intentione finem*]. For if an agent were not determined [*determinatum*] to some effect, it would not do this more than that. And so, for it to produce a determinate effect, it is necessary that it be determined to a fixed one, and this has the character of an end (*ST*, I-II, q. 1, a. 2).[52]

We see, then, that causal regularity is a sign (maybe *the* sign) of the cause for the sake of which. For the reliable connection between cause and effect to be intelligible, and not just a brute fact with no explanation, one needs to accept that the cause is oriented towards producing a given set of effects. This illuminates the relationship between cause and effect and is why the Aristotelian can speak of final causality and teleology as the

[52] See also *SCG*, III, cc. 2-3; *ST*, I, q. 44, a. 4, and how, in the 5th Way, Aquinas says that it is evident that natural beings which lack reason act for and end "because they act always, or almost always, in the same manner" (*ST*, I, q. 2, a. 3).

"precondition" of efficient causality altogether.[53] As Aquinas puts it, "the end is the cause of efficient causality, for it makes the efficient cause efficient" (*DPN*, c. 4).

Edward Feser addresses a common objection against this line of reasoning, according to which one does not need teleology or final causes to explain regularity in efficient causes. Instead, it suffices to affirm that efficient causes *necessitate* their effects. But, as Feser notes, "we need to know what it *means* to say that efficient causes necessitate their effects, and we need an *explanation* of this necessitation".[54] This explanation must involve either something intrinsic to the cause itself or something extrinsic to it. But if something extrinsic, one has merely pushed the problem back a step. Suppose one says that cause A necessitates its effect B because cause C reliably ensures that B always follows from A. The question reappears again: why does cause C reliably ensure such an effect instead of any other? If, once more, one appeals to something extrinsic to C, he initiates a vicious regress. So, the fact that A necessitates B needs to be grounded in something *intrinsic* to A:

> But what can this intrinsic feature be if it is not the very inclination to an end that Aquinas affirms and that this view in question is trying to avoid? What can it possibly be for A to be such that it *necessitates* the generation of B, other than there is something in A that *inherently "points" to* the generation of *B specifically*, even before it actually generates B? […] There seems, then, to be no way to avoid Aquinas's conclusion that to make efficient causal regularities intelligible we need to attribute finality to efficient causes.[55]

In this sense, David Hume's skepticism about causation serves as a nice *reductio ad absurdum* of the denial of teleology, showing how the rejection of final causes leads to the rejection of efficient causes too. Indeed, the cause's intrinsic orientation or directedness towards its proper effect(s) is precisely what keeps cause and effect from being altogether "loose and separate",[56] preventing the skeptic's suspicion that anything could come from anything. In a world without final causality, fire may change the color of your skin, watering a plant might turn it into an elephant, and dogs may bring about

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[53] See, for instance, D. Oderberg, "Finality Revived", p. 2412; *The Metaphysics of Good and Evil*, p. 29; E. Feser, *Aristotle's Revenge*, p. 60; M. Rota, "Causation", p. 108; E. Anscombe & P. Geach, *Three Philosophers: Aristotle, Aquinas, and Frege* (Oxford, Blackwell, 1961); P. Hoffman, "Does Efficient Causality Presuppose Final Causation?", in S. Newlands & L. M. Jorgensen, *Metaphysics and the Good* (Oxford, Oxford University Press, 2009), p. 296; G. Kerr, "Design Arguments and Aquinas's Fifth Way", *The Thomist*, 2018 (82, 3), pp. 459-460; "Essentially Ordered Series Reconsidered Once Again", *American Catholic Philosophical Quarterly*, 2017 (91, 2), p. 162.

[54] E. Feser, *Neo-Scholastic Essays*, p. 168.

[55] *Ibid*., p. 170.

[56] D. Hume, *Enquiries Concerning Human Understanding (1748)*, Section 7, Part 2, § 1.

the explosion of a distant star with a simple sneeze, making induction and knowledge about the future completely unreliable. Luckily, cause and effect are not loose and separate but connected or linked through what may be called an internal goal-oriented inclinational principle: the cause's disposition towards (its "pointing to") its characteristic effects. As Feser writes, "intrinsic teleology […] cements causes and effects together".[57]

Surely, many would not want to go as far as to say that teleology is the only possible way to account for efficient causality and causal regularities. Still, it is not unreasonable to treat it as a particularly illuminating hypothesis, making sense of our experience of the world. To say that a cause is, because of its nature, inclined or disposed to produce certain effects but not others seems to be a pretty easy way to account for the fact that that is precisely what it does, time and time again, over a wide range of different circumstances. And hence, lest the notion of natural teleology be ruled out on *a priori* grounds, causal regularities should count, at least, as some evidence in favor of it.

In summary, we can point to at least three key tenets in Aristotle's philosophy that are so closely linked to the thesis of natural teleology that can be used to boost the plausibility of this second pillar of the Aristotelian Foundation, either individually or cumulatively. I will now turn to some contemporary arguments and developments in favor of the same conclusion.

3. Teleology in Contemporary Philosophy

3.1. Teleology as Rationally Unavoidable

I will call "teleological eliminativism" the thesis that there is absolutely *no* teleology or end-directedness in the world. Instead, talk of it is, at best, a useful fiction humans implement to navigate reality. There is a strong case to be made that this kind of teleological eliminativism is profoundly incoherent and hence that accepting *some* form of teleology in the world is rationally unavoidable. This, in turn, can strengthen the plausibility of extending teleology to more phenomena in the natural realm. Indeed, as I will argue, it seems more intelligible that teleology is an omnipresent (albeit multifaceted) feature of the world rather than have it limited to a tiny region of it.

Now, Tim Hsiao, for instance, has argued that teleology is necessary for the existence of rational thought.[58] If this is the case, teleological eliminativism undermines itself in

[57] E. Feser, *Aristotle's Revenge*, p. 49. See also *Neo-Scholastic Essays*, p. 37.
[58] See T. Hsiao, "Consenting Adults", pp. 516-519.

throwing away the basis for rational discourse and argument. Indeed, reasoning seems to be a teleological process through and through. For example, when someone reasons his way through an argument, he moves from premises that point towards a conclusion to the conclusion, he uses concepts that also point towards the things they are a concept of, etc. These are all instances of intentionality.

Also, Hsiao notes, rational discourse and argumentation are governed by certain epistemic norms with categorical force, such as "One ought to accept truth and reject error", "One ought to proportion his beliefs to the evidence", "One should not put one's ego or selfish gain over the truth", and so on. But the best way to understand why these norms apply categorically is through a teleological framework. They state what is necessarily good for rational agents *qua* rational agents, and hence must be followed unconditionally, but this under the teleological assumption that reason is oriented towards truth and finds its fulfilment (its good) in the attainment of truth.

If teleological eliminativism is true, though, all of this is but a fanciful illusion. If there are absolutely no ends, purposes, orientations, etc., then neither is our reason oriented towards the truth. Hence, epistemic norms have at best hypothetical force, but there would be no reason to think rational agents *ought*, in a categorical way, to pursue and accept the truth, not even the truth of teleological eliminativism. Worse, the teleological eliminativist can't claim either to have arrived at his position in any rational fashion. If what he claims is true, it can't be the case that he has reasoned his way through premises and evidence that point toward such a conclusion, for these are all goal-directed steps and concepts. Finally, the very reliability of his own intellect would be compromised since it would not be directed at truth (actually, it wouldn't be directed to anything at all). And so, concludes Hsiao:

> The absence of teleology leaves us without any basis for rational thought. But since the critic of teleology must —insofar as he considers himself to be rational— rely on processes that are inherently teleological to form his arguments, then it follows that realism about teleology is rationally inescapable. Any attempt to rationally deny teleology is self-defeating, for anyone who attempts to do so is implicitly relying on arguments that require a teleologically deliberating intellect in order to be accepted as rational.[59]

In a similar fashion, Edward Feser has argued that teleology is inescapable for anyone who wants to uphold the scientific method as a valuable way to acquire knowledge about

[59] T. Hsiao, "Consenting Adults", p. 517.

the world.[60] It is worth exploring this line of argument, given how often teleological eliminativism is affirmed on the basis that science in general (and physics in particular) has shown that final causes are illusory. Alex Rosenberg, for instance, writes:

> Ever since physics hit its stride with Newton, it has excluded purposes, goals, ends, or designs in nature. It firmly bans all explanations that are teleological (from the Greek *telos*, meaning "end" or "goal" or "purpose" that some process aims at or is good at achieving). […] Physics' long track record of successes is the strongest argument for the exclusion of purpose or design from its account of reality.[61]

But that physics should ban teleology from its picture of reality doesn't necessarily show teleology is not a real phenomenon, no more than the fact that, as Russell once argued,[62] physics does not speak of "causes" shows that there really are no causes after all. This is especially true if independent evidence for teleology is available, and it certainly is. For, as Feser argues, the scientific method itself presupposes that teleology is real, being based on the actions, perceptions, decisions, and thoughts of scientists, all profoundly teleological.[63]

When a scientist conducting an experiment has a perceptual experience of a certain result, that perception is *directed towards* that which it represents: it has a certain kind of built-in *aboutness* that is the mark of intentionality. When the same scientist remembers the experiment to write a paper about it, his memories also exhibit the same kind of intentionality or aboutness, being *about* past events that are no longer present to him.[64] When other scientists read his work, they assume what they read has meaning (that sentences are *about* something and represent propositions and thought processes). Thus, they come to form certain beliefs *about* what the experiment shows. As Stewart Goetz and Charles Taliaferro write, "*there would be no knowledge of mass, electric charge, or space-time unless we are enduring selves which have experiences*. The very practice of science itself is unintelligible unless persons exist and have observations and thoughts".[65]

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[60] For the whole argument, see E. Feser, *Aristotle's Revenge*, pp. 65-138.

[61] A. Rosenberg, *The Atheist's Guide to Reality* (New York, W. W. Norton & Co., 2011), pp. 40-41. Notice the conflation between teleology and design, which has been dealt with in section *1.3.*

[62] See B. Russell, "On the Notion of Cause", in *Mysticism and Logic, and Other Essays* (New York, Longmans, 1919), pp. 180-208.

[63] The teleological character of passions could also be included here. See P. King, "Aquinas on the Passions", in *Aquinas's Moral Theory*, pp. 101-132; A. McIntyre, *Which Justice? Whose Rationality?*, p. 303.

[64] See, for instance, A. Plantinga, *Warrant and Proper Function*, pp. 58-59.

[65] S. Goetz and C. Taliaferro, *Naturalism* (Grand Rapids, William B. Eerdmans Publishing, 2008), p. 50 (italics in the original).

Hence, to keep his absolute ban on teleology, the teleological eliminativist has to hold up eliminativism all the way through, denying there are such things as observations and thoughts, consciousness and conscious experience. And this is precisely what someone like Rosenberg ends up doing, for instance, when he denies the intrinsic *aboutness* of thoughts:

> *The mistake is the notion that when we think, or rather when our brain thinks, it thinks about anything at all*. […] Thinking about things can't happen at all. The brain can't have thoughts about Paris, or about France, or about capitals, or about anything else for that matter. When consciousness convinces you that you, or your mind, or your brain has thoughts about things, it is wrong.[66]

That this position cannot coherently be spelled out —indeed, to think *about* eliminativism, understand it, and believe it true presuppose that which eliminativism itself claims is not real at all— shows the high intellectual price tag of denying teleology altogether, in an absolute fashion. And so, since it seems impossible to eliminate teleology from human consciousness, "the very existence of thinking, perceiving, and acting scientists themselves […] puts an absolute limit on how far teleology might be eliminated in the name of science".[67]

One can even go further than Feser, given that knowledge itself requires cognitive faculties *aimed* at truth. If this is so, the very claim that science gives man knowledge about the world, or that thanks to science man *knows* that teleology is unreal, would presuppose teleology at least in how human cognitive faculties need to be previously oriented to the truth they intend to recognize.

In a deeply influential paper in 1963, Edmund Gettier showed that there were counterexamples to the traditional definition of knowledge as justified true belief.[68] A common example goes as follows. Sarah's friend Smith, who is generally reliable, tells her he owns a Ford and gives her enough evidence to be justified in believing the proposition *Smith owns a Ford* (maybe he takes Sarah for a ride, he shows her the bill, etc.). Sarah then forms the subsequent belief *Smith owns a Ford or Brown is in Barcelona*, lacking any information about Brown's location. As it happens, Smith is lying, but Brown, by a cosmic coincidence, is indeed in Barcelona. Sarah's belief that *Smith owns*

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[66] A. Rosenberg, *The Atheist's Guide to Reality*, pp. 170-172 (italics in the original).

[67] E. Feser, *Aristotle's Revenge*, p. 124. Gilson rhetorically asks: "Final causes have disappeared from science, but have they disappeared from the minds of scientists?"; E. Gilson, *From Aristotle to Darwin*, p. 127.

[68] E. Gettier, "Is Justified True Belief Knowledge", *Analysis*, 1963 (23, 6), pp. 121-123.

a Ford or Brown is in Barcelona is both true and justified, but it would be strange to consider it a case of knowledge. To have a justified true belief, thus, seems not to be a sufficient condition for knowledge.

Now, discussions of Gettier problems have flooded the literature in epistemology ever since, and a thorough analysis of this topic would merit a book of its own. For our purposes, though, it suffices to say that a very plausible and influential solution comes in the form of Plantinga's account of warrant, which, being based on the notion of proper function, is teleological through and through.[69] What Plantinga shows is that, for a being X to have knowledge, X must have epistemic or cognitive faculties that meet at least the following three conditions: (i) they function properly (ii) according to a design plan aimed at truth, and (iii) in a cognitive environment sufficiently similar to that in which they were formed to function.[70]

Suppose X's cognitive faculties (i.e., X's mechanisms responsible for belief-formation) function properly but not according to a design plan aimed at truth. Instead, they are aimed at something else (like survival, or psychological relief, or gene propagation, etc.). In such a case, X's belief that *p* won't be warranted and won't qualify as knowledge, even if it turns out, by coincidence, that *p* is true. And it won't because X's faculties, not being aimed at truth, would lack possess any intrinsic guarantee to be able to recognize truth.

Conversely, suppose X's cognitive faculties might be oriented at truth. Still, if they are under some kind of malfunction (maybe due to the ingestion of drugs), the beliefs they produce will equally lack warrant for X, and hence not constitute knowledge (again, even if true). Finally, if X finds himself in an environment inimical to his cognitive faculties —if, for instance, his brain is being manipulated by an evil scientist—, his beliefs would also lack warrant even if his cognitive faculties are functioning properly according to a design plan aimed at truth. Simply, X would not find himself in that environment where such proper functioning mostly leads to true beliefs.

But then, one can make sense of Gettier cases, for they typically have to do with malfunction of some sort, located either in the exercise of the cognitive faculties, in the cognitive environment, or in some other step of the belief-forming process. As Plantinga writes:

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[69] See especially A. Plantinga, *Warrant and Proper Function*, pp. 1-47.

[70] Plantinga goes into further exploration and nuance, but this is sufficient for my purposes here.

> The first thing to see about the Gettier situations is that the true beliefs in these situations are true by accident, not by virtue of the proper function of the faculties or belief-producing mechanisms involved. And the second thing to see is that in the typical Gettier case, the locus of the cognitive glitch is in the cognitive environment: the latter is in some small way misleading.[71]

To stick with the same example, the fact that Smith, who is usually reliable and trustworthy, is in this case lying, vitiates the belief-forming process introducing a malfunction or deficiency in condition (iii) above. Then, even if my belief turns out to be true "by accident", it cannot count as knowledge, for it has no warrant. As Robert Koons puts it:

> Every belief is formed by a combination of a number of neural states with the intrinsic function of carrying reliable information, and a number of environmental factors with the extrinsic function of conveying reliable information to us. When all of these functions are fulfilled, the resulting belief is a state of knowledge. When malfunction occurs, the belief is a mere opinion, true if it happens to coincide in content with what would have been believed had there been no malfunction, false otherwise.[72]

Another powerful solution to Gettier problems, labelled Explanationism and recently proposed by philosophers Tomas Bogardus and Will Perrin,[73] points in the same direction. According to Explanationism, "knowledge is believing something *because* it's true", which requires "that truth play *a crucial role* in the explanation of your belief".[74] Notice that in Gettier cases I end up getting the justified true belief independently of it being true. Indeed, precisely because my having of a justified true belief in Gettier cases is *not* explained by the truth of the belief, it does not (and cannot) count as a case of knowledge.

Because of this, Explanationism appears to avoid Gettier cases altogether. As Linda Zagzebski's has argued, Gettier cases appear when one defines knowledge as true belief *plus* some added condition C which, by itself, does not entail true belief.[75] Then, one can always construct cases where a false belief that meets condition C is turned into a true

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71 A. Plantinga, *Warrant and Proper Function*, p. 35.

72 R. Koons, *Realism Regained*, p. 218. Koons argues that, in the Smith case, the fact that Smith is lying can also count as a case of "malfunction in the extrinsic function of my friend's speech as part of my environment" (p. 218).

73 See T. Bogardus and W. Perrin, "Knowledge is Believing Something Because It's True", *Episteme*, 2022 (19, 2), pp. 178-196.

74 *Ibid*., p. 179.

75 See L. Zagzebski, "The Inescapability of Gettier Problems", *Philosophical Quarterly*, 1994 (44, 174), pp. 65-73. Bogardus and Perrin show how Explanationism escapes Zagzebski's considerations in "Knowledge is Believing Something Because It's True", pp. 194-195.

belief, resulting in a true belief that meets condition C but is not, in fact, an instance of knowledge (i.e., a Gettier case). Explanationism avoids this problem from the start, for the condition it adds to the analysis of knowledge is inseparable from the belief in question being true. Indeed, it is possible to have justified but false beliefs but one can't have a belief because it's true *without the belief being true*.

Moreover, as Bogardus and Perrin write:

> One motivation for Explanationism is the observation that debunking arguments across philosophy —against moral realism, religious belief, color realism, mathematical Platonism, dualist intuitions in the philosophy of mind, and so on— have a certain commonality. To undermine some belief, philosophers often begin with something like this: "You just believe that because…", and then they continue by citing an explanation that does not feature the truth of this belief. Our evident faith in the power of such considerations to undermine a belief suggests that we take knowledge to require that a belief be held *because it's true*, and not for some other reason independent of truth. Explanationism agrees.[76]

But Explanationism requires an underlying teleological orientation of my cognitive faculties *towards truth*. Otherwise, truth could not figure crucially in the explanation of any of my beliefs. Suppose my cognitive faculties are not intrinsically *aimed at truth* but instead at something else (be it survivability, reproduction, psychological ease, etc.). In that case, I will have no reason to believe the best explanation for my having the beliefs I have involves its truth in the right sort of way. And so, putting all these points together, it turns out that knowledge likely requires teleology or intentionality not just because beliefs themselves are intentional states of mind, but because there can't be knowledge, strictly speaking, without proper function —and function is an intrinsically teleological concept. To know, I have to possess cognitive faculties *aimed* at truth that function properly in a congenial environment.

Hence, rational discourse and argument require teleology; the thoughts, perceptions, and actions of scientists (as those of everybody else) require teleology; and knowledge itself requires teleology. There just seems to be no way to coherently eliminate intentionality from the sphere of human consciousness. Not in a way, at least, that would not undermine the very basis upon which such an elimination could be said to be rationally justified, understood, or known.

For sure, an alternative to teleological eliminativism could be some kind of strong dualism, where the mind is the only entity that exhibits teleology or intentionality in an

[76] *Ibid*., pp. 185-186.

otherwise completely a-teleological world. However, for those who find dualism strange and implausible, the best next option would be simply to acknowledge intrinsic and immanent teleology in nature and mind-independent reality.[77] Indeed, it seems more parsimonious that a superior kind of teleology emerges from an already in some form teleological world than that a non-teleological world, completely devoid of intentional features, would give rise to teleological minds. Thus, recognizing teleology in nature, as the Aristotelians do, helps in mitigating the mystifying gap between mind and matter, making more rational sense of how the human mind fits into the natural world. The intentionality of thought would just be a late and more complex expression of intrinsic natural teleology, already at work even in the simplest phenomena and all throughout the biological realm (once more, *natura non facit saltus*).

The fact that physics, the most successful of the natural sciences, makes no appeal to final causes of any sort does not pose any insurmountable problem to this position (*pace* Rosenberg). It can simply be explained as a side-effect of physics' abstract mathematical method. Aristotle himself already noted, in the *Metaphysics* (III, 996a 18-996b), that mathematical reasoning did not appeal to the "that for the sake of which", because mathematics, bracketing movement altogether, dealt with immutable entities in which there was no principle of change or action. He even mentions how some sophists, like Aristippus, took that as an excuse to downplay final causes altogether, proving that these arguments against teleology are anything but new. But if contemporary physics attempts to achieve a purely mathematical description of reality, and mathematics *per se* makes no appeal to final causes, then it is no surprise that contemporary physics should not find final causes in nature: its own method *prevents* it from doing so. Hence, as Feser writes:

> The absence of some feature from physics' *representation* of nature simply does not entail that that feature is absent from nature *itself*. That physics eschews teleological explanation merely reflects its mathematically oriented methodology, and by itself has no metaphysical implications.[78]

If the arguments presented so far are successful, then it may well be the case that teleology does not enter into the consideration of contemporary physics (given a historically contingent account of what physics is and how it is supposed work). That does not damage the Aristotelian position: teleology would still be a necessary

[77] See E. Feser, *Aristotle's Revenge*, p. 118.

[78] E. Feser, *Aristotle's Revenge*, p. 377. See also D. Oderberg, "Finality Revived", p. 2400; E. Gilson, *From Aristotle to Darwin*, p. 19.

philosophical thesis, indispensable for making sense of the world as a whole, including our ability to investigate it scientifically and the way mind fits into nature. The picture contemporary physics draws of reality would simply need to be supplemented, *completed*, with philosophical considerations not constrained by the (self-imposed) limits of a mathematically driven methodology.

3.2. Teleology and Physical Intentionality

A growing trend that can easily accommodate teleology in mind-independent reality is an account of powers in terms of physical intentionality. Many power theorists have recently put forward the idea that powers exhibit a kind of teleology (or, in their preferred terms, intentionality), "being directed towards possibly unrealized (future) actualities".[79] A power *aims* or *points towards* its manifestation: it represents a tendency to produce a certain outcome under the right conditions. But in such a case, powers, even those of the most basic and simple kind of entity, are essentially *dispositional properties*, goal-directed capacities characterized in terms of that towards which they are oriented. In essence, this ontology of powers represents a contemporary rediscovery of the classic Aristotelian thesis of the connection between efficient and final causes, which I explored in section *2.3*.

Maybe the most influential in this new wave of the ontology of powers has been George Molnar's (sadly unfinished) book *Powers: A Study in Metaphysics*, published posthumously in 2003. In this work, Molnar argues that there is a striking parallel between the features that Franz Brentano took to be exclusively "the mark of the mental"[80] and those of physical powers. He notes that this parallel allows thinking of the latter as possessing *physical* intentionality. Intentionality, thus, instead of constituting the demarcation between the mental and the physical, would in fact be a common feature between both.

