



Neo-Aristotelian Naturalism, Local Ethical Supervenience, and the Beneficial Character of Virtue

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Abstract This article explores the ambivalent relationship of neo-Aristotelian naturalism to ethical supervenience. One of the main proponents of this approach, Michael Thompson, holds a position that leads to a rejection of local ethical supervenience. It is argued that this rejection implicitly undermines a premise held by other prominent neo-Aristotelian naturalists, such as Philippa Foot or Rosalind Hursthouse, who implemented Thompson’s species-relative logic of ethical evaluations into their theories. This premise—that there is a systematic connection between the virtuous life and the benefit of the individual—could be re-established if neo-Aristotelian naturalism abandoned the species-essentialist understanding of life-forms and instead accepted local ethical supervenience as an ethical frame of reference. Although this article derives its problem from the main works of the aforementioned authors, its interest lies not mainly in exegesis, but in the systematic discussion of the logical status and the functionality of the concept of life-form in neo-Aristotelian naturalism. This discussion will be enriched by the inclusion of the logical distinctions and insights from modern philosophical biology.

Keywords Local Ethical Supervenience · Michael Thompson · Neo-Aristotelian Naturalism · Philippa Foot · Species Essentialism · Virtue Ethics

1 Introduction

The assumption that ethical properties supervene on natural properties is commonly regarded as reflecting a widespread consensus in meta-ethics, particularly in the do-

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main of meta-ethical naturalism (cf. Smith 1994, 21; Harrison 2017, 89). However, in this article, I aim to demonstrate that one of the most promising approaches in meta-ethical naturalism—neo-Aristotelian naturalism—has a surprisingly ambivalent relationship with this almost truistic assumption. At least one of the main proponents of this approach, Michael Thompson, holds a position that leads to a rejection of local ethical supervenience. I argue that this rejection implicitly undermines a foundational premise, deeply rooted in the Aristotelian tradition, that is upheld by other prominent neo-Aristotelian naturalists such as Philippa Foot or Rosalind Hursthouse, who implemented Thompson’s species-relative logic of ethical evaluations into their theories. This premise—that there is a systematic connection between the virtuous life and benefit to the individual—could be re-established if neo-Aristotelian naturalism abandoned the species-essentialist understanding of life-forms and instead accepted local ethical supervenience.

While this article derives its problem from the early texts of the mentioned authors, my interest here is not primarily exegetical. Rather, I find the ambivalence in these texts particularly intriguing from a systematic point of view, as it can serve as a starting point for a new understanding of the logical status and the functionality of the life-form concept in neo-Aristotelian naturalism, which forms the meta-ethical foundation of many modern approaches in virtue ethics. As indicated at the end of this article, the meta-ethical turn suggested here could also bear profound implications for the neo-Aristotelian understanding of practical rationality in general. Let us now delve into the clarification of some of the concepts mentioned so far, in particular local ethical supervenience, neo-Aristotelian naturalism, and species-essentialist life-forms.

We can state a *supervenience relation* between sets of properties—let us denote them A-properties and B-properties—where two entities or cases that share all A-respects necessarily share all B-respects as well, even if a certain B-property may coincide with different sets of A-properties (cf. McLaughlin 2006; Teller 2009, 589; McLaughlin and Bennett 2021). Consider, for example, A-properties as physical properties and B-properties as mental properties. Mental properties supervene on certain physical properties if two individuals with identical brain states are thinking of the same entity (say, they are thinking of Aristotle), even if other individuals who are thinking of that entity (Aristotle) can have entirely different brain states in general. (Throughout this article, I operate under the assumption that mental supervenience is true.) *Ethical supervenience* denotes the idea that ethical properties—for example, the property of possessing a particular virtue or the property of living a virtuous life—supervene on certain natural properties.

For the purposes of this article, it is helpful to distinguish three versions of supervenience that differ in strength, namely, individual ethical supervenience, local ethical supervenience, and global ethical supervenience (cf. Teller 2009; McLaughlin and Bennett 2021). In *individual* ethical supervenience, any two living beings who share the same natural properties also share the same ethical properties. If Aristotle in ancient Greece possessed certain virtues, and we were to create an exact biochemical replica of Aristotle—let us call him Aristotle*—and place him in modern-day New York, according to individual ethical supervenience he would possess the same



virtues as the original Aristotle, despite his opinions possibly appearing antiquated in today's context (cf. Kim 1993, 175).