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[79] W. M. R. Simpson, R. C. Koons & N. J. Teh, "Introduction" to *Neo-Aristotelian Perspectives on Contemporary Science*, p. 1. For a sample of authors defending physical intentionality, see R. Harré and E. H. Madden, *Causal Powers: A Theory of Natural Necessity* (Oxford, Blackwell, 1975); C. B. Martin & K. Pfeifer, "Intentionality and the Non-Psychological", *Philosophy and Phenomenological Research*, 1986 (46), pp. 531-554; U. Place, "Intentionality as the Mark of the Dispositional", *Dialectica*, 1996 (50), pp. 91-120; "Dispositions as Intentional States", in *Dispositions: A Debate* (London, Routledge, 1996), pp. 19-32; J. Heil, *From an Ontological Point of View* (Oxford, Clarendon Press, 2003); N. Kroll, "Teleological Dispositions", in *Oxford Studies in Metaphysics*, vol. 10 (Oxford, Oxford University Press, 2017); D. Oderberg, *Real Essentialism*, pp. 137-138.

[80] See, for instance, F. Brentano, *Psychology from an Empirical Standpoint* [1874] (London, Routledge, 1995).

For instance, Molnar notes that if being *directed towards* something else is an essential feature of intentional states of mind, then powers should be thought of as exhibiting an analogous kind of intentionality, since they too are *directed towards* something beyond or outside themselves (i.e., their manifestations, their effects). Powers are "ontologically independent of their manifestations" because they can exist "even when they are not being exercised and have not been exercised and will not be exercised".[81] Still they are oriented towards a certain kind of outcome, because "they are properties *for* some behavior".[82] A certain substance, for example, is *soluble* even if it is never dissolved. To be soluble, to possess the power of solubility, must mean to have a *tendency to* dissolve under the right kind of circumstances.

Again, the idea of physical intentionality is bound to sound strange and counter-intuitive to those who want to stick to the thesis that intentionality is the mark of the mental. But it is precisely this assumption that Molnar, in line with the Aristotelian tradition, is challenging. Both physical and mental intentionality are manifestations of a more pervasive phenomenon, natural and intrinsic teleology, which simply takes on different forms in mental and non-mental beings.[83] The thesis of physical intentionality implies *not* the attribution of mental properties to purely physical things, but the negation of the idea that directedness is an exclusively mental phenomenon. Powers are "characterized by a directedness to their manifestations", but such a directedness "does not imply the presence of a conscious intention or desire".[84] It just implies that a power is, by its very essence, teleologically oriented to manifest in a certain way under certain circumstances. Indeed, a power is a power *for* a certain kind of behavior, and it is precisely that orientation that constitutes the power *as a power*: "Of the many ways of characterizing a power, the only one that reveals the nature (identity) of the power is the characterization in terms of its manifestation".[85]

If someone sees that powers are essentially *dispositional* properties but wants to avoid such a conclusion, a way out could be to try to reduce power properties to non-power ones, such as structural properties. This, however, faces an ontological regress problem, as Brian Ellis has argued.[86] For instance, suppose one wanted to explain a crystal's

[81] G. Molnar, *Powers*, p. 57.
[82] *Ibid.*, p. 60.
[83] See D. Oderberg, "Finality Revived", p. 2400.
[84] M. Tugby, "Organic Powers", p. 216.
[85] G. Molnar, *Powers*, p. 63.
[86] See B. Ellis, *The Philosophy of Nature*, p. 76.

brittleness appealing solely to its structure and the fact that it is constituted by planes. The problem, in Ellis's words, is the following:

> The existence of planes in a crystal structure does not by itself explain the crystal's brittleness, unless these planes are cleavage planes: regions of structural weakness along which the crystal is disposed to crack. But the property of having such a structural weakness is a dispositional property that depends on the fact that the bonding forces between the crystal faces at this plane are less than those that act elsewhere to hold the crystal together. Therefore, the dispositional property of brittleness in a crystal depends not only on the crystal's structure, but also on the cohesive powers of its atomic or molecular constituents. However, cohesive powers are causal powers. […] [And so,] there never seems to be any point at which causal powers can just drop out of the account.[87]

The main alternative analyses of causality also face serious problems, as Molnar argues. Regularity theories, for instance, cannot account for the intuitive possibility of singular causation (causation without regularity). They also struggle to distinguish mere regular correlation or accidental regularities from causation, unable "to deliver a distinction between *post hoc* and *propter hoc*".[88] And counterfactual theories of causality, in turn, appear bound to end up appealing to causal powers altogether: "the counterfactuals that state the dependence of some events on others are themselves made true by the existence of some causal nexus between the events in question".[89]

In the end, just as there are problems in rejecting a powers ontology, there are also benefits in adopting it. Powers can, for instance, offer an intelligible metaphysical grounding for the laws of nature, being "the truthmakers for the laws",[90] and they can make sense of causation in ways that mere regularity or counterfactual theories cannot.[91] Sure, for my purposes, this only ensures a minimal version of natural teleology, but such a discovery is still relevant and fruitful, and it hides the seed of philosophical progress. For, as Oderberg writes, "if some sort of teleology can be found in the world of the non-

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87 *Ibid*.

88 G. Molnar, *Powers*, p. 188.

89 *Ibid.*, p. 189. See also J. Jacobs, "A Powers Theory of Modality: How I Learned to Stop Worrying and Reject Possible Worlds", *Philosophical Studies*, 2010 (151), pp. 227-248.

90 G. Molnar, *Powers*, p. 199. See also S. Mumford, *Laws in Nature* (London, Routledge, 2004) and A. Bird, *Nature's Metaphysics: Laws and Properties* (Oxford, Oxford University Press, 2007).

91 See, for instance, G. Molnar, *Powers*, p. 188 and S. Mumford & R. L. Anjum, *Getting Causes from Powers* (Oxford, Oxford University Press, 2011). Another advantage that has been argued for is making sense of modality. See G. Molnar, *Powers*, pp. 200-223; J. Jacobs, "A Powers Theory of Modality", pp. 227-248 and B. Vetter, *Potentiality: From Dispositions to Modality* (Oxford, Oxford University Press, 2015).

living, how much more likely is it that the teleology of the living world is no mere projection of human interests, but a real, mind-independent, objective phenomenon?".[92]

3.3. Teleology in Biology

There is a *prima facie* reason to accept teleology and end-directedness in the biological realm: it sure *seems* to be there. It is *so easy* and natural to see "that for the sake of which" in biology that the difficult thing is to avoid speaking of biological matters in teleological terms. Biologists, for instance, speak of genes encoding information, DNA running a program, or "teleonomy" as one of the chief features of living beings.[93] The growth or development of any organism, plant, or animal sure seems to be an end-oriented process. Homeostasis, the tendency of living beings to resist and adapt to changes in the environment in order to maintain a stable internal state, assumes, in Larry Arnhart's words, "goal-directed causality".[94] An organ is defined and understood in terms of the *function* it is supposed to perform in its host: the heart is *for* pumping blood, the kidneys are *for* removing waste, the stomach *serves* digestion, the wings are *for* flying, etc. Pathologies, diseases, and abnormalities are identified when something is not going *as it is supposed to go*. And so on.

Resistance to recognizing ends in biology, then, cannot come from the fact that they are not at all apparent or that their presence is obscure. On the contrary, usually the critic of teleology needs to go to great lengths to explain how it is that there are no ends in biology, despite how clearly they seem to be there. More often than not, such resistance stems from deeper philosophical assumptions, such as that acknowledging teleology commits us to animism or theism. But imagine a person who sees that an Aristotelian theory of teleology need not commit her to believing in God, Intelligent Design, "little souls" or other dubious theses.[95] I contend that such a person has sufficient evidence in how the biological appears to her to justifiably embrace teleology as an acceptable

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92 D. Oderberg, "Teleology: Inorganic and Organic", p. 261. As Aristotle himself wrote: "Is it likely that whereas joiners and shoemakers have certain functions or activities, man as such has none, but has been left by nature a functionless being? Just as we can see that the eye and hand and foot and every one of our members have some function, should we not assume that in like manner a human being has a function over and above these particular functions?" (*NE*, I, 7, 1097b 28-33).

93 See L. Arnhart, *Darwinian Natural Right*, pp. 245-246.

94 L. Arnhart, *Darwinian Natural Right*, p. 244.

95 Larry Wright, for instance, wrote: "it seems to me that the notion of an organ having a function—both in everyday conversation and in biology—has no strong theological commitments. Specifically, it seems to me consistent, appropriate, and even common for an atheist to say that the function of the kidney is elimination of metabolic wastes"; L. Wright, "Functions", p. 82.

metaphysical thesis. And so, having already dispelled such assumptions about Aristotelian teleology as wrong-headed, that biology is so naturally infused with teleological talk begs the question: "Maybe the reason such teleological talk is both useful and common is that it represents something *true*".[96]

Nonetheless, it has sometimes been claimed that Darwin's theory of evolution has proven teleology to be merely illusory. Richard Dawkins, for instance, has said that natural selection explains "the *apparently* purposeful form of life".[97] He also writes that the "design stance" (by which we talk of an organ as if it had a purpose) is somewhat of an heuristic device, a "short cut" we use because explanation in terms of the laws of physics "can be very slow", but that ultimately needs to be translated "into proper Darwinian terms".[98]

But such objections to teleology from evolution seem, once more, to be conflating extrinsic and intrinsic teleology (or in other words, William Paley and Aristotle). Indeed, they assume that to say something has a purpose or end implies it has been intentionally designed by someone. This is especially evident in how Dawkins characterizes Aquinas's 5th way. In his mind, Aquinas's claim that "things without intelligence […] act for an end" (*ST*, I, q. 2, a. 3) roughly translates to "Things in the world, especially living things, look as though they have been designed".[99] But once such confusion is dispelled, I don't see why the truth of Aristotelian teleology should depend on how living beings came to be on the face of the Earth. Humans have an organ with the intrinsic function of pumping blood independently of whether their origin is direct creation by God, evolution through random mutation and natural selection, or spontaneous uncaused appearance out of literally nothing.

Darwinian attempts to reduce function to non-teleological concepts appear unnecessary once the teleology-design confusion is avoided. It is also noteworthy that

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[96] D. Oderberg, "Teleology: Inorganic and Organic", p. 275. Though Oderberg is asking this when discussing *inorganic* teleology, the same point applies here, if even more forcefully so.

[97] R. Dawkins, *The Blind Watchmaker* (London, W. W. Norton & Co., 2015), p. 5 (emphasis added).

[98] See R. Dawkins, *The God Delusion*, pp. 181-182. Dawkins takes the name "design stance" from D. C. Dennet, *The Intentional Stance* (Cambridge, MIT Press, 1987). Dennet adopts a similar attitude towards the "design stance".

[99] R. Dawkins, *The God Delusion*, p. 79. Thomas Huxley, the so-called "Darwin's bulldog", seemed to have also this kind of extrinsic Paleyan teleology in mind when he wrote: "The teleology which supposes that the eye, such as we see it in man, […] *was made* with the precise structure it exhibits, *for the purpose of* enabling the animal which possesses it to see, has undoubtedly received its death-blow [from Darwin]"; in *The Life and Letters of Charles Darwin*, vol. 2 (Cambridge, Cambridge University Press, 2009), p. 201 (my italics).

they are riddled with problems. For instance, Ruth Millikan proposed to explain the function of an organ in terms of the causal factors that lead to its perpetuation in evolutionary history.[100] In Millikan's analysis, the heart's function is to pump blood (and not to make a thumping sound, for instance) not because that is its end or purpose but because it is *that* effect in particular that led to natural selection favoring it. This, though, makes both knowledge and existence of function dependent on Darwinian evolution, which is problematic. As Feser writes:

> We can know what hearts, eyes, ears, feet, and the like are for whether or not we know anything about evolution […]. Nor is the point merely epistemological. A biological trait could surely have a function whether or not it arose via natural selection. For instance, if organisms with eyes arose either by spontaneous generation or by way of special divine creation rather than by natural selection, their eyes would still have the function of allowing the organisms to see.[101]

And the same applies either to the first living organism, or to the first appearance of an organ. If the function of an eye is to see *because* that is why it has been favored by natural selection, then the very first eye didn't have any function, for it had not been so favored *yet*. Neither would any of the organs of the first living organism have any function, for the same reason. Surely, there is something wrong in an account of function if it has such implications: that a fully functioning organ lacks all and any function just because it is the very first of its kind, or that no organ inside a human being would have a function if said individual had begun to exist spontaneously, or through any other means besides natural selection, despite being in every other way indistinguishable from a naturally evolved human.[102]

And so, as Robert Koons puts it, "it is far more plausible to take natural selection as a mode of explaining how it is that functions exist in the world, not as an account of what it is for something to be a function".[103] Evolution does not erase an organ's teleology but explains how it is that something with the end of doing X got to be perpetuated until

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[100] See R. Millikan, *Language, Thought, and Other Biological Categories* (Cambridge, MIT Press, 1984).

[101] E. Feser, *Aristotle's Revenge*, p. 388. Atheist Jerry Fodor makes the same point in *The Mind Doesn't Work That Way* (Cambridge, MIT Press, 2000), p. 85. See also R. Koons, *Realism Regained*, pp. 147-150.

[102] There is also an indeterminacy problem facing Darwinian analysis of function. See, for instance, E. Feser, *Aristotle's Revenge*, p. 389.

[103] R. Koons, *Realism Regained*, p. 148. Also: "Darwinism is best understood not as the thesis that there are no final causes in nature, but as the hypothesis that all final causes in nature are ultimately explicable in terms of reproductive advantage. Assuming that aerial stability is an adaptive feature of robins and that having a tail is indeed causally necessary (in the case of robins) for aerial stability, then this causal connection between tails and aerial stability is part of the explanation for actual robins' having tails: had their ancestors not acquired tails, robins would not have successfully reproduced" (p. 69).

today. Somewhere down the line of evolutionary history, an organ with the intrinsic function of enabling its host to see begins to exist, and from then on, it gets to be favored by the mechanisms of natural selection because of the evolutionary advantage it confers.

Now, *even if* evolution implied that organs did not serve ends, there would still be many biological phenomena in need of a teleological interpretation, as were those mentioned at the beginning of this section. Some would even be necessary conditions of the evolutionary process themselves. As Denis Walsh has written:

> The phenotypic plasticity *that drives adaptive evolution* consists in an organism's finely tuned capacity to develop and maintain a viable, stable homeostatic end state that is typical for organisms of its kind by the implementation of compensatory changes to its behavior, structure and physiology. In this respect, phenotypic plasticity bears all the hallmarks of a goal-directed phenomenon.[104]

Hence, if organisms need to exhibit goal-oriented properties for evolution to take place, there is no way evolution can imply a complete denial of teleology in the biological realm.

3.4. Teleology and Evolution

There is also the further point that evolution itself is very plausibly teleological or involves goal-oriented processes or principles. Darwin himself seems to have understood his own theory in this way.[105] For instance, in response to Asa Gray, who had praised him for "bringing back to [Natural Science] Teleology",[106] Darwin replied: "What you say about teleology pleases me especially, and I do not think anyone else has ever noticed the point".[107] Also, his famous comparison of natural selection to selective breeding is surely suggestive of a kind of mindless intentionality (since nature, unlike breeders, does not

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[104] D. Walsh, "Evolutionary Essentialism", pp. 440-441 (my italics). Also, Edward Feser writes: "Though natural selection might suffice to explain the adaptation of an organism to its environment, there is also the question of the internal development of an organism, and in particular of what accounts for the fact that certain growth patterns count as aberrations and others as normal. Hence Aristotle would say that there is no way to make this distinction apart from the notion of an end toward which the growth pattern naturally points: normal growth patterns are those that reach this end, aberrations (clubfoot, polydactyly, and other birth defects, for example) are a failure to reach it"; E. Feser, *Neo-Scholastic Essays*, p. 311.

[105] See, for instance, E. Gilson, *From Aristotle to Darwin*, pp. 80-90; J. Lennox, "Darwin *was* a Teleologist", *Biology and Philosophy*, 1993 (8), pp. 409-421; D. Depew, "Accident, Adaptation, and Teleology in Aristotle and Darwinism", in *Darwin in the Twenty-First Century* (Notre Dame, University of Notre Dame Press, 2015).

[106] A. Gray, "Scientific Worthies: Charles Robert Darwin", *Nature*, 1874 (10, 240), p. 81.

[107] Letter to Asa Gray (5 June 1874), in *The Life and Letters of Charles Darwin*, vol. 3 (London, William Clowes & Sons, 1887), p. 189 (quoted in E. Gilson, *From Aristotle to Darwin*, p. 84).

have a mind). Accordingly, in Gilson's words, Darwin envisaged "a nature wherein all comes about *as if* there had been choice, even though no one and nothing were there to choose".[108] A picture that mirrors Aristotle's own understanding of nature as something that acts for an end "as though [it] had foreseen the result" (*On the heavens*, II, 9, 291a 24) *but with no actual deliberation or choice on its part*. If this is right, Darwin's theory was, yes, a blow against the *extrinsic* teleology of creationists, but also a revival of an *intrinsic* teleology of the Aristotelian kind (where no conscious design or striving is needed for end-directedness).

Now, Edward Feser has argued that this teleological understanding of natural selection can resolve a very serious challenge to the theory that has come from the work of philosopher Jerry Fodor and scientist Massimo Piattelli-Palmarini.[109] Both committed atheists and evolutionists with no theological ax to grind, Fodor and Piattelli-Palmarini argue that the common Darwinian account of evolution in terms of natural selection faces an unsolvable selection-for problem.

To introduce their argument, they draw on the work of biologists Stephen Jay Gould and Richard Lewontin, who, in a very influential paper, argue that some phenotypic traits are not adaptations but "free-riders": traits that are not selected for by the evolutionary process, but that "come for the ride", so to speak, because they are necessary concomitants of selected traits.[110]

It is a similar difference, Gould and Lewontin wrote, as that which there is between arches and spandrels in cathedrals. In supporting the dome, converging arches form "spandrels", little triangle-shaped areas which medieval artists usually filled with decorations. A reasonable answer to the question of why cathedrals have arches would certainly be that arches have the function of holding the roof up. Somebody could be tempted to give an equally functional explanation for spandrels, saying that cathedrals have spandrels so that artists could draw on them all kinds of fanciful creatures. But such an explanation would be profoundly wrong-headed, for the truth is that spandrels are simply a geometrical by-product of having arches and lack any function of their own.

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[108] E. Gilson, *From Aristotle to Darwin*, p. 83.

[109] See E. Feser, *Aristotle's Revenge*, pp. 406-420 and J. Fodor & M. Piattelli-Palmarini, *What Darwin Got Wrong* (New York, Farrar, Straus & Giroux, 2010).

[110] S. J. Gould & R. Lewontin, "The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme", *Proceedings of the Royal Society B*, 1979 (205, 1161), pp. 581-598.

Hence, it is arches that architects "select for", whereas spandrels "free-ride" on such a choice. Counterfactually, if architects could have arrived at arches without also getting spandrels, they would have done that, but not vice versa. Similarly, the heart pumps blood through the body *and* makes a thumping sound. But we say that the heart was selected for its pumping blood and not for its making a thumping sound, given that "it's only because of constraints that the plumbing imposes on blood pumps that we have hearts that make the noises that they do".[111] Hence, counterfactually, if nature could have gotten hearts without thumping sounds, it would have done so, but not vice versa. (The role of this kind of counterfactuals is essential to Fodor and Piattelli-Palmarini's argument, as will be shown). And so, making a thumping sound "free-rides" on the selected feature: pumping blood.

Now, Gould and Lewontin wanted to show that a theory of natural selection had to allow for traits that were free-riders instead of adaptations. But Fodor and Piattelli-Palmarini, agreeing with them on that front, argue that "they missed a deeper point".[112] To see why, notice the general structure of the reasoning above. First, two coextensive phenotypic traits of the heart are identified: pumping blood and making a thumping sound. Second, two mutually exclusive hypothesis are put forward which are equally compatible with the data: "The heart is selected for its pumping blood and making a thumping sound free-rides on that" and "The heart is selected for its making a thumping sound and pumping blood free-rides on that". Third, the tie between the hypothesis is broken by appeal to the relevant counterfactual: *If the heart made a thumping sound but did not pump blood, it would not have been selected*.

The structure of this reasoning is repeated in many other cases. For instance, suppose in a certain ecological niche, "being a fly" is locally coextensive with "being an ambient black nuisance" (ABN): all flies are ABNs, and all ABNs are flies. In such a situation, which trait will be selected for in frogs, snapping at flies or snapping at ABNs? Does snapping at flies free ride on snapping at ABNs, or is it the other way around? Again:

> An appeal to counterfactuals is what breaks the assumed coextension. What would happen in a world where everything is the same as here except that some ABNs aren't flies, or vice versa? Which does the frog snap at in such a counterfactual world? If *those* frogs snap at flies

[111] J. Fodor & M. Piattelli-Palmarini, *What Darwin Got Wrong*, p. 100.
[112] *Ibid.*, pp. 109-110.

> that aren't ABNs, then (all else being equal) our frogs must be fly-snappers; if those frogs snap at ABNs that aren't flies, then (all else being equal) our frogs must be ABN-snappers.[113]

Hence, what solves the indeterminacy is an appeal to counterfactuals: "relevant *counter*factuals are what decide between two (or more) hypotheses that are equally compatible with the *actual* data".[114] But this generates a problem for the theory of natural selection, for selection is supposed to be a mindless phenomenon, and "counterfactuals have their effects on happenings in the actual world only via the mediation of minds".[115] We know that architects are selecting arches and not spandrels because, having minds, they are sensitive to what would counterfactually be the case if one could have arches without the spandrels. And so, it is arches, *not spandrels*, which they have in mind when designing their cathedrals. But, as Feser puts it,

> Natural selection is mindless, and sensitive only to actual local causal circumstances. So it cannot be affected by what would have been the case in some counterfactual situation. Hence, even though *we* can know the counterfactual to be true, its truth does not contribute anything to the causal factors that actually influence natural selection itself.[116]

Thus, if natural selection is the mechanism of evolution (or better put, the whole story behind the evolutionary process), it follows that there can be no fact of the matter about which traits are selected for. This would require natural selection to be sensitive to counterfactuals, which, being mindless, it cannot be. The relevant counterfactual may be true, but it is nonetheless causally effete since "possible-but-not-actual events do not exert selection pressures".[117]

Now, countless discussions have followed Fodor and Piattelli-Palmerini's argument. Still, for my purposes I want to focus simply on the fact that, as Feser notes, the problem could be solved by adopting a teleological view of nature, "holding that a tendency to select for traits that are advantageous […] is in some way intrinsic to the very nature of the evolutionary process itself", that "the evolutionary process is inherently *directed toward* this end".[118] Indeed, suppose the evolutionary process is intrinsically oriented towards selecting advantageous traits. In that case, there can be a fact of the matter about

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[113] *Ibid.*, p. 108.
[114] *Ibid.*, p. 101.
[115] *Ibid.*, p. 116.
[116] E. Feser, *Aristotle's Revenge*, pp. 410-411.
[117] J. Fodor & M. Piattelli-Palmarini, *What Darwin Got Wrong*, p. 113.
[118] E. Feser, *Aristotle's Revenge*, p. 419. John F. McCormick made a similar point: see J. F. McCormick, *Scholastic Metaphysichs, Part II* (Chicago, Loyola University Press, 1943), p. 73.

which trait out of two coextensive traits is selected for: the one which is actually advantageous, and which, were it counterfactually to be removed, would have diminished the organism's adaptability.