In *local* ethical supervenience, any two living beings that share the same natural properties *and* exist within the same local context also share the same ethical properties. To illustrate, envision we had reconstructed Greece to precisely replicate the physical and biochemical content of ancient Greece in 335 BC, including persons and their brain states, while leaving the rest of our modern world untouched (albeit instituting a no-fly zone over Greece*). According to local ethical supervenience, if we were to place Aristotle* in the recreated ancient Greece*, enabling him to precisely relive the life of the original Aristotle from 335 BC onward, their lives would exhibit the same ethical properties. By *local context*, I mean here all the elements that effectively interact with the entity in question. For example, ancient Greece and ancient America did not effectively interact because there was no exchange of anything of human interest—such as ideas, persons, or materials—between these regions around that time. From an ethical perspective, the ethical evaluation of Aristotle* may not be influenced by whether the people he encounters have real or false memories of the world outside of ancient Greece*. What appears to matter ethically is that Aristotle's and Aristotle*'s decisions are based on the exact same informational content, even though the truth value of the information they receive might, completely unnoticeable to Aristotle*, differ.

In *global* ethical supervenience, any two living beings who share the same natural properties and the same *global* context also share the same ethical properties. By *global context*, I mean here not only the local context but also all the elements that, while not directly interacting with any particular entity, nevertheless contribute to the overall structure and relationships within the universe. Imagine a scenario where a deity creates a second universe from scratch, a perfect replica of our own as it existed in 335 BC, and places Aristotle* on a duplicate Earth in ancient Greece*. According to global ethical supervenience, this replicate of Aristotle would possess the same ethical properties as the original Aristotle.

By *neo-Aristotelian naturalism* I mean the (meta-)ethical approach that is developed in the main works of Rosalind Hursthouse (1999), Philippa Foot (2001), and Michael Thompson (2008). Neo-Aristotelian naturalism is considered naturalistic because it assumes a dependency of ethical standards on the nature of the individual. This nature, however, is not understood in the sense of any of the natural sciences and their associated methods. Instead, it adopts an Aristotelian perspective, employing a modernized concept of form. Inspired by the logical structure of ordinary language, proponents of neo-Aristotelian naturalism posit that evaluations of individuals are relative to their species or life-form. The concept *life-form* is construed as a fixed set of propositions, so-called natural-historical judgments (or, as some say, 'Aristotelian categoricals'), that specify an idealized life cycle of the members of a given species. The general logic of life-form evaluations can be exemplified by reference to plant and animal life-forms, a method that will also be employed in this article.

According to neo-Aristotelian naturalism, the identification of an individual goes along with the assignment to a particular species, which directly brings the individual under a species-specific normative standard. Even descendants of the members of



a species whose individual natures are heavily altered due to genetic mutations are interpreted in the light of the supposedly unchanged life-form of that species. We can characterize this position as *species essentialism* (in distinction from individual essentialism) because the essence of the individual is not contained in its own material (or genetic) makeup (which could be subject to alteration by congenital mutations) but lies in the species under which it falls due to ancestry (cf. Witt 2011, 5–13). The process of the alteration or actualization of the life-form as a whole is barely described by any of the main proponents of neo-Aristotelian naturalism, even if it is recognized that this actualization must be possible in principle (cf. Foot 2001, 29). It seems to me that this gap in the official theory is the main reason for the ambivalent relationship of neo-Aristotelian naturalism to ethical supervenience.

In the next section, I will outline the elements of Thompson's theory that lead to a rejection of all the forms of ethical supervenience distinguished so far. In the subsequent section, I will demonstrate how this aspect of Thompson's theory creates a tension within neo-Aristotelian naturalism when it is combined with another premise held by Foot and Hursthouse. Ultimately, acknowledging this tension will serve as the catalyst for its resolution, which, as I will argue, lies in embracing local ethical supervenience as the meta-ethical foundation for a new ethical frame of reference, replacing the species-essentialist interpretation of the life-form.