Fodor and Piattelli-Palmarini, however, already begin from the assumption that "evolution is a mechanical process through and through", and hence exclude "final causes" from the get go, along with "divine causes, […] *élain vital*, entelechies, the intervention of extraterrestrial aliens and so forth".[119] Thus, they don't appear to consider the possibility of what Feser calls "an atheistic brand of Aristotelian teleology".[120] They do mention that treating natural selection as an intentional process would solve the problem, though quickly consider the suggestion "preposterous".[121] But when one inquires into why, it seems to be because they assume that intentionality requires mindedness, which results in a very naïve interpretation of what such a solution would mean: that "Mother Nature […] selects with ends *in view*".[122] Indeed, they write: "Only agents have minds, and only agents act out of their intentions, and natural selection isn't an agent".[123] But that something can be oriented towards an end without being a mental agent of any sort is precisely what the Aristotelian advocates for. And so, unless one wants to rule out this kind of mindless intentionality for *a priori* reasons, that nature acts as an architect (or a breeder, to follow Darwin's analogy) *but without a mind* can be an attractive and naturalism-friendly solution to the problem Fodor and Piattelli-Palmarini identify.

The point can be strengthened, for the fruitfulness of Aristotelian teleology with respect to evolution is not limited to this only. As atheist philosopher Thomas Nagel has argued, even if the current materialistic paradigm can account for how life, qualia, consciousness and reason can arise out of inert third-person material, it can hardly make the actual history of evolution on Earth anything more than a brute unintelligible string of astronomically improbable cosmic coincidences.[124] In other words, even if it is *possible* that, under mechanicism, life and mind would come from lifeless and mindless matter,

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[119] J. Fodor & M. Piattelli-Palmarini, *What Darwin Got Wrong*, p. XIII.

[120] E. Feser, *Aristotle's Revenge*, p. 418.

[121] See J. Fodor & M. Piattelli-Palmarini, *What Darwin Got Wrong*, p. 121.

[122] *Ibid.*, p. 121 (my italics).

[123] *Ibid.*, p. 122.

[124] See T. Nagel, *Mind and Cosmos* (Oxford, Oxford University Press, 2012). It is important to keep in mind that Nagel's argument is *not* against evolution *per se*, which he affirms, but only against the current neo-Darwinian account of it, which he takes to be incomplete and in need of being supplemented with teleological principles of nature.

that does not make it any more *probable*. On the contrary, if the laws of physics and chemistry are all that is at play in the history of the universe, the likelihood of evolution leading, *in the available geological time*, to rational beings capable of reliably knowing the most intricate truths about the world seems laughably slim at best.

For instance, in the context of arguing against the possibility of extraterrestrial intelligent life, scientists John Barrow and Frank Tipler listed ten crucial steps in the evolution of mankind "each of which is so improbable that it is unlikely to have occurred before the Earth ceases to be habitable".[125] For these and similar reasons, they claim that "there has developed a general consensus among evolutionists that the evolution of intelligent life […] is so improbable that it is unlikely to have occurred on any other planet in the entire visible universe".[126]

But this begs the question: if the current scientific and philosophical paradigm makes of the evolutionary origin of mankind on Earth such an astronomically improbable event, can it really claim in any intelligible sense to be *explaining* it? As Nagel writes: "to explain not merely the *possibility* but the *actuality* of rational beings, the world must have properties that make their appearance not a complete accident: in some way the *likelihood* must have been latent in the nature of things".[127] But the current neo-Darwinian account does the complete opposite. Instead of attempting to show why it was likely that such a thing would happen, it seems content simply with establishing that it was *possible* and that it just happened against all odds. Shouldn't that imply something is lacking in such a purported "explanation"?

If this is correct, current neo-Darwinian theories don't predict evolution's actual outcomes, which leaves the paradigm open and vulnerable to critique from Intelligent Design proponents. The problem is aggravated when facts about the fine-tuning of the universe for life are factored in,[128] together with the peculiarly life-friendly situation of planet Earth in the Solar System (neither too far nor too close the Sun, with a sufficiently massive planet nearby to dodge threats from random asteroids, etc.). Under a non-teleological view of nature, what appeals to direct intervention by God so easily explains

[125] J. Barrow & F. Tipler, *The Anthropic Cosmological Principle* (Oxford, Oxford University Press, 1986), p. 560. The steps include the development of a DNA-based genetic code, the origin of aerobic respiration and mitochondria, the evolution of the eye and endoskeleton, etc., and it is supposed to be a non-exclusive list. See pp. 561-564.

[126] *Ibid*., p. 133.

[127] T. Nagel, *Mind and Cosmos*, p. 86 (my italics).

[128] See, to this respect, L. Barnes, "The Fine-Tuning of the Universe for Intelligent Life", *Publications of the Astronomical Society of Australia*, 2012 (29), pp. 529-564.

is but a complete and brute accident, an inexplicable miracle of chance. That, though, is more an admission of defeat than a satisfying explanation, which should "show that the realization of these possibilities was not vanishingly improbable but a significant likelihood given the laws of nature and the composition of the universe".[129]

Even worse than *not* predicting what we observe to be the case is the fact that the conjunction of naturalism and the theory of evolution seems to undermine the reliability of our cognitive faculties, as Alvin Plantinga has convincingly argued.[130] This is because under the most common forms of naturalism the *content* of our beliefs lacks any causal role in the production of bodily movement. Instead, behavior is entirely determined by the neuro-physiological (NP) properties of what happens in the brain. A certain belief-content then accompanies these NP properties, but they are not causally efficacious in virtue of such a content. Thus, natural selection would certainly select brains with NP properties and processes that lead to adaptive behavior but would be indifferent to whether the accompanying belief-content was mostly true or not. This means that a believer in both naturalism and evolution has a strong reason to doubt the reliability of his own cognitive faculties, as they result from a process not interested in truth, but in survivability.

Suppose there could be a naturalistic way to explain how belief-content influences behavior. This, at most, Plantinga says, would allow us to have confidence in those cognitive faculties of ours that were relevant to survival and reproduction.[131] Consequently, beliefs about metaphysics, philosophy of science, scientific theories, natural laws, etc., would take the hindmost. Thomas Nagel concurs:

> Evolutionary naturalism provides an account of our capacities that undermines their reliability, and in doing so undermines itself. […] I agree with Alvin Plantinga that, unlike divine benevolence, the application of evolutionary theory to the understanding of our own cognitive capacities should undermine, though it need not completely destroy, our confidence in them. Mechanisms of belief formation that have selective advantage in the everyday struggle for existence do not warrant our confidence in the construction of theoretical accounts of the world as a whole.[132]

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[129] T. Nagel, *Mind and Cosmos*, p. 32.

[130] It's the so-called "evolutionary argument against naturalism". See A. Plantinga, *Warrant and Proper Function*, pp. 216-237; *Where The Conflict Really Lies* (Oxford, Oxford University Press, 2011), pp. 307-350.

[131] See A. Plantinga, *Where The Conflict Really Lies*, pp. 348-349.

[132] T. Nagel, *Mind and Cosmos*, pp. 27-28. Also: "Is it credible that selection for fitness in the prehistoric past should have fixed capacities that are effective in theoretical pursuits that were unimaginable at the time?" (p. 74). Maybe it is *possible*, but it sure seems highly unlikely. The same kind of evolutionary

To avoid this skeptical challenge and boost the likelihood of the actual evolutionary history on Earth, Nagel proposes revising the naturalist's conception of nature in a neo-Aristotelian sense. Apart from the laws of physics, the naturalist should acknowledge that "principles of a different kind are also at work in the history of nature, principles of the growth of order that are in their logical form *teleological rather than mechanistic*".[133] If the universe is to be such as to give rise to mind, and not simply as a cosmic accidence, it must have a certain built-in "teleological bias" that predisposes it towards such an outcome.[134] It is worth quoting Nagel at length here:

> Natural teleology would require two things. First, that the non-teleological and timeless laws of physics […] are not fully deterministic. Given the physical state of the universe at any moment, the laws of physics would have to leave open a range of alternative successor states, presumably with a probability distribution over them.
>
> Second, among those possible futures there will be some that are more eligible than others as possible steps on the way to the formation of more complex systems, and ultimately of the kinds of replicating systems characteristic of life. The existence of teleology requires that successor states in this subset have a significantly higher probability than is entailed by the laws of physics alone —simply because they are on the path toward a certain outcome. Teleological laws would assign higher probability to steps on paths in state space that have a higher "velocity" toward certain outcomes. They would be laws of the self-organization of matter, essentially —or of whatever is more basic than matter.[135]

A teleological view of nature, then, can easily bypass the problems of the current paradigm without necessarily implying theism (though also without excluding it). From the point of view of the laws of physics and chemistry, all possible outcomes would have roughly the same probability. Still, there would also be *teleological* laws that would give a higher probability to those paths that lead to an increase in overall value. The universe would be, from the get-go, characterized by an axiological bias, predisposed to end up

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reasoning can be applied to undermine moral realism. See, for instance, S. Street, "A Darwinian Dilemma for Realist Theories of Value", *Philosophical Studies*, 2006 (127), pp. 109-166; T. Bogardus, "Only All Naturalists Should Worry About Only One Evolutionary Debunking Argument", *Ethics*, 2016 (126), pp. 636-661.

[133] T. Nagel, *Mind and Cosmos*, p. 7 (my italics).

[134] See *Ibid*., p. 91.

[135] T. Nagel, *Mind and Cosmos*, pp. 92-93. Almost 40 years before, Étienne Gilson already argued in a similar way: "In the light of modern science, the probabilities that organic structures are spontaneously born from elements mechanically in motion are infinitely small; so much so that we can say that they do not exist. […] The physicist is content to think that at all events, though infinitely improbable, their existence is not absolutely impossible; but the philosopher who, in this matter, is but the man in the street, remains perplexed. If the existence of such beings is so highly improbable, how has it come about that they exist? And the only response that he can imagine is that it is perhaps necessary to restore to life some ancient forgotten or despised notions"; E. Gilson, *From Aristotle to Darwin*, p. 114.

giving rise to life, mind, and reason in a sort of gradual process of awakening in which its own intelligibility would become increasingly "intelligized", going, so to speak, from potential to actual:

> Some form of natural teleology […] would be an alternative to a miracle —either in the sense of a wildly improbable fluke or in the sense of a divine intervention in the natural order. The tendency for life to form may be a basic feature of the natural order, not explained by the non-teleological laws of physics and chemistry.[136]

This tendency or orientation would be inherent or immanent to the universe itself, "an irreducible part of the natural order",[137] instead of being super-imposed onto it from without. And so, Nagel's proposal essentially boils down to a vindication of natural and intrinsic teleology of the Aristotelian kind I have been defending on this chapter, adding yet one more reason in favor of its revival in metaphysics.

3.5. Denial of this Form of Teleology Leads to Skepticism

Nagel's idea of nature being governed by teleological or axiological laws, besides the merely physico-chemical laws, qualifies as a form of *axiarchism*. Axiarchism is the idea that reality (or its fundamental grounding) has an axiological bias and is oriented toward the good. It is a thesis one can find almost omnipresently in pre-modern philosophers. Plato's Idea of the Good, which is said to be the reason of the being and intelligibility of everything else (*Republic*, VI, 509b); Aristotle's purely actual Unmoved Mover that every natural substance tries to imitate (*Met.*, XII, 7, 1072a 26-27); the Stoics *Logos*, which ruled the cosmos in a rational way; the Provident God of the medieval philosophers and theologians… these are all variations on the core idea of axiarchism. In turn, axiarchism represents a teleological view of nature, one in which existence itself tends towards value. This means, then, that a denial of teleology would imply a denial of axiarchism.

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[136] T. Nagel, *Mind and Cosmos*, p. 124. Indeed, as he writes elsewhere, "if one asks, '*Why* is the natural order such as to make the appearance of rational beings likely?', it is very difficult to imagine any answer to the question that is not teleological"; *The Last Word* (Oxford, Oxford University Press, 1997), p. 138.

[137] T. Nagel, *Mind and Cosmos*, p. 93. Though, as Nagel acknowledges, his preference for this immanent solution stems from his commitment to atheism, the theist can also share such a view of nature. It is perfectly compatible, for instance, with classical theism, where God would be the metaphysical pre-condition of such an enriched natural order. Thus, Aristotelian teleology is a metaphysical thesis that is, at least *prima facie*, compatible with theism and naturalism, implying neither and excluding none.

Now, John Pittard has argued that denial of axiarchism leads to radical skepticism.[138] If this is true (and Pittard certainly puts forward a persuasive case), whoever wants to avoid skepticism should put his confidence in some form of fundamental axiarchic teleology being true. This, in turn, would lend strong support to the teleological side of the Aristotelian Foundation since its denial would come at very heavy costs for rationality itself.

Pittard's argument goes like this. First, Pittard draws a distinction between two kinds of conceivable worlds: those that are *epistemically hospitable* and those that are *epistemically inhospitable*. An epistemically inhospitable world *w* is one in which there exists at least one recent internal duplicate[139] of myself and "a large portion of your recent internal duplicates in *w* are radically mistaken about the past, present, or future (or at least are so mistaken during the interval where their experience mirrors your recent experience)".[140]

For instance, suppose a world w_1 where I began to exist 5 minutes ago but a Cartesian demon has generated in me all the memories and experiences that characterize my present mental state. My duplicate thinks he has been researching the metaphysical foundations of ethics in Aristotle and Aquinas for some years now and that he is presently writing down his dissertation. But, of course, none of this is true. W_1 is a *conceivable world* because, for all I know, it might be a metaphysical possibility. And it is also *epistemically inhospitable* because my w_1 duplicate is radically mistaken in all of his beliefs. An epistemically hospitable world, instead, will be any world with at least one recent internal duplicate of me that is not epistemically inhospitable.

Now, the key to Pittard's argument is that, among conceivable worlds, there is a *predominance* of epistemically inhospitable worlds over epistemically hospitable ones. Why think this? Because, intuitively, there are many more ways for a belief to be radically mistaken than for it to be correct. In other words, the conditions a conceivable world has to meet for it to be epistemically hospitable are much more constraining than the ones it needs to meet to be epistemically inhospitable. And so, "the range of ways that a world

[138] See J. Pittard, "Deceptive Worlds, Skepticism, and Axiarchism", *Inquiry*, 2021, pp. 1-36.
[139] "Subject S is a recent internal duplicate of yours if and only if S undergoes some interval of conscious experience that is phenomenally equivalent to (and therefore internally indistinguishable from) your recent conscious experience", *Ibid*., p. 3.
[140] *Ibid*., p. 3.

can be inhospitable is much wider than the range of ways that a world can be hospitable".[141]

However, if this predominance thesis is true, then I have a *prima facie* reason, absent any other considerations, to think that the actual world is probably epistemically inhospitable. This kind of predominance-to-probability reasoning is fairly innocuous. To illustrate this, Pittard asks us to consider members of an intelligent alien species that continually transmit their own thoughts through radio waves. Scientists detect several of these radio waves, and while they work on decoding them, someone considers how likely it is they encode thoughts about a sporting event:

> What should your view on this matter be? On the one hand, it's plausible that there is an infinite variety of ways for some alien to have a stream of thought that is about a sporting event, and also an infinite variety of ways for some alien to have a stream of thought that is not about a sporting event. And it's doubtful that we could show that these infinities differ in their cardinality. But it is also intuitively clear that among all of the conceivable streams of thought, those that are not about a sporting event predominate. In light of this predominance fact, it seems that you have a prima facie reason for thinking that the relevant thoughts are probably not about a sporting event.[142]

The pattern of reasoning here is the same as before. Since this appears uncontroversial, the predominance of epistemically inhospitable worlds should also lead, *absent any other considerations*, to the conclusion that, probably, the actual world is epistemically inhospitable.

Now, notice that, if axiarchism is true, "the existence of a bad or not very good world is either metaphysically impossible or (antecendently) objectively improbable".[143] Hence, the believer in axiarchism might have there already that *other consideration* that would undercut the predominance-to-probability reasoning. Epistemically inhospitable worlds are inherently bad (or at least not very good) from an axiological point of view. Hence, under axiarchism, their existence would already be either metaphysically impossible or antecedently very improbable. But does the non-axiarchic have any comparable

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[141] *Ibid*., p. 8. Here is an important precision: "By endorsing [this thesis of] predominance, I am not thereby committed to the claim that inhospitable worlds *outnumber* hospitable worlds. The number of inhospitable worlds is presumably infinite, but so presumably is the number of hospitable worlds. […] But when we are concerned with infinite sets, the fact that some type is predominant need not be grounded in some fact about the number of members of the different types. For example, it seems clear that among the natural numbers, non-primes are predominant […]. This is true even though the set of primes is infinite and has the same cardinality as the set of non-primes" (p. 9).

[142] *Ibid*., p. 11.

[143] *Ibid*., p. 2.

undercutting tool in his arsenal? Pittard considers several possibilities and finds them all lacking.

First, the non-axiarchic might appeal to restrictive theories of modality and claim that the space of possibility is, in fact, a lot smaller than the space of conceivability. This, however, would be irrelevant, for what is needed is a way to determine whether *conceivably inhospitable* worlds are in fact possible or impossible. There mere suggestion that not all conceivable worlds are possible does nothing to settle which ones are and which ones are not.

Second, the non-axiarchic might appeal to a wide representationalist theory of consciousness. According to this view, brain states only have phenomenal or representational properties (like the property of representing the world in some manner) given a certain evolutionary history. This theory, if true, would imply the impossibility of many conceivable inhospitable worlds (Boltzman Brains, for instance, lacking evolutionary history, would also lack phenomenal and representational properties). The problem is that no non-question-begging evidence can support it and hence, one can only justifiably assent to it if already under the assumption that the actual world is hospitable. Indeed, the principal motivation for wide representationalism appears to be its congruence with the scientific data,

> but this gives you a reason to accept wide representationalism only if you are independently justified in thinking that this scientific outlook is broadly correct. And you lack such justification if you have prima facie reason for thinking the world is inhospitable and no good counterbalancing reason to affirm the hypothesis of hospitableness.[144]

Third, the non-axiarchic might want to appeal to simplicity considerations. But there is, first, no reason to think that hospitable worlds are, intrinsically, significantly simpler than inhospitable ones. And second, unless one grants axiarchism, there seems to be no reason to think that reality would be biased towards simplicity in any noticeable way.

Fourth, the non-axiarchic might appeal to features of his conscious experience unlikely to happen in an inhospitable world, such as its coherence. But, counterargues Pittard, "there is reason to think that inhospitable worlds are more abundant than hospitable worlds even when we restrict our focus to conceivable worlds where coherent experiences are typical".[145] Also, I would add, if I inhabited an inhospitable world, I could be radically mistaken about my conscious experience being truly coherent.

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[144] *Ibid*., p. 21.
[145] *Ibid*., p. 26.

In the end, and unlike the axiarchic, the non-axiarchic does not seem to have any reason to think that the actual world he inhabits is epistemically hospitable, *despite* the predominance of conceivable epistemically inhospitable worlds. On the contrary, for all the non-axiarchic knows, what is most expected is that he probably inhabits an inhospitable world: "in light of her belief that goodness had no role in shaping fundamental concrete reality, and in light of the predominance of inhospitable worlds, she has reason to think that her outlook is probably radically mistaken".[146] And so, denial of axiarchism leads to radical skepticism.

4. In Conclusion

In this chapter, I have gone through several lines of argument, both old and new, in support of natural intrinsic teleology, the second pillar of what I called the Aristotelian Foundation of ethics. I started by showing how the most popular complaints against Aristotelian teleology attack a strawman. Contrary to common opinion, Aristotelian teleology does not imply panpsychism, vitalism, anthropocentrism, theism, nor does it license absolute, uncontrolled, and naïve teleological reasoning. Boiled down to its basics, Aristotelian teleology is simply the thesis that natural things have, built into their natures, certain inclinations, orientations, or tendencies towards certain other outcomes.

Next, I have pointed out that teleology follows neatly from Aristotle's doctrines of (1) act and potency, (2) substantial forms, and (3) efficient causality. I have also explained several contemporary arguments that suggest teleology is (4) rationally unavoidable, and necessary to account for (5) the physical intentionality of powers, (6) biological function, and even (7) evolution itself. Finally, (8) I have presented an argument to the effect that denial of teleology (and, with it, axiarchism) makes radical skepticism rationally unavoidable.

With this, I end my exploration of the Aristotelian Foundation's rational justification. I conclude that both pillars are solidly grounded and reasonable to uphold, the Modern "revolution" notwithstanding. Aristotelian virtue-ethics should not be afraid to search for its own motivation in metaphysics, for, as I have shown, expanding on Oderberg's words, both essentialism and teleology have "a metaphysically and scientifically respectable — indeed ineliminable— place in our best account of reality".[147]

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[146] *Ibid*., p. 32.

[147] D. Oderberg, "Finality Revived", p. 2423.

What I would like to do now is to go one step further and explore what I take to be the fundamental difference between Aristotle's and Aquinas's approach to the metaphysical foundation of ethics. For they, though agreeing on the Aristotelian Foundation, seemingly disagree in that Aristotle appears satisfied with leaving the matter thus, whereas Aquinas feels the need to ground the Foundation further in God. That is what I ask now: once the Aristotelian Foundation is in place, is there any need for God to ultimately ground ethics?

CHAPTER 4. GOD, THE ULTIMATE FOUNDATION OF MORALITY?

> The content of our obedience –the thing we are commanded to do– will always be something intrinsically good, something we ought to do even if (by an impossible supposition) God had not commanded it.
>
> C. S. Lewis, *The Problem of Pain*, pp. 99-100

1. The Moral Argument for God's Existence

1.1. Preliminary Remarks

Let's recapitulate. So far, I have argued (in Chapter 1) that an Aristotelian-inspired ethics requires an Aristotelian-inspired metaphysics as its grounding for it to make full rational sense. This I have called the Aristotelian Foundation, which is composed of two inter-dependent pillars, essentialism and teleology (nature and end). Both Aristotle and Aquinas, and the tradition that follows one or both, centered ethics around the fulfillment of one's nature. But then, for ethics to make sense, I must have a nature (and hence, essentialism) ordered towards something that is its fulfillment (and hence, teleology). With this in mind, Chapters 2 and 3 have been dedicated to probing these pillars, concluding, both from contemporary developments and arguments taken from Aristotle and Aquinas, that they are as solid as anything in philosophy can be. Aristotelian ethics can find in metaphysics one of its most powerful allies.

But now the question imposes itself: is this really enough? Is it enough to appeal to the Aristotelian Foundation to properly ground ethics? Or is there need for something else, something more? Many philosophers have thought so throughout History, and many still do today: that, in fact, *morality needs God*, and that it makes no sense or becomes problematic or cannot exist objectively if God does not exist. This is what the moral argument for God's existence seeks to establish, and as such has received and continues to receive a lot of attention in the philosophy of religion. In this chapter, I shall first defend an Aristotelian response to the moral argument that I think is available to the non-theist, and second, explore a more roundabout and indirect way that the Thomist could use to go from morality to God.

However, as David Bagget and Jerry Walls have noted, there is no such thing as *the* moral argument for God's existence.[1] There is no *one* moral argument for the existence of God but a myriad of moral *arguments*, each with its specific starting point, structure, and aspirations. There are arguments from moral evil,[2] from the experience of conscience and moral guilt,[3] from the need for divine help to be moral,[4] from the idea of cosmic justice,[5] from moral knowledge,[6] from moral altruism,[7] from the dignity of human persons,[8] from moral accountability,[9] from the rational stability of morality,[10] and so on and so on. This means I need to get clear about my target. *Which* moral argument, specifically, is the one I think the Aristotelian Foundation helps the non-theist to resist?

1.2. The Aristotelian Foundation versus William Lane Craig's Moral Argument

My target will be William Lane Craig's moral argument. Craig is one of the most respected scholars today working in the philosophy of religion, and he has defended the moral argument in several publications, debates, and venues. Additionally, his arguments have had a noticeable influence in the apologetics community beyond academic discourse and are often the object of public discussion between laypeople. Hence, it can be an

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[1] See D. Bagget & J. L. Walls, *The Moral Argument. A History* (Oxford, Oxford University Press, 2019), p. 7. Chad MacIntosh has recently surveyed a variety of them in contemporary literature. See C. MacIntosh, "Recent Work on Traditional Arguments for Theism (II)", *Philosophy Compass*, 2022, pp. 1-9. Many of these approaches can be combined into an overarching cumulative moral argument for God's existence, as suggested in D. Bagget & J. L. Walls, *Good God* (Oxford, Oxford University Press, 2011), pp. 29 and 99.

[2] See A. Plantinga, "Two Dozen (or so) Theistic Arguments", in J. L. Walls & T. Dougherty, *Two Dozen (or so) Arguments for God* (Oxford, Oxford University Press, 2018), pp. 476-478.

[3] See J. H. Newman, *An Essay in Aid of a Grammar of Assent* (London, Burns, Oarts & Co., 1870), pp. 101- 117.

[4] See L. Zagzebski, "Does Ethics Need God?", *Faith and Philosophy*, 1987 (4, 3), pp. 294-303 and J. Hare, *The Moral Gap* (Oxford, Oxford University Press, 1996).

[5] See D. Oderberg, "Morality, Religion, and Cosmic Justice", *Philosophical Investigations*, 2011 (34, 2), pp. 189-213.

[6] See M. D. Linville, "The Moral Argument", in W. L. Craig & J. P. Moreland, *The Blackwell Companion to Natural Theology* (Oxford, Blackwell Publishing, 2012), pp. 391-448; A. Ritchie, *From Morality to Metaphysics* (Oxford, Oxford University Press, 2012).

[7] See A. Pruss, "Altruism, Normalcy, and God", in M. A. Nowack & S. Coakley (eds.), *Evolution, Games, and God* (Cambridge, Harvard University Press, 2013), pp. 329-342.

[8] See A. Menuge, "Why Human Rights Cannot Be Naturalized: The Contingency Problem", in A. Menuge (ed.), *Legitimizing Human Rights* (London, Routledge, 2013), pp. 57-78; M. D. Linville, "The Moral Argument", pp. 417-446; D. Bagget & J. L. Walls, *The Moral Argument*, p. 11.

[9] See J. P. Moreland & W. L. Craig, *Philosophical Foundations for a Christian Worldview*, pp. 491-494.

[10] See C. S. Layman, "A Moral Argument for the Existence of God", in R. K. Garcia & N. L. King (eds.), *Is Goodness without God Good Enough?* (Maryland, Rowman & Littlefield, 2009), pp. 49-65; J. Hare, "Is Moral Goodness without Belief in God Rationally Stable?", in *Is Goodness without God Good Enough?*, pp. 85-99; D. Bagget & J. L. Walls, *The Moral Argument*, p. 28 and pp. 178-179.

important contribution, one likely to advance the debate, if I can show that the Aristotelian Foundation helps to undercut Craig's moral argument. My target will be his preferred formulation of the argument, the one Craig finds "most convincing".[11] It goes thus:

(1) If God does not exist, objective moral values and duties do not exist.

(2) Objective moral values and duties do exist.

(3) Therefore, God exists.[12]

Given that the Aristotelian readily grants premise (2), what is most relevant for my purposes here is Craig's justification for premise (1). To introduce ourselves to the argument, however, it will be helpful, first, to notice what the argument is *not* claiming. The point of the argument is *not* that atheists (or non-theists more generally) cannot act morally or recognize moral values and duties without belief in God. As Craig forcefully remarks: "My argument is that theism is necessary for there *to be* moral goods and duties, not that it is necessary for us to discern the moral goods and duties that there are".[13] It is not, hence, that there is no objective good or evil if one does not *believe* in God, but that there is no objective good or evil *if God does not exist*, even if one were to believe He did:

> [I]n the absence of God, that is, if God does not exist, then morality is just a human convention, that is to say, morality is wholly subjective and nonbinding. We might act in precisely the same ways that we do in fact act, but in the absence of God, such actions would no longer count as good (or evil), since if God does not exist, objective moral values do not exist.[14]

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[11] W. L. Craig, *Reasonable Faith* (Wheaton, Crossway Books, 2008), p. 172

[12] See, for instance, *Ibid*., p. 172; *On Guard* (Colorado, David C. Cook, 2010), p. 129 and J. P. Moreland & W. L. Craig, *Philosophical Foundations for a Christian Worldview*, p. 494. In another context, Craig puts the argument thus: "I am going to defend two basic contentions in this debate: I. If theism is true, we have a sound foundation for morality; II. If theism is false, we do not have a sound foundation for morality"; W. L. Craig, "Opening Statement", in *Is Goodness without God Good Enough?*, p. 31 (a more modest formulation can be found in W. L. Craig, "Opening Speech", p. 31). The response I will present could also be used to undercut this formulation of the argument. The Aristotelian naturalist could grant (I) without much problem but would strongly dispute (II).

[13] W. L. Craig, "This Most Gruesome of Guests", in *Is Goodness without God Good Enough?*, p. 169 (my italics). See also J. P. Moreland & W. L. Craig, *Philosophical Foundations for a Christian Worldview*, p. 492; W. L. Craig, *Reasonable Faith*, pp. 175-176; *On Guard*, p. 127 and pp. 134-135. Andrew Loke makes the same point in "A New Moral Argument for the Existence of God", *International Journal for Philosophy of Religion*, 2022, p. 4.

[14] J. P. Moreland & W. L. Craig, *Philosophical Foundations for a Christian Worldview*, p. 490. As it happens, many atheists throughout History have shared this sentiment. John Leslie Mackie, for instance, in his *Ethics: Inventing Right and Wrong* (New York, Penguin Books, 1991) famously argued that objective moral values would be very "queer" and strange entities, "utterly different from anything else in the universe" (p. 38), and hence something the naturalist should reject. Jean Paul Sartre also echoed

But why think this? Some may be tempted to argue thus. God is that necessary and supreme Being without which nothing else would exist: being Pure Existence Itself, he grants existence to every contingent reality and sustains it in being at all and every moment. Hence, if God does not exist, nothing else exists or can exist. And so, by extension, if God does not exist, no human act could be morally good or evil, right or wrong, because there would be no human acts, for there would be no human beings. But surely this is not what Craig has in mind. As evidenced by the above quote, Craig envisages a world in which human beings still exist as such, acting in exactly the same ways they do in the actual world, but in which their actions lack any objective moral properties precisely because of there being no God.[15] God, then, is thought of as some kind of proximate or direct foundation of morality, without whom morality itself immediately collapses and disappears.

In Craig's view, the objectivity of moral values is grounded in God's essential and necessary character, in His nature as Loving, Caring, Just, etc., while the objectivity of moral duties is grounded in God's will, in His commands:

> On a theistic view, objective moral duties are constituted by God's will or commands. God's moral nature is expressed in relation to us in the form of divine commandments which constitute our moral duties or obligations. Far from being arbitrary, God's commandments must be consistent with His holy and loving nature. Our duties, then, are constituted by God's commandments, and these in turn reflect His essential character. On this foundation we can affirm the objective rightness of love, generosity, and self-sacrifice, and condemn as objectively wrong selfishness, hatred, abuse, and oppression.[16]

But then, with God out of the picture, argues Craig, without an absolute standard of the Good to refer to and a transcendent Lawgiver to impose moral laws unto us, any *objective* distinction between good and evil, right and wrong, disappears. As Craig writes:

> On a naturalistic view, moral values are just by-products of socio-biological evolution. […] As a result of socio-biological pressures, there has evolved among *homo sapiens* a sort of "herd morality" which functions well in the perpetuation of our species in the struggle for survival. But on the atheistic view, there doesn't seem to be anything about *homo sapiens* that makes morality objectively true. If the film of evolutionary history were rewound and shot

Dostoyevsky's intuition that everything is permitted if God does not exist. See J. P. Sartre, *L'existentialisme est un humanisme*, p. 39.

[15] David Bagget and Jerry Walls specifically criticize this aspect of William Lane Craig's moral argument. See D. Bagget & J. L. Walls, *Good God*, pp. 98-101.

[16] W. L. Craig, "Opening Speech", in A. L. Johnson (ed.), *A Debate on God and Morality* (New York, Routledge, 2021), p. 31. See also W. L. Craig, *Reasonable Faith*, p. 182; *On Guard*, pp. 131-132.

> anew, very different creatures with a very different set of values might well have evolved. By what right do we regard our morality as objective rather than theirs?[17]

Now, this may well be all true under the most common forms of naturalism today. But it seems to me the Aristotelian naturalist has a ready and powerful response to this reasoning that allows him to retain the objectivity of moral values and duties even if God does not exist. For remember the core of Craig's argument: keep every fact about human beings and their nature intact but remove God from the picture —objective moral values and duties will disappear too. But this will not work against the Aristotelian. Given Aristotelianism, if human beings have a nature oriented towards certain ends (and, above all, to its fulfillment), that is all that is required to ground the objectivity of moral values and duties. An action will be objectively good if it promotes my flourishing and objectively evil if it detracts from it, *regardless of the existence of God*. Indeed, that is all that "X is morally god/evil" means.

Thus, if the Aristotelian Foundation is true, *that* is the proximate and direct foundation of morality. There is no need, at least in principle, to appeal to any separate, absolute, and transcendent standard of the Good. Suppose human beings have an objective nature, objectively oriented towards certain ends. In that case, there will inevitably be actions which, objectively, will promote human flourishing (and thus be objectively good) and actions which, objectively, will hinder human flourishing (and thus be objectively evil), *independently of the existence or non-existence of God*.

Similar reasoning will apply to moral duties. It is true that some authors of Aristotelian persuasion have suggested that the concept of moral obligation only makes sense in a theistic context. Thus, they say, the Aristotelian non-theist should just abandon it.[18] This, though, may be too quick of a concession. As I argued in Chapter 1, the Aristotelian Foundation provides the Aristotelian with a solid enough way to understand the experience of moral obligation and its categorical force. As Edward Feser has also emphasized:

> The hypothetical imperative *(1) If I want what is good for me then I ought to pursue what realizes my natural ends and avoid what frustrates them* is something which follows from the

[17] W. L. Craig, *Reasonable Faith*, pp. 174-175.

[18] Most famously, Elizabeth Anscombe, in "Modern Moral Philosophy", pp. 29-33. Mark C. Murphy makes a similar point in "Theism, Atheism, and the Explanation of Moral Value", in *Is Goodness without God Good Enough?*, p. 129. For challenges to this, see W. M. Diem, "Obligation, Justice, and Law: A Thomistic Reply to Anscombe", *Proceedings of the American Catholic Philosophical Association*, 2017 (90), pp. 271-286 and C. Pigden, "Anscombe on 'Ought'", *Philosophical Quarterly*, 1988 (38), pp. 20-41.

> [Aristotelian-Thomistic] metaphysics of the good. By itself, it does not give us a categorical imperative because the consequent will have force only for someone who accepts the antecedent. But that *(2) I do want what is good for me* is something true of all of us by virtue of our nature as human beings […]. These premises yield the conclusion *(3) I ought to pursue what realizes my natural ends and avoid what frustrates them*. (3) does have categorical force because (2) has categorical force, and (2) has categorical force because it cannot be otherwise given our nature.[19]

Again, if God does not exist but, still, human beings retain a nature oriented towards certain ends, then they will also retain a natural and necessary (essential) desire for their own good. And it will be the implicit presence of this natural desire that would ground the categorical and obligatory force of moral imperatives, when confronted with something either necessarily tied to the human good (like caring for one's offspring) or necessarily opposed to it (like adultery). If an action, for instance, is never flourishing promoting but always contrary to the human good, then it is always bad and one *ought* never to do it (because one necessarily desires his own good).

With this framework, God's commands are, for the Aristotelian who is also a theist, more like a manual of instructions, whose purpose is to tell a user how to operate a given instrument in order not to break it. God, being omniscient, knows what the human good is more perfectly than humans do. And so, he issues His commands as guidelines that illuminate what man must do to achieve his flourishing.[20] But just as the ultimate ground of the instruction's force and value is the nature of the instrument in question, the ultimate ground of the mandatory force of God's commands is human nature itself. God commands man not to commit adultery *because* such an action harms and goes against the human good, man's own flourishing, which man deeply and most truly desires. But if, *per impossibile*, God commanded human beings to do something that went against their flourishing, their nature, it would not (it could not) have any obligatory force upon them, just as an instruction manual that actually conduced to the destruction of its object could have no force upon someone who wanted to maintain it intact.

Now, Craig seems to be aware of this overall Aristotelian response to his argument. For instance, he writes: "It seems that the atheistic humanist must simply insist […] that

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[19] E. Feser, *Neo-Scholastic Essays*, p. 315. Feser quotes Michael Cronin to support this idea: "In the fullest sense of the word, then, moral duty is natural. For not only are certain objects natural means to man's final end, but our desire of that end is natural also, and, therefore, the necessity of the means is natural"; M. Cronin, *The Science of Ethics*, vol. 1 (Dublin, M. H. Gill & Son, 1939), p. 222.

[20] As Aquinas writes, "in divine law, there are some things which are commanded *because they are good* and others prohibited *because they are bad*" (*ST*, II-II, q. 57, a. 2, ad3).

whatever contributes to human flourishing is morally good and whatever detracts from human flourishing is bad and take that as his explanatory stopping point",[21] which is what I have just proposed. But Craig's answer to this solution seems to me to be predicated on a misunderstanding of what the Aristotelian is claiming. He usually considers the proposal of taking human flourishing as an explanatory stopping point "premature because of its arbitrariness and implausibility".[22] Regarding its arbitrariness, he rhetorically asks: "Given atheism, why think that what is conducive to human flourishing is any more valuable than what is conducive to the flourishing of ants or mice? Why think that inflicting harm on another member of our species is wrong?".[23] And in another context:

> We can limn prudential value for guinea pigs that will be characterized by objectivity, universality, and normativity, but we shall not therefore imagine that the flourishing of guinea pigs is morally good or that anyone has a moral obligation to abet it. Why is a preferential treatment of human flourishing not a case of speciesism, an unjustified bias in favor of one's own species?[24]

It should be clear, though, after my treatment of the Aristotelian Foundation, what is wrong with this response. First, the Aristotelian speaks of morality and moral goods exclusively with respect to rational creatures, who are responsible, up to a point, for their own characters, which they can fashion in a virtuous or vicious way through repeated action and free deliberation. Hence, the flourishing of a non-rational animal is a good but not a *moral* good (at least not in itself).

But second, and more importantly, given an Aristotelian framework, it cannot be arbitrary to take human flourishing as that which determines what actions are morally good or bad for human beings because *that* is the end human beings necessarily and naturally seek in all that they do —just as all other living substances seek, of necessity, their own species-specific goods. That's a teleological framework no human being can escape from. Even the evildoer does so *sub specie boni*, under the aspect of the good, under the (radically mistaken) impression that *that* is what his flourishing demands. Hence, human flourishing is not an elective end of human action, one which man can

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21 W. L. Craig, *Reasonable Faith*, p. 177. See also "This Most Gruesome of Guests", pp. 176-177.

22 *Ibid*., p. 177, and also "Opening Statement", p. 31; *On Guard*, pp. 138-140.

23 W. L. Craig, *On Guard*, p. 138.

24 W. L. Craig, "This Most Gruesome of Guests", p. 177. The same objection can be found in D. Bagget & J. L. Walls, *God and Cosmos* (Oxford, Oxford University Press, 2016), p. 130, echoed in A. Loke, "A New Moral Argument for the Existence of God", p. 5.

choose to seek or not, and hence one which man would need a reason to pursue in order to avoid being arbitrary. Human flourishing *just is* that to which human beings are ordered to by nature, and hence the ultimate good that justifies and drives all human action, even unconsciously.

Sure, guinea pig flourishing will be that good towards which guinea pigs are ordered (again, the good is species-relative). But given the facts of human nature, it is simply not the case that promoting the flourishing of guinea pigs is a necessary condition of human flourishing. In that case, no moral obligation can be attached to that activity for humans, and neither can be moral goodness *per se*.[25] However, given those same facts of human nature, it *is* the case that promoting the flourishing of other fellow human beings (especially certain close ones, like relatives and friends) *is* part of human flourishing-conditions. Hence, man feels instinctively morally obliged to do so, and it is objectively morally good for him to do it but objectively morally bad for him to unjustly harm or mistreat others.

As for his second criticism, that taking human flourishing as a stopping point is implausible, Craig writes:

> Atheists will sometimes say that moral properties like goodness and badness necessarily attach to certain natural states of affairs. For example, the property of badness necessarily attaches to a man's beating his wife. The property of goodness necessarily attaches to a mother's nursing her infant. Atheists will say that once all the purely natural properties are in place, then the moral properties necessarily come along with them. Now given atheism this seems extraordinarily implausible. Why think that these strange, nonnatural moral properties like "goodness" and "badness" even exist, much less somehow get necessarily attached to various natural states of affairs? I can't see any reason to think that, given an atheistic view of the world, a full description of the natural properties involved in some situation would determine or fix any moral properties of that situation.[26]

Once more, this can certainly be strange and implausible in the most common forms of atheism today. Still, it is just what follows naturally from the Aristotelian framework, which consists of a more enriched view of nature than the typical atheist materialistic view. For the Aristotelian, a complete description of the natural properties involved in

[25] Taking care of a herd of guinea pigs might be a *morally* good activity given certain conditions, but certainly not because of anything to do with guinea pigs *qua* guinea pigs. It might be morally good because taking care of non-rational animals in general may have a place in a good human life, or because it might be one or the only available legitimate means to provide for my family, or because it can be a way to exercise and develop certain flourishing-conducive virtues (like care, patience, commitment, responsibility…), etc.

[26] W. L. Craig, *On Guard*, p. 139.

some situation would include facts such as "Mary is fulfilling her flourishing conditions as a human mother" and "Peter is detracting from his flourishing conditions as a human husband". Given an essentialist-teleological metaphysics, and in reference to rational agents, those just imply facts about moral goodness and moral badness without any need to appeal to God. So, Craig's responses to an Aristotelian non-theistic foundation of morality do not work, for they do not grapple sufficiently with what the Aristotelian is claiming. In a sense, one might say that the *prima facie* force of Craig's first premise stems from centuries of anti-Aristotelian natural and moral philosophy.

In essence, Craig wants to say that morality needs some kind of reference point to be objective, and that such reference point is God: "On classical theism God's own holy and perfectly good nature supplies the absolute standard against which all actions and decisions are measured. […] He is the locus and source of moral value".[27] Hence, he wants to say that without God, all moral claims would be mere subjective opinions. But the Aristotelian has an objective reference point whose existence, for all Craig has shown, is independent of God: human nature with its teleological orientation towards certain goods.

Hence, given the Aristotelian Foundation, there is a satisfactory explanation and grounding for the objectivity of moral values and duties, there is an objective moral standard, whether God exists or not. Some actions are objectively morally good and others objectively morally evil, whether one thinks so or not, because human nature and its flourishing conditions are what they are objectively, whether one thinks so or not. If someone thinks flourishing is found in a life centered around sensitive pleasures, the Aristotelian has a way of showing that he is *objectively mistaken*. To rescue his moral argument, Craig would need to show that the Aristotelian Foundation is impossible without God: that if God does not exist, the Aristotelian Foundation does not exist.

But this would run contrary to a striking concession that can be found in Craig's work, one which the Aristotelian non-theist can use to his advantage. In response to Mark C. Murphy, Craig writes:

> I am inclined to agree that prudential value is independent of God in the sense that, given naturalism, it would be possible to give an accurate account of what it would be for a human being to flourish. Obviously, such an account would be vastly different from the theistic account, which sees the knowledge of God as the key to human fulfillment. But on the supposition of naturalism, it would seem to make sense to speak of what would make human

[27] J. P. Moreland & W. L. Craig, *Philosophical Foundations for a Christian Worldview*, p. 491.

> beings well-off, just as it would make sense to speak of what would contribute to the flourishing of animal species.[28]

But with this, it seems to me, Craig has conceded to the Aristotelian naturalist all that he needs to ground the objectivity of moral values and duties: he has conceded that if God did not exist, human beings could still have a nature oriented towards certain ends. And, from an Aristotelian point of view, *that's all one needs* to have objective moral values and duties. Craig concedes the debate to the Aristotelian when he grants that "prudential value is independent of theism" and that, hence, "it makes sense to speak of what, on atheism, is in an organism's best interest or conducive to its well-being".[29]

Sure, Craig criticizes Murphy's attempt to ground moral value in prudential value, and Murphy might not be the best representative of the Aristotelian position. Craig writes the following:

> Even if there were, on atheism, moral values and duties (which is moot), moral value and prudential value fall apart and are often in head-on collision. Acting morally will then not make prudential sense. In the absence of moral accountability, life thus becomes, in the language of French existentialists, absurd. One has moral value pulling in one direction and prudential value tugging in the opposite and no way to decide rationally which choice to make. By contrast, on classical theism moral value and prudential value may seem temporarily out of joint but are ultimately harmonious, so that adopting the moral point of view makes good prudential sense, even if it involves worldly sacrifice.[30]

Again, whether this line of response succeeds against Murphy's position is not the issue here. But clearly, this attempt by Craig of breaking apart prudential and moral value will *not* move the Aristotelian. For here is the true insight of Aristotelian ethics: that, when it comes to human beings, prudential value *just is* moral value, and vice versa. There is *never* a case in which acting morally is against one's own *true* self-interest, one's own *true* good. And this is why prudence (*phronesis*) was the chief *moral* virtue for Aristotle: that habit of practical reason which enabled a person to truly see the human good and its demands in a concrete situation, and act upon them. As Edward Feser, a prominent Aristotelian-Thomist philosopher, puts it:

> [T]he "old" natural law theory, given its Aristotelian-Thomistic foundations, does not draw the sort of rigid distinction between matters of ethics and matters of practicality, good mental and physical health, etc., that modern theorists tend to draw. Ethics, for Aristotelians, Thomists, and other classical thinkers, is a matter of *how to live well*, in *all* aspects of life.

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28 W. L. Craig, "This Most Gruesome of Guests", p. 177.
29 *Ibid*., p. 182.
30 *Ibid*., p. 182.

> Anything that enters into living well –from avoiding stress to avoiding disease to avoiding murder and adultery– is part of the moral life, broadly construed.[31]

And this is why Craig's concession that it makes sense, on atheism, to speak of what it would take for human beings to flourish is fatal for his argument, once Aristotelianism is brought to the table. For the Aristotelian construes ethics as the pursuit of flourishing, of the good human life. And hence, if one grants that, without God, it would still make sense to speak of the good human life —that, even if God did not exist, human beings could still have a nature oriented towards certain ends—, by that same token one grants that an Aristotelian understanding of moral values and duties would still be true (*objectively* true) even if God did not exist.