2 Ethical Supervenience and Life-Form Relativity of Ethical Standards

The most comprehensive account of the life-form concept within neo-Aristotelian naturalism is provided by Michael Thompson, who initially developed the concept in his article *The Representation of Life* (1995), claiming to give an expression to a certain tendency he found in the thought of Philippa Foot. This concept, still in a very early stage of its development, was already implemented in *On Virtue Ethics* (1999) by Hursthouse and in *Natural Goodness* (2001) by Foot. Later, Thompson introduced new elements into the theory and gave it a rigorous anti-empirical twist that relied heavily on a priori insights into the human life-form as such, which is a development that could not really be predicted by a reader who was only familiar with *The Representation of Life*. To the best of my knowledge, Foot did not publicly express her views about this evolution of the theory, given her health state deteriorated rapidly in 2004, coinciding with the period when Thompson began to publish his new insights (cf. Hursthouse 2012, 181).¹ Therefore, it may be considered inadequate to read Foot's work through the lens of Thompson's later contributions, as other interpreters sometimes do (see, e.g., Hacker-Wright 2021), and to utilize later passages from him to elucidate Foot's intended meaning of the life-form concept. For this reason, I will discuss Foot's and Thompson's theories of life-forms separately from each other.

¹ While Foot continued to draft notes in response to reviews of 'Natural Goodness' for even some years after 2004, my scrutiny of the handwritten notes from this period, preserved in the archives of the Somerville College in Oxford, suggests that she did not engage with the new theses of Thompson's later articles.

Thompson's theory of life-forms is founded on an ontology that rejects the notion of defining life as such by listing up general features like self-maintenance, development, or reproduction (cf. Thompson 2008, chap. 2). This perspective stems from Thompson's belief that identical biochemical compositions that make up body parts or whole bodies, and the respective activities of these bodies, can have different evaluative (or ethical) meanings.² To illustrate this, Thompson could refer to the example of so-called *false friends* in linguistics (see also Thompson 2004b, 363). Consider, for instance, the German word 'Gift'. It is pronounced and written exactly like the English word 'gift' (when used at the beginning of a sentence), but actually means 'poison' in German and not 'present'. Under certain conditions, Thompson might say, very similar living beings must be understood in analogy to these false friends, which is probably most intelligible in the case of mimicry. He writes that "tokens of the SAME type of thing, eye or leaf or flight or whatever, might be constituted very differently in a form of life very different from the one you have imagined. Similarly [...], the same materials might constitute quite different phenomena of life in sufficiently different species." (Thompson 2013, 719) For example, in an oak tree, a certain aggregation of cells may constitute a leaf, but in another form of vegetative life, such a thing might be better understood as some kind of sickening excrescence, while something quite different would be considered a leaf (cf. Thompson 2004b, 363). In essence, Thompson posits that the life-form of the species is giving evaluative meaning to biochemical compositions in the same principal way as the language gives linguistic meaning to the expressions of the community of speakers (cf. Thompson 2004a, 53 n6). Thompson writes that a life-form "is in this respect like a language that physical matter can speak" (Thompson 2004b, 363).

This difference in evaluative meaning is not limited to similar body parts but extends to whole bodies. We know that genetically identical members of a species can develop markedly diverging appearances if they grow up under varied environmental conditions. Consider, for example, the members of an aquatic plant species that normally develop different forms of leaves, depending on whether their body parts are submerged or above water. In certain instances, such as in the case of the two-headed water-starwort (*Callitriche heterophylla*), when placed in a lake with unusually high water temperatures, submerged shoots will develop aerial-type leaves as well, which seems to be some kind of defect or error of that plant (cf. Li et al. 2019, 6). It is easy to imagine that a species very similar to the two-headed water-starwort could even develop the submerged-type leaves in the air when air temperature is sufficiently

² I distinguish here between the terms 'moral' and ethical'. While morality is concerned with what we owe to others and therefore presupposes rationality, I understand ethics in a broader sense. An individual who achieves their telos, that is, realizes the goods that are relevant in their life, can be said to have lived a good life. I call the discipline that is concerned with the good life 'ethics'. Since, according to neo-Aristotelian naturalism, animals and plants seem to be able to achieve such a good life (realize their telos) by their own activities, one could, in theory, speak of 'ethical' evaluations also in their cases, distinguishing these evaluations from other kinds of evaluations regarding utility, aesthetics, etc. However, given that the use of the term in such a broad sense may seem unusual, I will speak here, e.g., of 'evaluative' meaning when the considerations refer only to animals or plants, while I speak of 'ethical' meaning when they concern humans, although I assume that both kinds of evaluations share an analogical structure and concern the good life or goodness of individuals.



low. Consequently, the differences between the members of such a species could be all-encompassing if, for example, some of them were placed in a hot spring in a relatively cold country like Iceland.

In a series of thought experiments, Thompson heavily builds on this ability of living beings for phenotypic plasticity. Thompson prompts us to envision two independently evolved plant species with vastly different life-forms, one of them typically found in the Arctic and the other in Brazil. We can imagine that one of these species may bear red flowers while the other displays white blooms, that one might grow to towering heights while the other remains relatively small, and so forth. Nevertheless, Thompson suggests that it is conceivable that the seeds of these different species, and thus their genetic material, might, by a miraculous accident, be “alike in every physical detail” (Thompson 2008, 56 n3). And Thompson adds: “Though physically identical, the seeds and the genes will necessarily attract quite different descriptions.” (Thompson 2008, 56 n3) It appears that what Thompson is conveying with this thought experiment is that a seed of the Arctic plant species, if transferred to Brazil, could be described in analogy to the two-headed water-starwort that grows in a hot spring in Iceland: it had to be deemed a deficient member of its species, deviating from the idealized life-form. According to Thompson, this judgment apparently remains unchanged even if we discover that there always was a species with the exact same traits for which living under those conditions is considered normal and healthy. Following the same logic, I believe that according to Thompson a three-legged cat would not cease to be considered defective if relocated to a nearly identical duplicate of Earth, populated by a species very similar and genetically identical to cats on our planet, but where having three legs is deemed normal. This description of the Earth’s cat would not change even if the twin mice on Twin Earth were, additionally, exceptionally slow. Thus, I interpret Thompson here to present an argument against both individual and local ethical supervenience.

But Thompson takes it even further. In another thought experiment, Thompson asks us to imagine “a creature who comes to be from sand or swamp muck by the agency of lightning or quantum-mechanical accident—a creature part for part the same as I am” (Thompson 2008, 60). Regarding this scenario, Thompson remarks: “In supposing my imagined double to be a product of sheer accident, *we have severed all links with any specific [...] wider context*; we can associate it with no *determinate* life-form at all; and so the ground of all vital description is removed.” (Thompson 2008, 60) In other words, according to Thompson’s theory, the movements, gestures, and vocal expressions of Swamp Thompson would possess no (ethical) meaning at all, despite the fact that he and Swamp Thompson would be identical on a physical level (and, thus, if mental supervenience were true, they would also be identical on the level of mental properties). If the original Thompson had spontaneously gone on a secret vacation after this incident and Swamp Thompson had travelled to Pittsburgh, then everyone would have believed that the entity which seemed to be giving a philosophy lecture at Pittsburgh University the very next day was a more or less virtuous human being. If the original Thompson had died in an accident while on his vacation, unnoticed by anyone, nobody would ever have been able to prove that Swamp Thompson was not really Thompson (their fingerprints would be identical, they would have the same ideas and memories, etc.). However, according



to Thompson's theory, the Pittsburgh students would have been mistaken in assuming that they had encountered a human being with ethical properties. Instead, what they encountered was "a mere congeries of physical particles" (Thompson 2008, 60). Since the students were mistaken in assuming that Swamp Thompson could be considered a member of the human life-form, there was actually no valid conceptual or ethical basis for describing the processes going on in swamp Thompson as 'speaking', 'bleeding', 'being courageous', etc. (cf. Thompson 2008, 60). This theory would thus undermine all of the aforementioned examples of ethical supervenience on natural properties, including global ethical supervenience.