Put differently, suppose an Aristotelian theist who discovered the ultimate apodictic proof *against* the existence of God. Such a person may have acquired a definite reason to stop being a theist, but *that alone* will be insufficient for him to stop believing in objective morality. Assuming human beings have a nature oriented towards certain ends, that is enough for morality to remain objective. Whether God exists or not has no more bearing, for the Aristotelian, on the question of whether some action is objectively morally good or evil for me to do than on the question of whether some food is objectively healthy or unhealthy for me to eat. Given the Aristotelian Foundation, the existence of God does not affect the objectivity of moral truth, no more than it affects the objectivity of medical truth. All that is needed is a nature with a certain constitution and flourishing conditions —if I have *that*, it makes no difference if it turns out God does not exist.

This, plausibly enough, may be part of the reason why Aristotle himself seemingly never felt the need to appeal to any absolute and transcendent standard of the Good, let alone to anything remotely divine, in order to speak of moral issues in an objective sense. But more curious, this also appears to be the position of even a committed classical theist like Aquinas. In the context of discussing whether the order of love will remain unaltered in Heaven (*ST*, II-II, q. 26, a. 13), Aquinas argues that, when it comes to love of neighbor, the blessed will love more those closer to God, because God will be to the blessed the whole reason for loving. But, in response to an objection, he makes a surprising qualification: "God will be for each the whole reason for loving because He is man's good. *For if, for an impossible supposition* [per impossibile]*, God were not man's good, He wouldn't be man's reason for loving*" (*ST*, II-II, q. 26, a. 13, ad3; my italics). This

[31] E. Feser, *Neo-Scholastic Essays*, p. 408.

suggests Aquinas has in mind the Aristotelian Foundation as the sole proximate and immediate foundation of morality: it is because man, by his nature, is oriented towards God as his ultimate end that God can be man's reason for loving. But if, *per impossibile*, God were not man's ultimate good (say, because human nature were not ordered towards God), then God could not be man's reason for loving, despite being God himself.

Further evidence of this position, I think, can be gathered from Aquinas's treatment of the controversial Old Testament slaughter of the Canaanites: "Everyone dies of natural death, both guilty and innocent. And this natural death is inflicted by divine power because of original sin […]. For this reason, one can, *without injustice*, inflict death on anyone, guilty or innocent, by God's command" (*ST*, I-II, q. 94, a 5, ad2; my italics). Independently of what one thinks of the passage in question and Aquinas's solution to its troublesome nature, this shows that, to Aquinas's mind, this was not a case in which God commanded something unjust *and, still,* Israel was obligated to comply. On the contrary, God's command changed the moral species of the act so that carrying it did not imply doing an injustice, for God is the ultimate owner of man's life and he can decide when *and how* the life of a particular human being should end:

> Similarly, when Abraham consented to killing his child, *he did not consent to homicide*, because to kill him was his duty given the command of God, who is lord of life and dead. God himself decreed the death of all men, just and unjust, because of the sin of the first father. If someone with divine authority executes this sentence, *he does not commit homicide*, as neither does God (*ST*, I-II, q. 100, a. 8, ad3; my italics).[32]

In Aquinas, both Israel's and Abraham's obligation to comply appear conditional on God's command *not* being unjust. Hence, one can assume Aquinas to be of the thought that if God were, *per impossible*, to command something unjust, something which went against the human good, man ought not to obey God. These passages, in turn, make it plausible that Aquinas could have felt comfortable affirming the following counterpossible propositions: (a) If, *per impossibile*, God were not man's good, man would have no reason or obligation to love God; (b) If, *per impossibile*, God were contrary to man's good, man ought to hate God; (c) If, *per impossibile*, God were not just but unjust, justice would still be good for man and injustice, evil; and, lastly (d) If, *per impossibile*, God did not exist, objective moral values and duties would still exist.

[32] Also, "Oseas, uniting himself to a woman of prostitution, or to an adulterous woman, *did not commit adultery nor fornication*, for he united himself to the one that was his by the command of God, who is the author of the institution of marriage" (*ST*, I-II, q. 100, a. 8, ad3; my italics).

Suppose, in a counterpossible fashion, God can be removed from the picture or disconnected from man's good leaving human nature intact. Because of this, the result is that, still, many things (indeed, mostly the same as before) would continue to count as objectively good or evil, right or wrong. But in such a case, what follows is that God is not, in fact, the immediate and proximate foundation of morality, without which it would inevitably collapse. We can't do the same, though, the Aristotelian argues, with human nature itself. If, *per impossibile*, human beings did not have a nature, *then* objective moral values and duties would not (and could not) exist. Nothing could be objectively good or bad for a being that lacked a nature and, subsequently, had no flourishing conditions. In other words, hold everything else equal except for the existence of God, there would still be objective moral values and duties. Hold everything else equal, *even the existence of God*, except for us having a nature oriented toward certain ends, there would be *no* objective moral values and duties.

Some may object to this counterpossible approach by claiming that counterpossible propositions have no non-vacuous truth value and are, therefore, irrelevant with respect to this discussion or inscrutable.[33] But I don't think this is right, and neither did Aquinas, for he was very fond of this kind of counterpossible propositions. For instance, when discussing, in the context of omnipotence, whether God can sin, he writes:

> The Philosopher says that God and the wise man can do evil things. But this needs to be understood as a conditional the antecedent of which is impossible, as if saying that God can do evil if he wants to, because nothing prevents that a conditional, both the antecedent and consequent of which are impossible, be true, as if one said: *If man is a donkey, he has four legs* (*ST*, I, q. 25, a. 3, ad2).[34]

Surely, of the following two counterpossible propositions, (i) *If man is a donkey, he has four legs* and (ii) *If man is a donkey, he has eight legs*, the former is true and the latter is false.[35] Similarly, what the Aristotelian will claim is that, given his metaphysical framework for morality, the counterfactual *If God does not exist, moral values and duties*

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[33] Craig makes this point about counterfactuals with impossible antecedents in *Reasonable Faith*, pp. 181-182.

[34] Examples of this abound in Aquinas's work. For instance, "If, *per impossibile*, Christ's divinity were separated from his body, then his divinity would not be present in the sacrament [of the Eucharist]" (*Super Ioannis*, cap. 6, l. 6) and "If, *per impossible*, Adam could have suffered in the state of innocence, his suffering would have been less than Christ's" (*ST*, III, q. 46, a. 6, ad3).

[35] Thomas Bogardus gives another interesting example: *If you were the number two, you'd be even* is certainly true, but *If you were the number two, you'd be odd* is certainly false. See T. Bogardus, "Only All Naturalists Should Worry About Only One Evolutionary Debunking Argument", *Ethics*, 2016 (126), p. 638, note 8.

do not exist is false, whereas *If man does not have a nature, moral values and duties do not exist* is true, independently of whether the respective antecedents are possible or impossible.

What this means is that, for Craig to defend premise (1) against the Aristotelian non-theist, he needs a defense of a link-premise: *If God does not exist, man does not have a nature*. If it could be defended that man can only exist with a nature oriented toward certain ends if God exists, then the truth of premise (1) would have to follow for the Aristotelian, though in a more indirect and roundabout way than Craig appears to intend. In essence, this would be a reduction of the moral argument to the cosmological argument, which I think can be attempted by appealing to one of Aquinas's famous five ways. But before turning on to this, let's take a detour on a related topic.

1.3. Excursus on the Evolutionary Debunking Argument

There is one variety of moral argument that has gained a lot of attention in recent literature that tries to establish a tension between naturalism, evolution, and moral realism. In essence, it is an argument from moral knowledge: the idea is that, given naturalism and evolution, there is no guarantee that our moral judgments conform with moral truth, so that the naturalist who accepts evolution should either be a moral anti-realist or deeply skeptical about his own ability to access the truth value of moral claims.

Philosopher Sharon Street, who gave the first influential defense of this line of argument, called attention to the fact that "the forces of natural selection have had a tremendous influence on the content of human evaluative judgments", for it is extremely plausible to assume that different evaluative tendencies "can have extremely different effects on a creature's chances of survival and reproduction".[36] Suppose some living being X experienced a natural unreflective tendency to think of its own destruction or the killing of its offspring as good. Such a creature would have disappeared early on in the evolutionary process, and the genes encoding these bizarre evaluative tendencies would not have been perpetuated. It is important to understand, though, the following:

[36] S. Street, "A Darwinian Dilemma for Realist Theories of Value", *Philosophical Studies*, 2006 (127, 1), pp. 113-114. Being a naturalist herself, Street proposed embracing moral anti-realism because of the argument, but other authors have used essentially the same reasoning to the detriment of naturalism. See, for instance, M. D. Linville, "The Moral Argument", pp. 393-417; "Darwin, Duties, and the Demiurge", in *A Debate on God and Morality*, pp. 166-184 and T. Bogardus, "Only All Naturalists Should Worry About Only One Evolutionary Debunking Argument".

> The influence of Darwinian selective pressures on the content of human evaluative judgments is best understood as *indirect*. The most plausible picture is that natural selection has had a tremendous *direct* influence on […] our "more basic evaluative tendencies", and that these basic evaluative tendencies, in their turn, have had a major influence on the evaluative judgments we affirm. […] [H]ad the general content of our basic evaluative tendencies been very different, then the general content of our full-fledged evaluative judgments would also have been very different, and in loosely corresponding ways.[37]

At this point, the argument appeals to what Mark D. Linville has called *Darwinian counterfactuals*,[38] which shed light on how the basic moral intuitions of human beings would have been different had they evolved differently. The point is that "We might […] easily imagine all sorts of counterfactual moralities where conscience bids acts that, from our present perspective, are outright atrocities".[39] Darwin himself pondered such scenarios:

> If […] men were reared under precisely the same conditions as hive-bees, there can hardly be a doubt that our unmarried females would, like the worker-bees, think it a sacred duty to kill their brothers, and mothers would strive to kill their fertile daughters, and no one would think of interfering.[40]

Alongside Darwin's bees, Linville asks us to consider a pack of rational wolfs, who philosophize about unquestionable loyalty and obedience to the alpha as a supreme moral value, while despising equality as a perversion of the true moral norms.[41] Hypothetical examples such as these abound. Human beings take great care of their children (and normally feel obliged to do so) for an unusual number of years relative to the rest of the animal kingdom. Frogs and all kinds of fish just produce their offspring and abandon it immediately without any second thoughts. Presumably, a species of rational frogs or fishes would still do the same and feel no remorse because of it. Street herself entertains the possibility that human beings had evolved along the lines of lions (feeling an urge to experience the killing of competing offspring as good, under certain circumstances), bonobos (with an unreflective tendency to turn to sexual relations in all kinds of circumstances with all kinds of partners), or the social insects (experiencing a totalitarian devotion for the common good, in detriment to one's own individual self). "Presumably",

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37 S. Street, "A Darwinian Dilemma for Realist Theories of Value", pp. 119-120.

38 See M. D. Linville, "The Moral Argument", p. 403.

39 M. D. Linville, "God Is Necessary for Morality", in M. Peterson and R. VanArragon (eds.), *Contemporary Debates in Philosophy of Religion* (Malden MA, Wiley-Blackwell, 2020), p. 59.

40 C. Darwin, *The Descent of Man and Selection in Relation to Sex* (New York, D. Appleton & Co., 1882), p. 99. Quoted in M. D. Linville, "The Moral Argument", p. 403.

41 See *Ibid*., p. 397 and "Darwin, Duties, and the Demiurge", p. 169.

she writes, "in these and other such cases our system of full-fledged, reflective evaluative judgments would have looked very different as well, and in ways that loosely reflected the basic evaluative tendencies in question".[42]

Once these Darwinian counterfactuals are established, the question is pressed: in the face of this proliferation of counterfactual peer-disagreement, why should human beings think that *their* moral judgments are the true ones? What reason do they have to think their morality is any truer than all those other counterfactual moralities? Why think *they* are right in claiming that equality, monogamy and caring for one's offspring are morally good whereas complete submission, promiscuity and child-abandonment are morally bad? Craig himself, as quoted above, incorporates some of these ideas into his defense of the moral argument:

> On a naturalistic view, moral values are just by-products of socio-biological evolution. […] As a result of socio-biological pressures, there has evolved among *homo sapiens* a sort of "herd morality" which functions well in the perpetuation of our species in the struggle for survival. But on the atheistic view, there doesn't seem to be anything about *homo sapiens* that makes morality objectively true. If the film of evolutionary history were rewound and shot anew, very different creatures with a very different set of values might well have evolved. By what right do we regard our morality as objective rather than theirs?[43]

Now, a possible response, already surveyed in Chapter 3, is that of Thomas Nagel: to revise naturalism so that the fundamental fabric of the universe includes teleological laws that strive for the emergence of value. If this were so, Bertrand Russell's famous words that "Man is the product of causes that had no prevision of the end they were achieving"[44] would be denied, and its skeptical consequences avoided. On this new naturalistic picture, human beings could have some *a priori* warrant in their own reflective moral judgments, for these teleological laws would have boosted the probability of evolution producing rational beings with moral faculties capable of reliably tracking moral truth. But I think the Aristotelian has in his arsenal the theoretical tools to give a more direct response here.

Recall that, according to an Aristotelian view of nature, each living being has a concrete essence or nature, teleologically oriented towards certain ends. That to which a given being tends to is its good, and that which aids him in achieving his specific good is also good to it. But this means that to different natures, we must attribute different goods.

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[42] S. Street, "A Darwinian Dilemma for Realist Theories of Value", p. 121.

[43] W. L. Craig, *Reasonable Faith*, pp. 174-175. See also M. D. Linville, "Darwin, Duties, and the Demiurge", p. 170 and "God Is Necessary for Morality", p. 59.

[44] B. Russell, *Why I Am Not A Christian and Other Essays* (New York, Simon & Schuster, 1957), p. 107.

In other words, an analysis of the good needs to be species-specific or species-relative. As Aristotle himself clearly states that "what is wholesome or good is different for human beings and for fishes" (*NE*, VI, 7, 1141a 22-23), which is why, "if people are to give the name of wisdom to the knowledge of what is beneficial to themselves, there will be more than one wisdom; because there is no one wisdom that is concerned with the good of all animals, but a different kind for each species" (*NE*, VI, 7, 1141a 29-32), just as there is not one medicine alone for all of them but many.

But then, given that the good is species-relative, it follows that the *moral* good would also have to be species-relative, on the supposition that several rational species existed. And hence, what is morally good or bad for a human being might not necessarily be morally good or bad for a rational wolf, a rational bee, a rational frog, etc., precisely because we'd be dealing with different underlying natures. This, it seems to me, is just what follows from nature and end being the proximate foundation of morality, and so I think the Aristotelian naturalist should simply embrace the Darwinian counterfactuals.

This is also how I read Aquinas. After all, to Aquinas, the principles of the natural law are formed from the several ends and inclinations present in human nature. Reason finds itself, so to speak, in a given nature, pulled towards several ends, and judges which actions are right or wrong depending on whether they accord or not with the pursuit of the complete and integrated good (the flourishing) of *this* specific nature it is a part of. The principles of moral reasoning just are those ends and tendencies inscribed into human nature, which reason does not choose, but simply discovers as given. To Aquinas, practical (and hence, moral) reason is primarily instrumental, in the sense that the ultimate ends are not chosen after rational deliberation but given to us by nature. As Aquinas writes:

> Because the good has the reason of an end, and the bad the contrary reason, it follows that everything to which man has a natural inclination, reason will naturally apprehend it as good and, in consequence, as something to be pursued, while the contrary as bad and to be avoided. Which is why the order of the precepts of the natural law follows the order of natural inclinations (*ST*, I-II, q. 94, a. 2).

The Aristotelian philosopher, then, should simply agree with Mark D. Linville when he writes that "we do not reason *to* our basic moral predispositions; we reason *with* them. They function in the manner of moral First Principles, and they are conferred as part of

our evolutionary heritage. And, as Darwin thought, they *might* have been different".[45] Yes, if human beings had (counterfactually and, must I say, counterpossibly) evolved along the line of wolfs, bees, frogs, etc., they might have arrived at a very different evaluation of what constituted their flourishing-conditions, precisely because their nature and natural inclinations (their "basic moral predispositions" or "evaluative tendencies") would have been very different themselves.[46] But this need not mean, *per se*, that *that* counterfactual moral evaluation would have been wrong or that our actual one is. Each one, the Aristotelian will say, is true or false relative to the specific rational nature one is talking about. In other words, (i) if human beings had evolved differently, they would have a different nature; (ii) if they had a different nature, their flourishing would be different too; (iii) if their flourishing were different, the moral claims that applied to them would be different too.

Is the Aristotelian, then, conceding that morality is wholly subjective? No, on the contrary. It is true that, in this picture, some things which human beings in the actual world consider deeply morally wrong would only be so *for them*, not necessarily for any other rational species, with a different underlying nature. However, moral truths continue to be objective, only that they are as species-specific as claims about health or the good in general. For instance, no moral proposition on sexual ethics could have any categorical force on a rational animal that did *not* reproduce sexually (a rational starfish?). Neither could a treatise on this topic written by a natural law philosopher of a rational hermaphrodite species be identical in its content to one by Aquinas. But this hardly means that there is no objective moral truth when it comes to *human* sexual behavior, any objectively good way for human beings to behave sexually.

Hence, all moral claims should be understood with an implicit clause referring to the rational species in question, and this, I think, is how the Aristotelian naturalist should respond to this kind of evolutionary debunking argument. If a being A is of rational species S (if he has *this* specific nature), then *this* set of moral propositions objectively applies to him. And so, for instance, the moral truth should not be thought of exactly as

[45] M. D. Linville, "God is Necessary for Morality", p. 80. In another context, Linville complains that, in such a case, "Moral reasoning would then appear to be *means-end* reasoning, where the ends have been laid down for us by natural selection"; "The Moral Argument", p. 403. But that moral reasoning is, essentially, means-end reasoning, where the ends are fixed in us by nature is *precisely* what the Aristotelian claims moral reasoning to be.

[46] In fact, we wouldn't be *human* strictly speaking, hence the counterpossible nature of the case.

"Parents ought to care for their offspring", but "*Human* parents ought to care for their offspring".

Nobody tends to think this way because, as far as everyone knows, human beings are the only rational animal on Earth, and so the only being to which moral reasoning and propositions can apply. But surely, suppose human nature were such that children didn't need substantial post-natal care for an extensive number of years, but instead achieved maturity shortly after exiting the womb. In that case, there would hardly be among humans any moral obligation to care for their offspring to the extent that they usually do in the actual world. The same would apply if humans reproduced in the astronomically large numbers that frogs and fishes do. Hence, if we equip naturalism with Aristotelian tools, the naturalist should have no problem here. One and the same physical act could be morally good and obligatory for rational species *A* and morally bad and prohibited for rational species *B*. Aquinas, once more, apparently would agree. He writes:

> In natural things, a good act is that which is convenient to the agent's nature, a bad act one which is not convenient to the agent's nature. Hence it happens that *one and the same act is judged in different ways if compared to different agents*. For this that is moving upwards, if compared with fire, is a good act, because it is natural to it. But if compared with earth, it is a bad act, for it is against its nature (*De malo*, q. 2, a. 4; my italics).

Building a hypothetical on Aquinas's example, it seems, then, that he would have to agree with the following: that if fire and water were rational and free agents, one and the same physical act (moving upwards) would be morally good and obligatory for fire and morally bad and prohibited for water.

Now, some Darwinian counterfactuals might be more disturbing to think about than others.[47] Would it be *truly* morally good, even obligatory, for a species of rational bees to commit siblicide or filicide under certain circumstances? I'd concede that more thought needs to be put into this question, but tentatively I'd say it depends. Assuming the advent of reason doesn't imply, *per se*, any substantive change in the nature of the creature in question, I think the Aristotelian should simply bite the bullet and accept that this is what follows from his metaphysical and ethical framework. Even a committed Aristotelian-Thomist like Feser, while (obviously) recognizing that torturing babies for fun cannot possibly be good for humans given their natures, ponders that "[p]erhaps God could make

[47] Michael Ruse theorizes about an extraterrestrial intelligent species which did not consider immoral actions physically indistinguishable from what humans would consider rape. See M. Ruse, "Is Rape in Andromeda Wrong", in E. Regis, Jr. (ed.), *Extraterrestrials: Science and Alien Intelligence* (Cambridge, Cambridge University Press, 1985), p. 67.

creatures of *some* kind for which torturing babies for fun would be good".[48] That's disturbing to think about, given that we can't but imagine it from the particular standpoint of our nature and its flourishing-conditions. Still, nothing in it appears absurd or incoherent *once the Aristotelian framework is taken into account*.

But very plausibly, the nature of a rational bee would *not* be qualitatively the same as the nature of its most immediate non-rational bee ancestor, precisely because of the one being rational and the other not. Rationality comes with its own set of tendencies, ends, and goods, and so with demands of its own. Thus, a rational mother bee, while feeling a deep instinctual urge towards killing her fertile daughter, might end up recognizing that, while such an action would have been called for had she and her daughter been *mere* bees, in actuality filicide is in deep and stark conflict with some other good of a superior kind to which she is oriented because of being rational. Thus, through cultural progress and rational reflection on the *true* flourishing of rational bees, the infanticidal impulses would end up being regarded as remnants of a non-rational era, to be strongly opposed through the virtue of self-control. Just as humans already have done in History and continue to do (or at least ought to do) with many of their own inherited animal impulses.

1.4. In Conclusion

I have shown how an Aristotelian framework can help the naturalist resist William Lane Craig's moral argument for the existence of God. Given that what is morally good or bad for an agent is determined its flourishing, and this is in turn determined by the nature of the agent in question, there would still be objective moral values and duties even if God did not exist, granted that human beings continued to possess a certain nature oriented towards certain ends.

As Feser writes, "that a heart has the function of pumping blood is something true of it simply by virtue of being the kind of material substance it is, and would remain true of it whether or not it has God as its ultimate cause".[49] Similarly, that an action X is morally good for a human being to perform is something objectively true simply by virtue of human beings being the kind of substances they are. Thus, it would remain true even in the absence of God. In other words, it is not God's existence that grounds the objectivity

[48] E. Feser, "The Thomistic Dissolution of the Logical Problem of Evil", p. 278.
[49] E. Feser, *Neo-Scholastic Essays*, p. 29.

of morality but the fact that human beings have a concrete nature with its own objective flourishing-conditions.

I have also shown how Craig himself, in admitting that prudential value is independent of theism and that it would still make sense to speak of human flourishing even if God did not exist, essentially concedes the argument to the Aristotelian. That admission *plus* an Aristotelian understanding of morality simply yields the objectivity of moral values and duties without needing to appeal to God as its transcendent and absolute source. Lastly, I have also argued that the same core principles can be deployed in response to standard evolutionary debunking arguments.

What remains to be seen is whether there is a way for the theist to argue for the existence of God *from* the Aristotelian Foundation. That is, recognizing that morality is properly grounded in an essentialist and teleological understanding of human nature, is there a way to argue that the existence of such a nature needs to be grounded further in God? Some authors of Thomistic persuasion have claimed so: that while the doublet of nature and end is the *proximate* foundation of morality, God is its *ultimate* foundation.[50] To that I now turn.