But interestingly, there is one version of ethical supervenience that Thompson explicitly accepts that we had not considered before. Thompson acknowledges that on 'the philosopher's Twin Earth', the life-form of the twin humans, who are biochemical identical to the humans on the planet Earth, may have the *exact same content* (the same entries on their list of natural-historical judgments) as the human life-form (cf. Thompson 2004b, 361; Thompson 2013, 710). That is, Twin Thompson, in contrast to Swamp Thompson, would possess the same ethical properties as the original Thompson. Nevertheless, Thompson emphasizes that the beings on Twin Earth are "'twin humans', not humans; their form is not human form but twin human form" (Thompson 2004b, 361). We should assume that this case differs from the case of Swamp Thompson not only in scale; rather, the important difference is due to the fact that Twin Earth was not created from scratch, as in our first example of global ethical supervenience, but has a *history* similar to that of our planet, except that it is located in a different region of our universe. The twin humans are therefore evolutionary descendants of twin apes, Twin Aristotle would have been the son of Twin Nicomachus, etc. For Thompson, it seems, ethical properties only *start* to supervene on natural properties when these natural properties already have the right kind of history. This version of ethical supervenience could be called global *historical* ethical supervenience.

The idea of global historical supervenience is well known in philosophical aesthetics, where some have suggested that the aesthetic properties of a physical artwork, such as the *Mona Lisa*, do not simply supervene on natural properties but also require a certain history that connects the artwork with the original artist (cf. Currie 1990). Therefore, the Twin *Mona Lisa* on Twin Earth, created by Twin Leonardo da Vinci, would have the same aesthetic value as the *Mona Lisa* on our planet, while *my* copy of the *Mona Lisa*, created by a sophisticated 3D printer, could be aesthetically worthless, even if it had the same natural properties. Now we have almost all the elements necessary to understand the special logic of life-form evaluations in Thompson's sense. This understanding can be enriched, however, if we first take a look at some of the developments in modern philosophical biology—a discourse that is unfortunately almost entirely neglected by Thompson.

In philosophy of biology, there exists a widely accepted distinction between logical classes and logical individuals (cf. Ghiselin 1974; Hull 1976; Ereshefsky 2017). A *logical class* is an abstract entity with members, all of whom share the defining properties of the class. In theory, we can construct different logical classes on will—for example, a class encompassing all entities in our universe with a red color. However, such a class would group entities in a rather arbitrary way. In



philosophy, our focus lies more on logical classes with explanatory value, which are, therefore, considered ‘natural kinds’ (cf. Ghiselin 1997, 45; LaPorte 2004, 19). For example, the chemical elements can be conceived of as logical classes that are at the same time natural kinds. Gold can be defined as a logical class that includes all chemical elements in our universe with the atomic number 79. Therefore, so-called fool’s gold, which looks like gold but consists of a different material, is not gold. When new chemical elements with the atomic number 79 are created out of other chemical elements in the process of neutron star collisions, these new materials fall under the pre-existing class of gold, rather than establishing a new and independent logical class. Similarly, if we transmute a bar of gold to something that does not have the atomic number 79 anymore, the remaining material would not be ‘bad gold’ but simply no gold at all. Even if gold had never existed in the universe, or if all gold were destroyed in the distant future, we could reasonably refer to the class of gold as one of the (currently unavailable) chemical elements on the periodic table.

A *logical individual* differs from a logical class in that it represents a concrete entity with a spatio-temporal origin and ending, whose parts have to be continuously connected with each other. Defining an individual solely by listing its properties is inadequate, as it can undergo total change over time without ceasing to be the same individual (as in the case of a caterpillar transforming into a butterfly). This is why we give individuals proper names and not definitions. If we were to create an exact duplicate of an individual—say, Aristotle—that copy would not be the original individual, even if we destroyed the original Aristotle a second before creating that duplicate and placed it on Aristotle’s former location. Notice that the form of the connection between the parts of an individual does not necessarily imply a connection that leaves no physical space between those parts. Between the atomic nucleus and the atomic shell lies a vacuum, and between the cells of a multicellular organism there may be an intercellular space that can be filled with air. Therefore, it depends on the functionally integrated structure of the individual and its mode of operation how big the space between its parts can be without losing the required kind of internal connection that grants it the status of a logical individual.