2. Is the Aristotelian Foundation Enough? Aquinas's Fifth Way

2.1. A Thomistic Bridge from Morality to God

This new question requires moving away from Aristotle and focusing on Aquinas. As a committed Aristotelian in his approach to ethics and the philosophy of nature, I have argued that Aquinas most plausibly would have endorsed the Aristotelian response to Craig's moral argument. If it is man's nature and its flourishing what determines which actions are morally good or bad, then there is no *direct* or *immediate* connection between morality's objectivity and the existence of God. And hence, if God, *per impossibile*, did not exist, there could still be objective moral values and duties, granted that human beings still had a teleologically oriented nature that could ground their objectivity.

This said, I think there is in the distinctive aspects of Aquinas's philosophy a way to build back the bridge to God that this Aristotelian response demolishes. And it consists of showing that while objective moral values and duties depend on teleology to exist, teleology itself depends on the existence of God. In syllogistic form:

[50] See, for instance, M. R. Holloway, *An Introduction to Natural Theology* (New York, Apple-Century-Crofts, 1959), p. 146 and E. Feser, *Neo-Scholastic Essays*, pp. 35-36. Feser calls this position "Scholastic teleological realism".

(4) If objective moral values and duties exist, human beings have a nature oriented towards a certain end.

(5) If human beings have a nature oriented towards a certain end, God exists.

(6) Objective moral values and duties exist.

(7) So, God exists.

Notice that (4) and (5) together yield *If objective moral values and duties exist, God exists*, which, by contraposition, is logically equivalent to Craig's premise (1) *If God does not exist, objective moral values and duties do not exist*. So, in a sense, I am arguing that the Thomist can try to salvage Craig's moral argument by changing the justification of premise (1) and breaking it down into a two-step process, from objective moral values to teleology and from teleology to God. It is not that objective moral values and duties *directly* and *immediately* point to God, but that they do so indirectly and mediately, pointing to something that points to God. This, in practice, will be to reduce the moral argument to the cosmological argument (or more precisely, to a species of the teleological argument).[51]

Given that, throughout this work, I have been defending both (4) and (6), the key premise in need of justification is (5), the one linking teleology to God. This is, furthermore, the premise in dispute between Aristotle and Aquinas. As far as the extant Aristotelian corpus shows, Aristotle never made any connection between teleology and theism nor appeared to feel any need to do so. Aristotle's preferred proof of God starts from movement. It is change that can't exist unless God exists, not finality *per se* —in other words, to Aristotle, God is the cause of things *moving* towards their ends, but not of them *having* ends in the first place.[52] After all, "the divine is not an ordering ruler, since he needs nothing, but rather is that for the sake of which wisdom gives orders" (*EE*, VIII, 3, 1249b 13-16).[53]

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[51] There is some precedent for this in the Thomistic literature, though not much. See, for instance, M. R. Holloway, *An Introduction to Natural Theology*, pp. 154-155. Some authors have wanted to argue that Aquinas's 4th way is a kind of moral argument: see, for instance, W. L. Craig, *Reasonable Faith*, p. 104 and D. Bagget & J. L. Walls, *The Moral Argument*, pp. 11-12. But this interpretation does not seem right. Aquinas's focus in the 4th way is not on the moral good, but the good as a transcendental perfection of being, alongside the other transcendentals.

[52] See E. Feser, *Neo-Scholastic Essays*, p. 50 for this point.

[53] As translated by M. R. Johnson, *Aristotle on Teleology*, p. 262. Johnson (in pp. 258-263) successfully refutes several attempts to argue that Aristotle linked teleology to God. See also M. Leunissen, "Teleology in Aristotle", in J. K. McDonough (ed.), *Teleology: A History* (New York, Oxford University Press, 2020), pp. 39-63, and the discussion between Marie George and Edward Feser in M. George, "An Aristotelian-Thomist Responds to Edward Feser's 'Teleology'", *Philosophia Christi*, 2010 (12), pp. 441-449 and E.

Aquinas rejoinder to this is his famous Fifth Way, which reads as follows:

> The fifth way is taken from the governing of things. Indeed, we see things which lack cognition, like natural bodies, that act for an end. This is evident in that they always or frequently act in the same manner to achieve what is best, from where it is obvious that they go towards the end intentionally [*ex intentione*], and not because of chance. But what lacks cognition does not tend towards an end unless directed to it by something with cognition and intelligence, like the archer does with the arrow. Hence, there exists an intelligent being that orders all natural things to their end, and this we call God (*ST*, I, q. 2, a. 3).

In syllogistic form:

> (8) There are things that lack cognition and act for an end.
>
> (9) Nothing that lacks cognition acts for an end unless directed by some intelligent being that knows said end.
>
> (10) So, there is some intelligent being that directs things that lack cognition to their end (and this we call God).[54]

What I propose the Thomist do is to adapt the Fifth Way as a justification for the contested premise (5) above, that *If human beings have a nature oriented towards a certain end, then God exists*. If the Fifth Way is correct, that's the bridge the Thomist needs to go from morality to God, and the moral argument would be saved. In the words of Maurice Holloway: "A proof from moral obligation can be made, but it is really only a special instance of the Fifth Way".[55] Before inquiring how to proceed with this, though, let's get clear on some background interpretative questions.

2.2. Prior Interpretative Decisions Regarding the Fifth Way

Aquinas's Fifth Way is open to many interpretations, mainly because of its concise and ambiguous formulation. As it happens, some interpretations won't be useful to the

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Feser, "On Aristotle, Aquinas, and Paley: A Reply to Marie George", in *Neo-Scholastic Essays*, pp. 49-58. Celestine N. Bittle, in *God and His Creatures* (Milwaukee, The Bruce Publishing Company, 1953), argued that Aristotle, in *Physics*, VIII, 199a concludes "that the order of nature is the result, not of chance, but of *purposive intelligence*", that his entire argument in this chapter "revolves around the finality present in nature, and finality, he argues, presupposes *intelligence*" (p. 87). This, however, is clearly not the case in the quoted passage. Aristotle is comparing nature to intelligence because both act for the sake of an end, *and that's all*. No mention is made of the idea that, if nature acts for the sake of an end, this presupposes an intelligence of some kind.

[54] For other renditions, see J. Johnson, *Final Causality in the Thought of Thomas Aquinas*, p. 103; T. J. Pawl, "The Five Ways", in B. Davies & E. Stump, *The Oxford Handbook of Aquinas* (Oxford, Oxford University Press, 2012), p. 125; "Aquinas's Five Ways", in M. Bruce & S. Barbone (eds.), *Just the Arguments* (Oxford, Blackwell Publishing, 2011), p. 17; J. Bochenski, "The Five Ways", *Poznan Studies in the Philosophy of the Sciences and the Humanities*, 2000 (73), pp. 83-85.

[55] M. R. Holloway, *An Introduction to Natural Theology*, p. 154.

Thomist wanting to appeal to the Fifth Way to bridge the gap between morality and God. Hence, I need to lay down the interpretative decisions that will facilitate my purposes here. They are, in total, four.

2.2.1. The Fifth Way is a Stand-Alone Argument

Some authors have suggested that Aquinas did not intend the Fifth Way as a stand-alone argument, capable of reaching the existence of God on its own. Ralph McInerny, for instance, has written that "[t]he fifth way is not to be taken in isolation from the four arguments that preceded it, and *on which it depends*".[56] Likewise, Robert Koons has suggested that Aquinas thought "of the teleological argument in close connection with the cosmological argument", entering into the picture "when we already know [because of the cosmological argument] that the cosmos has a First Cause, and that this cause is necessary".[57]

According to this line of interpretation, the Fifth Way would not establish, *per se*, the existence of God, but only one aspect of its nature: its intelligence. Because of the previous four ways, Aquinas would have shown that there exists an absolutely necessary, purely actual, supremely perfect, uncaused cause of things, and the role of this last way would just be to prove that such a First Cause is an intelligent being. If this is correct, there would be no way to use the Fifth Way *alone* to bridge the gap from morality to God, not without bringing to bear the rest of the five ways, overloading the work the Thomist needs to do for the argument to go through.

Luckily, it is far from clear that this is the correct interpretation of the Fifth Way, not to speak of Aquinas's intentions. In fact, there appears to be some *prima facie* justification for the idea that Aquinas intended each way to be, with sufficient work and development, independent of the others. After all, he prefaces the exposition of the five ways by saying that "[t]he existence of God can be proven through five ways" (*ST*, I, q. 2, a. 3), with no indication that they should be taken together in a cumulative fashion. On the contrary, the impression given is that *each and any* of these five ways is intended to prove the existence of God on its own. This explains why he ends *each* way, independently, by saying that

[56] R. McInerny, *Natural Theology* (Elmhurst, The Priestly Fraternity of St. Peter, 2005), p. 117. McInerny's italics.

[57] R. Koons, "A New Look at the Cosmological Argument", *American Philosophical Quarterly*, 1997 (34, 2), p. 201. Andrew Loke also takes this approach with the teleological argument. See A. Loke, *The Teleological and Kalam Arguments Revisited* (Cham, Palgrave MacMillan, 2022).

the being reached in its conclusion is "what everybody calls God" (*ST*, I, q. 2, a. 3). This cannot be a conclusion Aquinas thinks is reached *only* when the five ways are completed, but at the end of each way, including the Fifth. Because of this, I will take the Fifth Way as a stand-alone argument that can be developed without having to go first through the others.

2.2.2. The Fifth Way is Not a Design Argument

Some authors have taken Aquinas's Fifth Way to be, in essence, William Paley's Design Argument.[58] Paley's argument focuses on the complexity of the biological realm and argues, from analogy with human artifacts (like a watch), that living things most probably have been designed by an intelligence. Such an argument is often taken to have been decisively refuted by Darwin's theory of evolution by natural selection, which purportedly shows how living beings might display the appearance of design without having been designed by anyone.

If Aquinas's Fifth Way was a Design Argument, then it could not be used to salvage the moral argument. For it would not allow us to build a bridge between man having a nature oriented towards certain ends and the existence of God, not without bringing to bear the whole biological realm to really bolster the argument's plausibility. Even if it could, this would be at the cost of inheriting the problems of Design Arguments, not the least of which is that they are often pitted against the most accepted current scientific theories. In that case, Aquinas's Fifth Way would face an objection from evolution that would be difficult to solve without asking for a radical revision of the Darwinian paradigm.

Fortunately, there is plenty of evidence that Aquinas's Fifth Way is not Paley's Design Argument. Paley's focus on complexity is nowhere to be found in Aquinas's text. It is not complexity that furnishes the way with its starting point: it is finality, and finality can manifest in very simple phenomena, like the tendency of a proton to attract electrons. Building on an analogy from human artifacts, Paley makes *extrinsic* the teleology to be found in the biological world. Aquinas, following Aristotle, thinks of natural teleology as *intrinsic*, which radically distinguishes natural objects from human artifacts. Finally,

[58] Most (in)famously, for instance, Richard Dawkins, in *The God Delusion*, p. 103. Kevin Decker, in "Science and Nature without God", in R. Arp (ed.), *Revisiting Aquinas's Proofs for the Existence of God* (Leiden, Brill, 2016), pp. 227-235 presents a critique from natural selection and evolution to the Fifth Way, thus presupposing that it is some kind of design argument *à la* Paley.

there is in Aquinas's text no indication that he is even thinking exclusively of living beings, and reason to think he could take *any* natural object, living or not, as a springboard for the argument, for in his view *all* natural objects exhibit finality. For these and other reasons, the consensus among scholars familiar with Aquinas's philosophy is that his Fifth Way is *not* a Design Argument,[59] and I shall follow suit.

2.2.3. The Fifth Way is Not an Argument from Cosmic Order

Joel Johnson has noted a confusing ambiguity in the starting point of the Fifth Way. He writes:

> In asserting that natural bodies "act for the sake of an end", Aquinas might be affirming one of two propositions:
>
> (1a) Each natural body (NB1, NB2, NB3, etc.) acts for its own particular end (E1, E2, E3, etc.), such that NB1 acts for E1, NB2 acts for E2, NB3 acts for E3, etc.
>
> (1b) Each natural body (NB1, NB2, NB3, etc.) acts for some common end (EC), such that NB1 acts for EC, NB2 acts for EC, NB3 acts for EC, etc.[60]

In other words, what is exactly the intended starting point of the Fifth Way? Is it the intrinsic finality each individual thing exhibits towards its natural and particular end, or is it the harmony that all natural bodies exhibit in conjunction with each other, striving for some kind of cosmic teleological order? Anthony Kenny echoes the same concern in his comprehensive study of the five ways:

> [I]t is not clear whether [Aquinas] is arguing that there are particular phenomena which exhibit teleology which must originate in intelligence, or whether he is saying that the universe as a whole displays an order which must be the design of a designer. When he says that things

[59] See, for instance, M. Holloway, *An Introduction to Natural Theology*, pp. 146-147; G. Kerr, "Design Arguments and Aquinas's Fifth Way", pp. 447-471; E. Feser, "Teleology: A Shoper's Guide", pp. 142-159; "Existential Inertia and the Five Ways", *American Catholic Philosophical Quarterly*, 2011 (85, 2), pp. 250-255; "Between Aristotle and Paley: Aquinas's Fifth Way", *Nova et Vetera*, 2013 (11, 3), pp. 707-749; M. Hayes, "A Response to Decker", in *Revisiting Aquinas's Proofs for the Existence of God*, p. 237; T. Pawl, "Aquinas's Five Ways", p. 17; "The Five Ways", p. 125; J. Owens, *An Elementary Christian Metaphysics* (Houston, Center for Thomistic Studies, 2011), p. 349; "Aquinas and the Five Ways", *The Monist*, 1974 (58, 1), pp. 27-28; R. Koons, "A New Look at the Cosmological Argument", pp. 200-202; J. F. Wippel, *The Metaphysical Thought of Thomas Aquinas*, p. 480; T. Crean, *God is No Delusion* (San Francisco, Ignatius Press, 2007), ch. 2; A. Echavarría, "Teleología, contingencia y creaturidad", in E. Alarcón *et al.* (eds.), *Opere et veritate* (Eunsa, Pamplona, 2018), pp. 218-219. René Ardell Fehr has suggested that the confusion with Paley's argument comes from Shapcote's translation of the *Summa Theologiae*, that rendered Aquinas's *ex intentione* as "designedly". See R. A. Fehr, *Thomas Aquinas and the Teleological Argument* (Thesis, Dominican University College, 2018), pp. 78-85, and also W. Newton, "A Case of Mistaken Identity: Aquinas's Fifth Way and Arguments of Intelligent Design", *New Blackfriars*, 2014 (95, 1059), pp. 569-578.

[60] J. Johnson, *Final Causality in the Thought of Thomas Aquinas*, pp. 104-105.

> act to achieve what is best, does he mean what is best for themselves, or does he mean some universal good[?][61]

Because of this ambiguity in the text, many authors (most notably Jacques Maritain) have taken the second route and interpreted the Fifth Way as a kind of argument from cosmic order.[62] In support of this line of interpretation, there is the fact that, in other texts, Aquinas clearly articulates arguments from cosmic order to God, and it would be natural to think that such would have ended up being featured among his five ways. For instance, in his prologue to the *Commentary on the Gospel of St. John*, Aquinas argues for God's existence in a manner reminiscent of the Fifth Way, but clearly stating that its starting point is "the whole course of nature":

> We see among natural things that they act for the sake of an end and achieve useful and determinate ends. But because they lack intellect, they can't direct themselves unless they are directed and moved by another who is directed by intellect. From where this movement of natural things towards determinate ends indicates that there is something other which directs natural things towards their ends and governs them. And so, *when the whole course of nature proceeds orderly towards an end and is directed*, it is necessary to suppose something other and superior that directs and governs it as a lord: and this is God (*Super Ioannem*, pr. 1; my italics).

Additionally, the last proof of God's existence in the *Summa contra Gentiles* (I, c. 13) is clearly an argument from cosmic order, which Aquinas also calls a proof *ex gubernatione rerum*, the same label that he later applies to the Fifth Way in the *Summa Theologiae*. If this reading is correct, though, Aquinas's Fifth Way could not serve my intended purpose. The Fifth Way could not be used to go from man's natural teleology to God because its starting point would not be the individual instances of finality of each natural substance towards their proper ends, but the harmonic order present in the whole world.

However, there is also compelling evidence that points to the other reading. Johnson takes notice of an argument Lawrence Dewan uses against Maritain's interpretation.[63] It goes like this. In the third part of *Summa contra Gentiles*, when trying to prove God's

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[61] A. Kenny, *The Five Ways*, p. 97.

[62] See J. Maritain, *Approaches to God* (New York, Harper Brothers, 1954), p. 65. Other authors following the same reading are M. Hayes, "Aquinas's Fifth Way and the Possibility of Science", in R. Arp (ed.), *Revisiting Aquinas's Proofs for the Existence of God*, pp. 215-226; C. Martin, *Thomas Aquinas* (Edinburgh, Edinburgh University Press, 1997), pp. 179-201; C. Bittle, *God and His Creatures*, pp. 80-104; E. Gilson, *The Christian Philosophy of St. Thomas Aquinas* (London, Victor Gollancz, 1957), pp. 75-76.

[63] See J. Johnson, *Final Causality in the Thought of Thomas Aquinas*, pp. 122-124 and L. Dewan, "St. Thomas's Fifth Way Revisited", *Universitas*, 2004 (31), pp. 47-67.

providence, Aquinas gives an argument that is pretty similar in content and structure to the Fifth Way:

> As it was proved, natural bodies move and act for the sake of an end, even though they don't know the end, for they always or frequently achieve what is best, and they would not do differently if they acted from art. But it is impossible for things that do not know the end to act for the sake of the end and achieve it in an orderly fashion unless they are moved by another that has cognition of the end, like the arrow is oriented to the target by the archer. Hence, it is necessary that all operation of nature is ordered by some knowledge. And this must be attributed to God, either mediately or immediately (*SCG*, III, c. 64).

As can be seen, many motifs of the Fifth Way are found in this text: that natural bodies act for the sake of an end, that they always or frequently achieve what is best, that they cannot do so unless directed by some intelligence, even the example of the archer is featured here. So, it is plausible that Aquinas has in mind in this text a similar underlying reasoning to that of the Fifth Way. But now, Dewan continues, notice that Aquinas gives, *immediately after this argument*, another one which is clearly an argument from cosmic order. He writes:

> Additionally, things which are distinct by nature do not come together in a single order unless reduced to order by an ordering agent. But in the universe there are many things of distinct and contrary natures, integrated nonetheless in a single order, for some use the operations of others, and some are helped or governed by others. Thus, it is necessary that there exists one single orderer and ruler of the universe (*SCG*, III, c. 64).

Now, if Aquinas gives an argument from cosmic order immediately after the one quoted above, this must mean that the one before *is not* intended as an argument from cosmic order, for Aquinas would not have repeated essentially the one same argument twice. And so, reasons Dewan, since the first argument presents so many similarities with the Fifth Way, it seems reasonable to assume that the proper interpretation of the Fifth Way should not take it as an argument from cosmic order. Instead, its starting point should be understood to be the goal-orientedness and teleology found in natural objects toward their proper ends, so that if there was, in the entire world, only *one* substance with a nature oriented towards an end, that would suffice, in Aquinas's mind, to get to God.

Despite the evidence to the contrary, I find this line of reasoning convincing, and so, I do not read the Fifth Way as an argument from cosmic order, and neither do many other authors of Thomistic persuasion.[64] Additionally, even if Aquinas intended the Fifth Way

[64] See, for instance, G. Kerr, "Design Arguments and Aquinas's Fifth Way", p. 453; L. Elders, *The Philosophical Theology of St. Thomas Aquinas* (Leiden, E. J. Brill, 1990), pp. 121-125; J. Bochenski, "The Five Ways", p. 84; J. F. McCormick, *Scholastic Metaphysics, Part II*, pp. 64-66; E. Feser, *Aquinas*, pp.

to be an argument from order, there is still merit in trying to see whether an argument for God from the finality of natural things to their respective particular ends can go through or not.

2.2.4. The Fifth Way is Not Restricted to Unintelligent Beings

There is one last obstacle to the Thomist's purpose of using the Fifth Way to salvage the moral argument, and it may be the most obvious. Let's recover the steps I said a Thomistic moral argument should follow:

> (4) If objective moral values and duties exist, human beings have a nature oriented towards a certain end.
> (5) If human beings have a nature oriented towards a certain end, God exists.
> (6) Objective moral values and duties exist.
> (7) So, God exists.

According to my words, the Thomist can try to justify premise (5) by appealing to Aquinas's Fifth Way, because that's the one that focuses on finality being a proof of God. But a quick check of the text in the *Summa* reveals that the starting point of the Fifth Way is those "things which lack cognition". Indeed, I formalized the argument thus:

> (8) There are things that lack cognition and act for an end.
> (9) Nothing without cognition acts for an end unless directed by some intelligent being that knows said end.
> (10) So, there is some intelligent being that directs things that lack cognition to their end (and this we call God).[65]

How can an argument composed of (8)-(10), which is clearly limited to beings which lack cognition, possibly be used as a justification for premise (5), when premise (5) focuses on human beings, who obviously don't lack cognition?

110-120; M. Fradd & R. A. Delfino, *Does God Exist?* (St. Louis, En Route, 2018), ch. 9; H. Renard, *The Philosophy of God* (Milwaukee, The Bruce Publishing Company, 1952), p. 48; M. R. Holloway, *An Introduction to Natural Theology*, p. 146; T. J. Pawl, "The Five Ways", pp. 124-125; J. Johnson, *Final Causality in the Thought of Thomas Aquinas*, pp. 105-124; "Nature Does Nothing in Vain" (manuscript); A. Echavarría, "Teleología, contingencia y creaturidad", p. 218.

[65] For other renditions, see J. Johnson, *Final Causality in the Thought of Thomas Aquinas*, p. 103; T. J. Pawl, "The Five Ways", in B. Davies & E. Stump, *The Oxford Handbook of Aquinas* (Oxford, Oxford University Press, 2012), p. 125; "Aquinas's Five Ways", in M. Bruce & S. Barbone (eds.), *Just the Arguments* (Oxford, Blackwell Publishing, 2011), p. 17; J. Bochenski, "The Five Ways", *Poznan Studies in the Philosophy of the Sciences and the Humanities*, 2000 (73), pp. 83-85.

To this, many Thomists have answered, correctly in my opinion, that it is not out of necessity that Aquinas focuses here on non-cognitive agents, but out of a propaedeutic intention.[66] In other words, precisely because they lack cognition, it is easier to grasp that such beings need to be directed to their ends by another, and this is why Aquinas limits the argument in this manner. Rational agents, like human beings, in being able to know, can direct their own actions to several ends, and so it may be more difficult to see how they are also directed by another. This does not mean, though, that they are *not* also directed by another. Aquinas himself argues to the contrary:

> The rational creature governs itself by its intellect and will, but both require to be ruled and perfected by God's intellect and will. Hence, in addition to the government with which the rational creature governs itself as lord of its actions, it requires to be governed by God (*ST*, I, q. 103, a. 5, ad3).

After all, man can certainly direct himself to many ends, but he also finds himself already directed to many other ends in a non-cognitive or pre-cognitive way, because of his own nature, like the way man finds himself naturally directed to truth, for instance. Human beings have this orientation out of a natural appetite, not of a free and rational choice. And so, even an intelligent creature has in itself many "noncognitive bents",[67] as Gerard Smith puts it, that are in it *apart* from its cognitive activity and that, in fact, furnish it with the teleological framework which makes its deliberate action possible. In Aquinas's words:

> It is necessary that in the will we find not only that which is of the will, but also that which is of nature. *This pertains to all created natures*, so that God can ordain it to the good, through their natural appetite. Because of this, even the will has certain natural appetite of that good which is appropriate to it. *And apart from this*, it has to desire something according to its own determination, not of necessity. […] But because nature is the will's grounding, that which is desired with a natural desire is the principle and grounding of all other desires (*De Veritate*, q. 22, a. 5; my italics)

Hence, not all end-orientedness in a rational creature can be accounted for in terms of its own knowledge or cognitive activity, because not all inclination in it is self-given or chosen. And because of this, a rational creature such as man can also furnish the Fifth Way with its starting point, which means the Thomist can try to use it to save the moral argument. In Gaven Kerr's words, "while the Fifth Way explores the finality only of

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[66] See, for instance, H. Renard, *The Philosophy of Being* (Milwaukee, The Bruce Publishing Company, 1948), p. 151 and J. F. Anderson, *Natural Theology* (Milwaukee, The Bruce Publishing Company, 1962), pp. 50-51.

[67] G. Smith, *Natural Theology*, p. 144.

unintelligent things, the metaphysics which informs it can be extended to intelligent things as well".[68] The Thomist only needs to adapt the Fifth Way accordingly, maybe in the following manner:

> (8') Human beings are oriented, by nature, to some end(s).
> (9') Human beings could not be oriented, by nature, to some end(s) unless directed by some intelligent being that knows said end(s).
> (10') So, there is some intelligent being that directs human beings to their end(s) (and this we call God).

2.3. A Faulty Justification of the Controversial Premise

Now, with all these interpretative decisions in place, all that remains to see is how the Thomist can defend the argument. The plausibility of (8') can be boosted by appealing to the objectivity of moral values and duties, which the truth of (8') so easily explains. Also, premise (8) or (8') is uncontroversial once the Aristotelian framework has been defended, which I have done in Chapters 2 and 3. Because of this, I won't keep arguing for it but assume it to be justified. The controversial premise is bound to be, instead, (9) o (9'), that things in general (and human beings in particular) can't be oriented towards an end unless an intelligent being is orienting them to it. This is also the premise that, presumably, the Aristotelian will resist more forcefully, given that natural objects are oriented towards their ends *intrinsically* because of their natures. Hence, where's the need to appeal to something else?

Because of this, it is surprising that Aquinas, despite giving some brief argument in favor of (8) in the text of the *Summa*, apparently leaves (9) with no justification whatsoever.[69] The only thing approximating a justification is his example of the arrow and the archer, which, taken in itself, is pretty poor. Sure, if an arrow is found oriented towards a specific target, this needs to be explained by appealing to some intelligent being who has thrown the arrow. This is because the arrow, *qua* arrow, has no intrinsic

[68] G. Kerr, "Design Arguments and Aquinas's Fifth Way", p. 470. See also L. Elders, *The Philosophical Theology of St. Thomas Aquinas*, p. 120; G. Smith, *Natural Theology* (New York, The Macmillan Company, 1951), pp. 144-145; H. Renard, *The Philosophy of God*, p. 47; M. Grison, *Teología natural o teodicea* (Barcelona, Herder, 1972), p. 94; A. L. González, *Teología natural* (Eunsa, Pamplona, 2015), p. 131; A. Echavarría, "Teleología, contingencia y creaturidad", pp. 227-230.

[69] Many authors have taken notice of the lack of support of this premise in the *Summa*. See, for instance, T. Pawl, "The Five Ways", p. 125; C. Martin, *Thomas Aquinas*, pp. 182-183; J. Bochenski, "The Five Ways", p. 68; J. Johnson, *Final Causality in the Thought of Thomas Aquinas*, pp. 106-107.

orientation towards said target (or to any target, for that matter). Hence, the arrow's orientation towards the target can't be explained by appealing exclusively to the arrow's nature or intrinsic constitution, and so we need some external intelligent source that has given it this extra inclination. But the Fifth Way, at least if it's to be of any use in salvaging the moral argument, is supposed to be pretending to explain the *intrinsic* and *natural* inclinations of a given being by appeal to God, not its non-intrinsic ones. Hence, it is difficult to see how the example of the arrow supports premise (9).

As it happens, it is not easy to find, in Aquinas's *corpus*, some line of reasoning that could be used as an argument for (9). Thus, one cannot shake the feeling that Aquinas might have considered such a premise to be rather obvious or evident in itself, in need of no further justification. An author like Ralph McInerny appears to share this sentiment when he writes:

> [I]f we reflect seriously on inanimate things, we discover that they do indeed act intelligently, which is to say, they behave as if they were intelligent, as if they knew what they were doing, in the wonderfully consistent way they achieve ends. […] To operate for the sake of an end is to act intelligently. When we speak of the intelligent behavior of inanimate things, we obviously do not mean that those things themselves possess intelligence. Clearly, they do not. But, once again, they behave as if they were intelligent, and therefore we are pressed to discover the source of the intelligence they display, if it is not to be found in them. The only conclusion to be reached is that the source of the intelligent behavior of these things, because it does not reside within them, is external to them.[70]

This, though, will be clearly wrong for the Aristotelian, who will consider that the source of this "intelligent" behavior in things is internal to the thing itself and in need of no further grounding. Things consistently act for the sake of ends because that is how they are intrinsically constituted given their natures, and nothing more is needed to explain this, at least *prima facie*. Maybe it *is* obvious that the Aristotelian position is lacking here, but the Thomist can hardly leave it at that. He needs to go beyond Aquinas and offer some more substantive argument to support this conclusion.

Now, by far, the most common way of doing this in the literature is to argue that there is something strange in final causality itself that requires theism for it to make full sense. And the strangeness is the following. The end is said to be a cause (a final cause) because it somehow determines and influences the agent and the course of its action. But nothing can be a cause unless it exists: non-existent things are not and cannot be causes. However,

[70] R. McInerny, *Natural Theology*, pp. 114-115. See also L. Elders, *The Philosophical Theology of St. Thomas Aquinas*, p. 120.

the end does not, at present, exist: it will exist when it is realized by the agent. But if the end does not exist in actuality *and* it has to exist in order to be a cause *and* it is indeed a cause of the action, *then* the end must exist in some other manner. Now, the only other way the end can exist, if it is not in reality, is in an intellect that conceives of it. But in the case of things that lack cognition, the end cannot exist in an intellect that pertains to them, because they have none. And in the case of rational agents, they too are subject to the causal influence of many ends which have a natural precedence over any actual cognition that takes place in them. Hence, what follows from all of this is that the ends of things, in order to be causally efficacious, must exist in an Intellect that transcends the natural order, that gives things their natures, directing them to their proper ends, and that in turn is not directed by anyone, being instead its own end.

Here is how Michael Hayes puts it:

> [I]f the acorn becomes an oak because the acorn's final cause is the oak, how is the oak, as a final cause, causally efficacious? After all, before the acorn actually becomes an oak, the oak does not yet exist. […] For final causality to be efficacious, the final cause must somehow exist —after all, *ex nihilo nihil fit*. From nothing comes nothing. Since it does not yet exist in reality, the oak must exist formally. Unless one is a Platonist, the form of the oak must exist in an intellect —this is the only way that substantial forms can exist when not instantiated in matter. Therefore, the ordering principle guiding natural bodies to their respective ends is some intelligence.[71]

Edward Feser is another author who has made this his main line of defense of Aquinas's Fifth Way. He writes:

> One of the common objections to the very idea of final causation is that it seems to entail that a thing can produce an effect even before that thing exists. […] But how can this be? Where goal-directedness is associated with consciousness, as it is in us, there is no mystery. A builder builds a house, and he is able to do so because the *form* of the house exists in his intellect before it is instantiated in a concrete particular object. […] So, final causation is perfectly intelligible when associated with an intelligence, because in that case the "end" or "goal" *does* exist as a form in the intellect. […] To the "How can something non-existent be a cause?" objection to final causation, then, the Thomist's reply is to say "It can't. That's why the final cause of a natural object must exist already as an idea or form in an intellect existing altogether outside the natural order".[72]

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[71] M. Hayes, "Aquinas's Fifth Way and the Possibility of Science", pp. 221-222.

[72] E. Feser, "Teleology: A Shopper's Guide", pp. 157-158. See also his "Existential Inertia and the Five Ways", pp. 252-253; "Between Aristotle and William Paley", pp. 733-740 and *Aquinas*, pp. 116-117.

And, as I said before, this appears to be the most common justification for the Fifth Way's controversial premise in the literature.[73] Is it also a satisfactory one? I am not entirely convinced that it is. It seems to me that the whole reasoning rests upon an understanding of the final cause that assimilates it to an efficient cause. Since, at present, the end does not actually exist, it is understood to be influencing the agent "from the future", so to speak, as if it were efficiently pulling the agent from one state to another — as if the non-existent oak tree, for instance, was efficiently drawing the existent seed towards itself. This, in turn, is (understandably) considered odd or even metaphysically impossible, and an additional explanation is concocted to account for such a strange form of causation. But the whole problem can be averted, together with any need for an ulterior explanation, simply by *not* understanding the final cause in this fashion. Dealing with this issue, Monte Ransome Johnson writes:

> The term αἴτιον is translated into English as "cause" or "explanation". The problem with "cause", at least in English-language contexts, is that the term is heavily laden with customs that stem from its wide use in that language's rich philosophical discussions (causes precede effects, constant conjunction, spatial-temporal contiguity, etc.). If we consciously or unconsciously import these customs into our interpretation of Aristotle, then we can create problems that are otherwise specious, for example "backwards causation".[74]

Instead, Johnson suggests, it is understood that in teleological explanations, "the order of generation and the order of explication are reversed: the starting point of the explanation is what you end up with in the process of generation".[75] And hence, the mature oak tree is the final cause of the seed (better, its final *explanation*) not because *it* somehow "causes" the seed to progressively transform into itself, but because *the seed* is intrinsically oriented, by nature, to develop into an oak tree. There is no currently non-existent cause weirdly influencing the agent from the future, only an existent agent with an existent natural inclination towards such an effect. Properly speaking, it is not the non-existent end that influences the agent's action but the existent intrinsic tendency built into

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[73] Some instances of this I have been able to identify include the following: G. H. Joyce, *Principles of Natural Theology* (New York, Longmans, Greens & Co., 1923), pp. 118-120; R. Garrigou-Lagrange, *God: His Existence and His Nature* (New York, B. Herder, 1955), pp. 345-370 and 387-390; A. L. González, *Teología natural*, p. 130; J. F. McCormick, *Scholastic Metaphysics*, pp. 67 and 157; H. Renard, *The Philosophy of Being*, pp. 148-149; G. Smith, *Natural Theology*, pp. 142-143; J. Maritain, *Approaches to God*, pp. 32-33; M. R. Holloway, *An Introduction to Natural Theology*, p. 153; J. F. Anderson, *Natural Theology*, p. 49; M. Grison, *Teología natural o teodicea*, p. 98; J. F. Wippel, *The Metaphysical Thought of Thomas Aquinas*, pp. 483-484; T. Crean, *God is No Delusion*, ch. 2; J. Orr, "No God, No Powers", *International Philosophical Quarterly*, 2019 (59, 4), pp. 411-423.

[74] M. R. Johnson, *Aristotle on Teleology*, pp. 40-41.

[75] *Ibid*., p. 166.

the agent itself. Once final causation is understood in this way, the Aristotelian will claim, all mystery as to how the final cause operates should dissipate.[76]

Here is another way to think about this. When cognitive agents are involved, we typically don't see a problem with explaining their actions teleologically. One forms a purpose in his mind (for instance, to become healthy) and this purpose influences him to act accordingly (going for a walk). In this case, as Johnson notes, "[b]ecoming healthy does not 'efficiently' cause me to take a walk, as backwards causality holds, rather, *the purpose of becoming healthy* is the explanation for my taking a walk, which is in turn the moving cause of my becoming healthy".[77] But the whole point of Aristotle's teleological view of nature is that what conscious and chosen purpose does in the case of cognitive agents, natural inclination does in the case of non-cognitive agents. Again, it is not the mature oak tree that efficiently causes the seed to grow (as backwards causation would hold). Rather, *the intrinsic and natural inclination of the seed towards becoming an oak tree* is the explanation for its growth, which is, in turn, the moving cause of its becoming one. The influence of the "non-existent" end, so to speak, is entirely inscribed into the inclination: it *just is* the inclination itself. And no further explanation is needed because it is just a fact about natural objects that they will be intrinsically oriented towards certain ends, given their substantial forms.

Joel Johnson makes a similar case when discussing this defense of the Fifth Way's controversial premise. He writes that the whole reasoning rests on a confusion between two ways of characterizing the end of an action:

> On one hand, the end of an action can be characterized as the determinate effect *produced by the agent* [the End_P]. On the other hand, the end of an action can be characterized as the determinate effect *towards which the agent inclines (or tends)* [the End_T]. These two characterizations of the end of an action differ in that the former characterizes the end as the determinate effect produced by the agent's completed action in the patient, while the latter characterizes the end as the determinate effect towards which the agent's action tends, irrespective of whether the agent successfully produces the effect in the patient.[78]

Then, the above reasoning acts as if the final cause is really the End_P (the end as that which currently does not exist but is finally produced by the agent) when in reality it is the End_T (the end as that towards which the agent tends). The end cannot be a cause in

[76] After all, Aristotle himself clearly states in his *Posterior Analytics* (II, 11) that there is this reversal of genetic and explanatory orders in teleological explanations and, apparently, feels nothing strange about it.

[77] *Ibid*., p. 56 (my italics).

[78] J. Johnson, *Final Causality in the Thought of Thomas Aquinas*, pp. 41-42.

the sense of End_P, because the End_P does not currently exist. But it can be a cause in the sense of End_T, for the agent presently possesses a tendency towards it.

Johnson even argues that this is the proper interpretation of Aquinas's thought.[79] For, as it happens, in the *Summa Theologiae*, Aquinas shows his awareness of the objection that ends can't be causes because they do not presently exist. There, he writes: "A cause is naturally prior to its effect. But the end comes last, as its name suggests. Hence, the end cannot be a cause" (*ST*, I-II, q. 1, a. 1, obj1). In the context of this discussion, it is deeply significant that Aquinas does not connect this objection to the controversial premise of the Fifth Way. He does not answer that the end, albeit not existing in reality, can be a cause because it exists in the mind of God. Instead, he says: "Although the end is last in execution, it is first in the agent's intention, *and in this manner it is a cause*" (*ST*, I-II, q. 1, a. 1, ad1; my italics).

In other words, the end as yet non-existent (as last in execution) is not and cannot be a cause, but the end as the object of an inclination (as first in the agent's intention) *is* and *can be* a cause. Or, as Johnson puts it, "an end influences an agent to act because an agent acts in virtue of some inclination, the identity of which is determined by its end".[80] And hence, there's no need to appeal to anything further than the existing inclination, like a transcendent Intellect in which the end can pre-exist in some form or other, for it to have a causal influence over the agent. The end influences the agent because, presently, the agent has a built-in inclination toward the end.

In summary, if the Fifth Way is to be of use to the Thomist here, some other justification for the controversial premise is needed. In the next section, I will explore a novel interpretation of the Fifth Way that, to my mind, can provide the Thomist with just that.

2.4. A Novel Interpretation of the Fifth Way

For those who accept a teleological view of nature, the soundness of the Fifth Way hinges primarily on the justification of what I have called its controversial premise: that nothing could act for the sake of an end unless oriented towards it by some intelligence. I have shown how Aquinas leaves this premise essentially unjustified in the text of the *Summa*, and how the most common defense of it in the literature fails. I now wish to put

[79] See *Ibid*., pp. 42-47 and pp. 112-114.
[80] *Ibid*., p. 46.

forward a different reading of the Fifth Way, along the lines of Aquinas's *De Ente et Essentia* argument for God (in IV, 33-34). In order to do so, a brief presentation of the *De Ente* argument is in order.[81]

Aquinas's *De Ente* argument follows three main steps. First, Aquinas identifies and argues for a real distinction between being (*esse*) and essence in creatures. When it comes to an object of experience, that which makes it the kind of thing it is instead of another (a horse, for instance, instead of a dog or a rock) is not identical with that which makes it simply to be, instead of not to be. The first principle Aquinas calls the *essence* of a thing, and the second, its *esse*, its act of being.

Second, given such a real distinction, the key question becomes: Why does *this* existent thing have *esse*, if nothing in its essence or about its essence demands it? Aquinas applies the principle of causality: if something has *esse* without being its own *esse*, it must have it received from an outside source.

Third, if the essence of this outside source, in turn, is really distinct from its *esse*, it too will have to possess it in a received or derived way from a further source, which initiates a causal regress. Aquinas, then, identifies this causal regress as a *per se* one, which of necessity needs to have a first member. Here it is important to understand the distinction between a *per se* series and a *per accidens* series.[82] A *per accidens* causal series (also called a linear or horizontal series) is one in which each member possesses the causality of the series in an intrinsic or underived way, out of its own nature. The classic example is that of a series of fathers and sons: Peter engenders Paul, Paul engenders Thomas, Thomas engenders David. In this series, each member has in itself the power to engender the next member, in virtue of being the kind of thing it is (a healthy adult specimen of the human species). This is why Paul, for instance, does not need the cooperation or aid of his father, Peter, to engender his own son, Thomas. Paul can

[81] For full in-depth defenses of the argument, see G. Kerr, *Aquinas's Way to God* and E. Feser, *Five Proofs of the Existence of God*, ch. 4. I've also explored this argument in E. F. Gel, "La existencia de Dios", *Espíritu*, 2022 (71, 164), pp. 283-304.

[82] For more on *per se* and *per accidens* causal series, see G. Kerr, *Aquinas's Way to God*, pp. 121-149; "Essentially Ordered Series Reconsidered", *American Catholic Philosophical Quarterly*, 2012 (86, 4), pp. 541-555; "Essentially Ordered Series Reconsidered Once Again", *American Catholic Philosophical Quarterly*, 2017 (91, 2), pp. 155-174; "Design Arguments and Aquinas's Fifth Way", pp. 463-464; E. Feser, *Five Proofs of the Existence of God*, pp. 21-29; *Scholastic Metaphysics*, pp. 148-154 and C. Cohoe, "There Must Be a First: Why Thomas Aquinas Rejects Infinite, Essentially Ordered, Causal Series", *British Journal for the History of Philosophy*, 2013 (2), pp. 838-856.

engender Thomas even if his father has died, because he has such a power intrinsically, out of his own nature.

Things are quite different with a *per se* causal series (also called a hierarchical or vertical series). Here, the posterior members possess the causality of the series only ever in a derived or received way, not because of their own natures, but because they borrow it, so to speak, from the antecedent members. Being this so, a series made entirely of members who derive their causal power from prior members is a metaphysical impossibility, for the presence of said causal power in the series would be brute or unintelligible —nothing would explain it. Hence, while the need for a first member in *per accidens* series is an open question for Aquinas, *per se* series must have, of necessity, a first or primary member that possesses the causality of the series in an underived or intrinsic way, out of itself or its own nature, being thus able to impart it onto the other members.

A classic example of a *per se* series would be the following: a fire that heats a pot, that heats the water it contains, that heats anything it is thrown inside.[83] The causality at work in the series is the power of heating. But neither the pot nor the water have such a power intrinsically, simply in virtue of being the kinds of things they are. On the contrary, the pot and the water are naturally unable to heat anything. Hence, for the causality to be there in the series, for the series to be able to heat anything, a first or primary member with the power to heat as an intrinsic ability of its nature must also be there. Such is the fire, which is why removing the fire amounts to removing the causality of the series. Likewise, no infinite series of things naturally unable to heat would be able to heat anything. Hence, the presence of heating in the series is evidence of a primary member in the series possessing its causality in an underived way.

Why does Aquinas locate the *esse* of things in a *per se* series, instead of a *per accidens* series?[84] Because he understands *esse* to be the act of all acts, that principle which actuates absolutely everything else in the thing. Hence, there is nothing in the thing that is independent of its *esse* and to which its *esse* could, somehow, become attached once received, like an accident inheres in a substance. This means, for Aquinas, that the cause

[83] The example is Kerr's. See G. Kerr, *Aquinas's Way to God*, p. 128.

[84] This is the key move in avoiding the main objection against the *De Ente* argument, that of existential inertia. See E. Feser, "Existential Inertia and the Five Ways"; G. Kerr, "Existential Inertia and the Thomistic Way to God", *Divinitas*, 2019 (62), pp. 157-176; "A Deeper Look at Aquinas's First Way", *Nova et Vetera*, 2022 (20), 461-484; E. F. Gel, "La existencia de Dios", pp. 296-298.

of *esse* does not simply *give* a thing its *esse* at the first moment of its existence but has to be *sustaining* it all throughout its existence, at each and every moment. If the cause of *esse* stopped giving *esse* to the thing, the thing would simply and immediately stop existing, since there is nothing in the thing that has any sort of consistency apart from its *esse*, and that hence could "grab on" to its *esse* to avoid losing it. But then, if the cause of *esse* also has its *esse* received from another, it too must have it sustained by another. And so, we are on to a causal regress of a *per se* type, where each posterior member is able to impart *esse* to another and sustain it *only because and insofar* a prior member is imparting to it its own *esse* and sustaining it. And, because no *per se* series can be without a first member, here too there must be a first or primary cause of *esse* that possesses *esse* in an underived or intrinsic way, not because it receives it from another, but because it has it from its own nature. And this can only be something whose essence is simply identical to its *esse*: the *Ipsum Esse Subsistens*, which everybody calls God.[85]

Why is this *De Ente* argument relevant to interpreting the Fifth Way? Because, in a sense, it points to the underlying metaphysical reasoning behind all of Aquinas's ways. As Joseph Owens puts it:

> All five ways are probative for Aquinas, because all five ways can be understood as starting from observed sensible things in which existence is other than nature, and as proceeding to existence identified with nature […] Functioning on the plane of existence and not of nature, the five ways are exemplifications of the same metaphysical procedure from accidentally possessed existence to its ultimate source, subsistent existence.[86]

At this point, I think the Thomist has two avenues available, one more tested and secure and the other more novel and experimental. The first avenue would just be to identify the link between finality and essence-*esse* composition, taking the first as a sign of the second and then reducing the existence of something which is thus composed to that which simply is its own *esse*. Framed in terms of my discussion of the moral argument, the objective reality of moral goods would lead to the conclusion that human beings really have a nature oriented towards certain ends. This in turn could be used to justify the first step of the *De Ente* argument, the real distinction of *esse* and essence in

[85] Though this is not something I will pursue here, one could unpack this conclusion further, showing how the several traditional divine attributes (including unicity) follow from the nature of that which, being is its own being, is Pure Act. See, for instance, E. Feser, *Five Proofs*, ch. 6 or Aquinas, *Summa Theologiae*, I, qq. 3-26.

[86] J. Owens, "Aquinas and the Five Ways", pp. 28-29 and 34. See also G. Smith, *Natural Theology*, p. 145.

human beings, and the rest of the argument would play as before. Thus, the Thomist would arrive to the existence of God from the objectivity of moral values and duties, avoiding the difficulties present in justifying the Fifth Way's controversial premise and making it more metaphysically grounded.

How could the link between finality and essence-*esse* composition work? Consider that if something was its own *esse*, it would have to be its own good and, hence, could not be oriented towards an end distinct from itself. Why? According to Aquinas, *esse* is the act of all acts, the perfection of all perfections. Hence, if something were its own *esse*, it would be Pure Act: its *esse* would not (and could not) be limited by any principle of potentiality, constituting an absolutely perfect being, lacking in no perfection (for all perfections are grounded in *esse*). Something which were thus could not be oriented towards any further actuality, which means it could not have an end distinct from itself. In other words, a being whose essence is distinct from its *esse* could fail to be everything its essence calls it to be, whereas a being whose essence was identical to its *esse* would always already be everything it is supposed to be and hence oriented towards nothing further. If this is so, for something to be "finalized" (to have an end distinct from itself) is for it to be oriented toward an actuality it currently does not have. Thus, that which is finalized is not at present everything that it can be: it is not purely actual, but a mixture of act and potency. And so, finality is the teleological expression of essence-*esse* composition.[87]

Apart from avoiding the issues with the controversial premise, this interpretation would also have the benefit of unifying the Fifth with the other four ways. The First Way starts from change, but natural objects change because they are composites of act and potency, but they are composites of act and potency because they are composites of *esse* and essence. The Second Way starts from caused causes, but a cause can be caused only if it is a composite of *esse* and essence. The Third Way starts from transitory and corruptible beings, but something is transitory and corruptible precisely because its essence is not identical with its *esse*. The Fourth Way starts from degrees of perfection. But something can have a perfection to a limited degree only if its essence is not identical with that perfection, and ultimately with that perfection of all perfections which is Aquinas's *esse*. The Fifth Way would thus be inscribed in this same argumentative pattern.

[87] See, for instance, H. Renard, *The Philosophy of God*, p. 46.

There is a purely hermeneutical objection to this line of reading: it doesn't seem to be that grounded in Aquinas's text in the *Summa*. A worry that some may have on this front is the curious lack of any denial-of-infinite-regress step in the Fifth Way. This, though, is easily dealt with since one can consider such a step to be implicit, or at least not explicitly excluded, and other texts of Aquinas could support this. For instance, in a parallel text in his *Summa contra gentiles*, he writes:

> It is impossible for things without knowledge of the end to act for that end […] unless they are moved by another with knowledge of the end, as the arrow is directed to the target by the archer. Hence, the whole working of nature must be ordered by some knowledge. And this must lead back to God, *either mediately or immediately*, since it is necessary that every inferior art and knowledge gets its principles from a superior one, as it is in the speculative and practical sciences (*SCG*, III, c. 64, n. 5; my italics).

This "either mediately or immediately" clause provides support for introducing a denial of an infinite regress into the Fifth Way, despite its being absent from the text of the *Summa*.[88] But the more troubling question, from a hermeneutical standpoint, is not that there is no mention in the text of essence-*esse* composition or a causal regress. Instead, it is that Aquinas appears to take the Fifth Way to conclude directly in a governing *intelligence*, and at this point intelligence still has to make any appearance in the previous interpretation. As Johnson puts it: "The Fifth Way is not an argument for the existence of God on the basis of the mere existence of beings; it does not seek to prove the existence of a first (efficient) cause. Rather, it is an argument based on final causality, and seeks to prove the existence of a divine intellect".[89] Of course, the argument could be restated without the emphasis on intelligence. Still, it would be nice for the Thomist to have an interpretation of the Fifth Way that made intelligible why Aquinas framed it in those terms.

Now, the second avenue I mentioned above could potentially aid the Thomist in this regard. However, I have not seen it put forward in the literature and, hence, it would need further thought and investigation. It would be the following: to interpret the Fifth Way along the lines of the *De Ente* argument *but without reducing the one to the other*. The *De Ente* argument is concerned with finding a cause for the *esse* of creatures, and thus, it works on the "*esse*" side of the essence-*esse* composite. "Why does *this* have *esse* when nothing about it demands it?" is its driving question. In this second reading, the Fifth Way

[88] See also D. Bonnette, *Aquinas's Proofs for God's Existence* (The Hague, Martinus Nijhoff, 1972), p. 170, who comments on this.

[89] J. Johnson, *Final Causality in the Thought of Thomas Aquinas*, p. 116.

would be concerned with the cause of the *essence* of creatures, working then on the "essence" side of the essence-*esse* composite.[90] Its driving question: "Why does *this* have such an essence when nothing about it demands it?".

Why go this route? For a start, that which primarily gives something its teleological orientation is its essence, or more precisely, its substantial form. Aquinas readily admits this: "From the form follows the inclination to an end, or to an action, or to something else, because each thing, insofar as it is in act, acts and tends toward that which is convenient to it according to its form" (*ST*, I, q. 5, a. 5). Hence, if God is to be the ultimate cause of finality in creatures, as he is in the Fifth Way, then he must be the ultimate cause of their respective essences or forms. In Aquinas's mind, then, God must be giving things their orientation *by giving them their essences or forms*, their very natures.

Put in another way, one can find in Aquinas two seemingly incompatible ideas.[91] First, the natural inclination a substance has towards its end comes from its form, which is intrinsic to it, as quoted above. But second, no creature has this inclination towards an end of itself but received from God. Aquinas says as much in his *De Veritate*, for instance. When answering an objection to the effect that natural objects don't need to be governed by God's providence because they are already determined to their ends "by their own natures [*per propriam naturam*]", he writes: "That determination by which a natural thing is determined to something is not in it out of itself [*non est ei ex seipsa*], but from another" (*De Veritate*, q. 5, a. 2, ad5). How are these two ideas reconciled? At face value, they can't be both true. Either natural substances are intrinsically oriented towards their ends by their natures, or they need to be oriented towards their ends by an outside intelligent and providential source. The way out of this conundrum, I propose, is to understand Aquinas as claiming that no composite has its natural inclination of itself *because no composite has its nature of itself*. Hence, all composites have their natural inclinations from another *because all composites have their natures from another*.

Suppose the starting point of the Fifth Way is what explains that *this* thing has *this* teleological orientation, but its teleological orientation follows from its form. In that case, I take it that, ultimately, the driving question behind the Fifth Way must be "What explains that *this* thing has *this* form?". After all, for Aquinas, God may be *primarily* the cause of a creature's *esse*, but he is not *only* that. God's creative act "produces a whole

[90] *Pace* Owens, who thinks that "all [five ways] function on the 'existence' side of the 'essence-existence' couplet"; J. Owens, "Aquinas and the Five Ways", p. 34.

[91] See J. Johnson, *Final Causality in the Thought of Thomas Aquinas*, p. 126.

subsistent entity" (*DP*, q. 3, a. 1), which must mean that "simultaneously with giving *esse*, God produces that which receives *esse*" (*DP*, q. 3, a. 1, ad17). Since that which receives *esse*, and in which *esse* is received, is the essence of the creature, it follows that God gives things their being *and their nature*.[92]

Now, once the composition of essence and *esse* in a creature is recognized, it is easy to see why it must receive its essence from an outside source just as much as its *esse*. The key principle here is that no composite can be identical to any of its components. Thus, that which is composed of essence and *esse* is identical neither to its *esse* nor to its essence or nature. Not being its own nature, a given thing can't have its nature of itself: the thing itself can't be the reason why it has the nature it possesses. In a sense, then, that *this* has such a nature is accidental to it: nothing in its *thisness* demands that it have such *suchness*. But it has it, nonetheless. Hence, given that the reason of it having the nature it has cannot be found in itself, it must receive its nature from an extrinsic cause.

Up to this point, everything said amounts to the rather innocuous claim that a creature receives its nature from the outside. In other words, that the reason why *this* creature has *this* nature must be searched for not in the creature itself, but in something extrinsic to it. I say this is innocuous because everyone readily recognizes that a material being, for instance, receives its nature from the causes that, existing before it, produced it (every horse, for example, receives its "horseness" from its parents). The trick, then, should be for the Thomist to locate the essences (or forms) of creatures not simply in a *per accidens* series but also in a *per se* one.[93]

How to do this? The most promising line of reasoning is to notice that (i) if *esse* is the principle by which everything subsists in a creature and (ii) *esse* is sustained, then essence must ultimately also be sustained in a creature. But causal sustainability, as was said, is

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[92] See H. Renard, *The Philosophy of Being*, p. 150; M. R. Holloway, *Natural Theology*, p. 151; L. Elders, *The Philosophical Thought of St. Thomas Aquinas*, p. 123; J. Wippel, *The Metaphysical Thought of Thomas Aquinas*, pp. 484-485; G. Kerr, "Design Arguments and Aquinas's Fifth Way", p. 456; E. Feser, "Teleology: A Shopper's Guide", p. 159; "Between Aristotle and William Paley", p. 736.

[93] Alternatively, the Thomist could also go beyond Aquinas himself and argue for the necessary finitude of *per accidens* series too. In such a case, the series should terminate in a being who, being its own nature or essence, need not receive it from another. For arguments to the effect that *per accidens* series must be finite, see A. Pruss, *Infinity, Causation, & Paradox* (Oxford, Oxford University Press, 2018); "Causal finitism and the Kalaam cosmological argument" (on-line); R. Koons, "The Grim Reaper Kalam Argument", in W. L. Craig and P. Copan (eds.), *The Kalam Cosmological Argument*, vol. 1 (Nueva York, Bloomsbury, 2017), pp. 273-284; "A New Kalam Argument", *Noûs*, 2014 (48), pp. 256-267; J. Schmid, "A Step-by-Step Argument for Causal Finitism", *Erkentnnis*, 2021, pp. 1-26; W. Tisthammer, "An Eternal Society Paradox", *Aporia*, 2020 (30), pp. 49-58.

the mark of a *per se* series. Hence, essence is received in a composite according to some *per se* causal series. This means that the regress initiated must terminate in a being who, lacking all composition, is its own essence or nature. *Et hoc omnes dicunt Deum*.[94]

What does intelligence have to do with any of this? The following. Appealing to a very plausible principle of proportionate causality,[95] every perfection found in an effect must be present, in some way or another, in its complete cause —otherwise, said perfection would come from nothing. Put in reverse, no cause can give what it does not have. But now we have identified an ultimate cause of the essences or forms of creatures which is its own essence. Thus, the essences or forms of creatures must be present, in some way or another, in this ultimate cause. But they cannot be present in the exact same way as they are found in creatures. If this were the case, then this ultimate cause would substantially be a cat, and a dog, and a horse, and a fundamental particle, etc. But the only way we know of possessing the form of a substance without *being* that kind of substance is to have it intentionally, in an intellect's knowledge. Hence, the essences or forms of things must be found in their ultimate cause in a way that is most analogous to how they are present in an intellect. And so, this ultimate cause of the essences of things can be called an Intelligence, and even further, an *ordering* Intelligence. Why? Because in giving things their own natures, it gives them their determination or order towards certain ends.

Apart from making Aquinas's appeal to intelligence more understandable, I think this second interpretation also helps to make sense of his example of the arrow and the archer. Recall I said above that it was not clear how this example supported Aquinas's claim that nothing lacking cognition could act for an end unless oriented by an intelligence. In the

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[94] Objection: Doesn't Aquinas say that 'angels' (separated intellects) are also identical to their own essences? Despite answering in the affirmative in earlier texts, Aquinas's final position on this question appears to be 'No'. Assuming angels exist, they are (as all creatures) composites of essence and *esse*. Hence, not everything *in* the angel is identical to its essence, and so the individual angel can't be identical to its essence either – in fact, the angel is not identical to any of its components. In any composite X, material or immaterial, something that is not X but that is *in* X is making X *to* be, and another something that is not X but that is *in* X is making X *to be the kind of thing it is*. And so, only something absolutely simple, lacking all composition, could be identical to its own essence. In other words, for something to be its own nature, nothing in it can be distinct from its nature. But if X has something which is not its nature (as an angel does), then X can't be identical to its nature: it will be, instead, the composite of its nature and that something else. See Aquinas, *Compendium Theologiae*, I, q. 15; *Quodlibeta*, II, q. 2, a. 2, and J. Wippel, *The Metaphysical Thought of Thomas Aquinas*, pp. 238-253 for discussion of the relevant texts about this issue.

[95] Edward Feser appeals to this principle to arrive at the same conclusion. See E. Feser, *Five Proofs of the Existence of God*, pp. 208-216. Aquinas himself appears to operate with this principle: "The end that is pursued in the production of all beings is their form. But the agent would not act for the sake of the form if he did not have the similitude of the form in itself" (*ST*, I, q. 15, a. 1).

case of an arrow hitting a target, the inference to an intelligence (an archer) works because the arrow, *qua* arrow, has no intrinsic inclination towards any target. Given this, the arrow's directedness towards the target can't be explained by appealing to the arrow's nature or intrinsic constitution. Instead, it needs to be explained by appealing to an outside source that has given it this extra orientation. But the same reasoning could hardly apply to the arrow's *natural* inclinations, *qua* made out of wood, for instance.

However, considering this new interpretation, the example makes sense. Just as the arrow, *qua* arrow, does not possess out of itself this inclination towards a target, a creature, *qua this* thing, does not possess out of itself this nature and its accompanying natural inclination. Given that the composite is not its nature, it can't itself be the reason why it has such a nature instead of any other, and hence this determination towards an end instead of any other. But then, for anything that is not its own nature, that is not identical with its nature, it follows that it has its nature (and with it its inclination) received from another, like the arrow receives its direction from the archer.

Aquinas himself appears to confirm this line of reasoning by connecting the example of the arrow and the archer with the idea that God gives things their inclinations by giving them their respective natures. In the *Summa Theologiae*, again in response to an objection against providence based on the fact that things are determined to their ends by their natures, he writes:

> The natural necessity inherent in things which are determined towards something is a kind of impression by which God directs them to the end, *like the necessity by which the arrow moves towards a target is an impression of the archer, and not of the arrow*. But in this they differ: *that what creatures receive from God is their nature*; while what man impresses onto natural things apart from their nature pertains to violence. Hence, just as the violent necessity in the arrow's movement proves the direction of the archer, *the natural necessity in creatures proves the govern of Divine Providence* (*ST*, I, q. 103, a. 1, ad5; my italics).

I take it, then, that this second interpretation of the Fifth Way, concerned with finding the ultimate *per se* cause of the nature or essence of things, provides the Thomist not only with a more metaphysically grounded way of defending Aquinas's controversial premise, but also a more proper interpretation of Aquinas's overall thought and intention. Finally, as before, this reading has the added benefit of putting the Fifth Way in line with the other four —otherwise, it seems strangely out of place. In the First Way, things that are not their own actuality (because they move) are reduced to something that is its own act. In the Second Way, things that are not their own causality are reduced to something that is its own causal power. In the Third Way, things that are not their own necessity are reduced

to something that is necessary *per se*. In the Fourth Way, things that are not their own perfections lead to something that is absolutely perfect. And in this same vein, in the Fifth Way, things that are not their own ends or natures are reduced to something that is its own end and nature.

3. In Conclusion

In this final chapter, I have put the issues explored in the previous ones at work in a very contested topic of the philosophy of religion. Some authors of both theistic and atheistic persuasion have considered over the centuries that moral claims lose their objective truth value in the absence of God. If God does not exist, everything is allowed: all morality is reduced to the expression of one's own subjective preferences, or those of one's culture. Hence, some theists have argued that if one wants to retain the reality of objective moral values and duties, one must embrace the existence of God as an absolute and transcendent moral standard.

What I have shown is that the Aristotelian Foundation I have defended throughout this work can provide a solid metaphysical foundation to the objectivity of morality without needing to appeal, at least immediately, to the existence of God. There is a sound Aristotelian response, then, to this kind of moral argument, championed by William Lane Craig. I have also shown how the same principles can be applied to solve the evolutionary debunking argument against moral realism. If I have argued correctly, I have added another motivating factor for the Aristotelian Foundation: that it provides a solid and naturalistic-friendly foundation for moral realism. Hence, naturalists who are also moral realists are advised to look further into the resources of Aristotelian metaphysics to properly ground their moral intuitions.

I have also explored, however, a strategy the Thomist could employ to salvage the moral argument. The Thomist should agree with the Aristotelian that if, *per impossible*, God did not exist, there would still be objective moral values and duties, granted that mankind still had a nature oriented towards certain ends. At this point, though, the Thomist can appeal to Aquinas's Fifth Way to argue that, in reality, nothing could be oriented towards an end if God did not exist. This is Aquinas's controversial premise, and it is difficult to find in his *corpus* any direct justification for it. I have shown how its most common defense is flawed and that the Thomist should explore a novel approach along the following lines.

For any composite (human beings included), *this* can only point to its end if it has a certain nature, since its nature is that which gives it its "pointing". But the question the Fifth Way should be understood as posing is: Why does *this* have *such* a nature? Independently of having a certain nature, *this* has no inclination at all. But then, nothing in its *thisness* demands that it have such *suchness* —nothing in the thing, considered apart from its form, requires it to have such form (and with it, such an inclination). Hence, its nature, its suchness, needs to be imparted to it from the outside, and with its suchness, it also receives its end-orientedness. This initiates a causal regress that, because of its *per se* nature, must lead back to something whose thisness is identical to its suchness, something which is its own nature, and in being its own nature, is its own *esse*. And this everybody calls God.

As it turns out, there are objective moral values and duties because man, objectively, has a nature oriented towards certain ends. Still, man has a nature oriented towards certain ends because and only because he receives it from God. And so, the Thomist appears to have a way of showing that the proposition "If God does not exist, objective moral values and duties do not exist" is true after all.

CONCLUSIONS

The time has come to conclude this work. Throughout its pages, I have attempted to study the metaphysical foundation of ethics in Aristotle and Aquinas and explore its rational defensibility today. I started, in Chapter 1, exploring how the whole Aristotelian-Thomistic ethical edifice rests on the truth of a metaphysical foundation constituted by two pillars: nature and end, essentialism and teleology. I called this the Aristotelian Foundation.

In discussion with Timothy D. Roche, I identified the dependency relation between ethics and metaphysics not as one of *methodological dependence*, but of *background dependence or grounding*. Strictly speaking, ethics does not need to go into metaphysics to derive from it its principles. In this sense, it is a methodologically autonomous science. Still, as the truths uncovered by biology could not possibly be there without the laws of physics in place, ethical truth is *grounded* in metaphysical truth. And so, if the general principles laid down by Aristotelian metaphysics were not true, Aristotelian ethics could not possibly be rationally sustained.

Both to Aristotle and Aquinas, ethics is the science of human flourishing or fulfillment, that discipline that tells man what to do to achieve its ultimate good. But if this is so, man must have a concrete nature (and thus, essentialism) oriented towards certain ends (and thus, teleology). If, instead, man had no nature or were oriented to no end, there could be no objective distinction between good and bad actions, real and apparent goods, virtuous and vicious habits.

Having identified this grounding relation, I proposed myself, in Chapters 2 and 3, to probe the philosophical safety of the identified pillars in order to see whether Aristotelian ethics is constructed in solid ground. Alasdair MacIntyre once tried to advance an Aristotelian ethics *without* an Aristotelian metaphysics. That such a project had to fail gives anyone interested in vindicating the former a strong reason to likewise vindicate the latter.

Hence, in Chapter 2, I studied the first pillar of the Aristotelian Foundation, both from Aristotle's own corpus and from several interesting lines of argument advanced in the recent literature. I argued that some kind of essentialism —in terms of the real essences or natures or substantial forms of things— is required to account for the distinction between substantial and accidental change, and natural beings and artifacts. Additionally,

I showed how essentialism places a limit on anthropocentrism, whereas its negation easily lends itself to anthropocentric abuse.

From there, I argued that essentialism is an unavoidable metaphysical thesis, given the paradoxical and incoherent nature of absolute conventionalism. The conventionalist claims there are no real essences or natures but that they are all constructs of the mind, the brain, the human linguistic community, and so on. But for this to be true, there must be at least one non-conventional entity (i.e., the mind, the brain, the human linguistic community, and so on) that is logically prior to said conventions. Thus, absolute conventionalism defeats itself, for it can only be true on the assumption of its falsehood.

I also showed how essentialism makes most sense of the modern scientific practice (which is best understood under the assumption that it is looking for the natures of things) and provides the best metaphysical grounding for the laws of nature that science discovers. Also, essentialism is a fruitful hypothesis when it comes to the biological realm, explaining the several aspects of unity of organisms, the radical distinction between organisms, organs, and collectives, and apparently being a core assumption of the theory of evolution, despite the evolutionary objections leveled against it. Finally, I argued that a more enriched form of essentialism is the natural position to adopt once the absurdities of the project of reductive essentialism are noted.

In Chapter 3, I attempted to do the same for the Aristotelian Foundation's second pillar: teleology. Here, I started dispelling several misconceptions about Aristotelian teleology that are usually behind the most common objections it receives. I showed that it does not imply panpsychism, or vitalism, nor (necessarily, at least) anthropocentrism or theism. As I wrote, boiled down to its basics, Aristotelian teleology is simply the thesis that natural things have, built into their natures, certain inclinations, orientations, or tendencies towards certain outcomes.

Following this, I argued that the truth of teleology followed quite naturally from the distinction between act and potency, and the reality of substantial forms and efficient causality. Next, I explored several recent arguments in its favor. Teleology was argued to be rationally unavoidable, insofar as thought, conscience, and knowledge itself appear to be intrinsically teleological through and through. Dispositionalist arguments for understanding powers in terms of physical intentionality were also presented, alongside the idea that teleology was extremely useful to account for biological function and several features of evolution itself. Lastly, I gave an argument in favor of axiarchism, which is

teleological in nature, to the effect that its denial makes radical skepticism rationally unavoidable.

With this, I ended my exploration of the Aristotelian Foundation's rational justification, concluding that both its pillars are solidly grounded and reasonable to uphold even today. I continued, in Chapter 4, intending to apply the previous conclusions to a hotly debated topic in the philosophy of religion: whether morality ultimately needs God to be objective. There, I argued against William Lane Craig's moral argument, showing that, once the Aristotelian Foundation is in place, the Aristotelian has a perfectly legitimate naturalistic explanation of the objectivity of moral values and duties without having to appeal to God. Indeed, to the Aristotelian, granted that human beings have a nature oriented towards certain ends, that is all one needs to ground objective morality, whether God exists or not. I showed how Craig essentially concedes the argument to the Aristotelian in recognizing that prudential value is independent of theism. I also argued that this would have plausibly been Aquinas's position had he been pressed with the question. Additionally, I showed how the naturalist could use the same Aristotelian tools to undercut the evolutionary debunking moral argument.

Then, I took the theist's side and explored a strategy with which a Thomist could try to salvage the moral argument. As I argued, the Thomist should agree with the Aristotelian that if God did not exist, there would still be objective moral values and duties because of man having a nature oriented to certain ends. But I showed he should go on to argue that man could not possibly have a nature oriented to an end *if God did not exist*. Aquinas's Fifth Way, then, became the bridge between the Aristotelian Foundation and the existence of God, saving the moral argument.

After getting clear on the interpretative background with which I approached the Fifth Way, I also argued that the most common defense of its controversial premise in the literature is flawed and that some other justification of it was needed. I went on to explore a novel interpretation of Aquinas's Fifth Way, following the lines of the *De Ente* argument. Since no composite is identical to its nature, I argued that no composite has its nature of itself but needs to receive it from the outside. This initiates a regress which, because of its *per se* nature, necessarily must terminate in something that, being absolutely simple, is its own nature (and consequently, its own *esse*). *Et hoc omnes dicunt Deum*.

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