With this distinction in mind, it is now clear that Thompson conceptualizes the life-form as a logical category that exhibits properties of *both* logical classes and logical individuals. A life-form in Thompson’s sense has a particular spatio-temporal origin, like a logical individual, and all things that fall under that life-form have to be connected to this life-form by some kind of “trait transmitting historical succession” (Thompson 2004b, 365–366), which makes the reproductive relations between the parts of the species (the specimens) the relevant kind of connection between these parts (see also Thompson 2004a, 65 n10; Thompson 2008, 59). This explains why twin humans are not considered humans: they lack a historical connection with each other. However, a life-form also shares similarities with the concept of a logical class because it is defined by a set of general sentences—natural-historical judgments—that remain unchanged even if individual members of the species undergo significant changes (for example, due to genetic mutations or as a result of a permanent change of their environment). Therefore, the individual members of the species fall under the supposedly fixed life-form due to their lineage of succession



even if they do not individually (or even as a group) possess the characteristics by which their logical class is defined.

Thompson's logic of ethical evaluations has some distinct implications. If we cut off a corner from a triangle-shaped paper, what remains falls no longer under the logical class of triangles—it is not a defective triangle, but a pentagon. In Thompson's view, however, if one of the four legs of a cat were amputated, the remaining entity would still count as a cat, despite the fact that one of the defining elements of the feline life-form (or the class of cats) is: "Cats have four legs." Conversely, even if someone were to confuse Swamp Thompson with a being perfectly embodying all the natural-historical judgments that can be stated about the human life-form, that entity still would not count as a good (or bad) human, because the human form was not transmitted to that entity through historical succession. This deviation from standard (Fregean) logic forms the conceptual foundation upon which ethical teleology in neo-Aristotelian naturalism rests. Hence, the three-legged cat has a defect, and swamp Thompson is devoid of both virtues and vices. Likewise, if a natural-born chimpanzee were to exhibit the outer appearance and behavior of a feral human child due to genetic mutations, it would still be considered a defective chimpanzee, even if someone were to mistake it for a genuine feral human child, raise it as such, and some years later seemingly observe it speaking, voting, and engaging in politics like a normal human being.

From the perspective of modern philosophical biology, it may seem evident that Thompson's category of life-form is a theoretical misconstruction.³ The evolving continuum of diverging traits, which makes up the biological species, cannot be brought under a temporally fixed set of sentences that define a unitary normative ideal for each individual member of the species (cf. Hull 1989, chap. 1). All such generalizations would be rather arbitrary and artificial, given the considerable diversity that can exist within a species (cf. Hull 1998, 357–358). And even if such a generalization seemed to be an appropriate description of a particular species at a specific point in its evolutionary history, this particular state of affairs would be accidental. The reproduction of the members of a species cannot be interpreted as an act that transmits the 'unified and general form of the species as such' to a concrete individual. Rather, if we accept evolutionary theory, as neo-Aristotelian naturalism

³ Thompson and Foot suggest that instead of using the term 'species', which is heavily influenced by the understanding of evolutionary theory, one could simply adopt the term 'life-form', thereby highlighting the philosophical rather than biological nature of their concept (cf. Foot, 2001, 15 n14; Thompson 2008, 28 n5). While this distinction works well in the case of Thompson, who gave his theory a radically anti-empirical twist (see sec. 4 of this article), Foot's attempt to disentangle the life-form concept from its biological roots appears less convincing to me. Despite her effort to distance herself from an evolutionary understanding of functions (cf. Foot 2001, 32 n10.), she acknowledges that species (and life-forms) are in principle part of an evolutionary process, posing potential challenges to her theory (see sec. 3 of this article). While Thompson's anti-empirical turn of neo-Aristotelian naturalism enabled a vindication against the most vulgar attacks by adherents of evolutionary biology, recent years have seen growing skepticism regarding the overall persuasiveness of this approach (cf. Moosavi 2017; Moosavi 2018; Runge 2023). In this article, I seek to disentangle the philosophical concept of life-form from the biological species concept in a different way that diverges from Thompson's approach, aligning more with Foot's perspective in an attempt to preserve some of her intuitions that have been abandoned by Thompson and his adherents.



does in principle, reproduction has to be understood as the *source of diversity* within the species, which is the precondition of evolution (cf. Ayala 1970, 3).

In the past, philosophers speculated that the genetic code of the members of a species could be interpreted in analogy to the atomic numbers in chemical elements, assuming that all members of a given species share a distinctive genetic code (cf. Kripke 1980; Putnam 1997). However, modern biology has long since debunked this perspective. It is now firmly established that each individual, with the exception of identical twins, possesses a distinct and unique genome. It would not be possible to define a certain threshold of required genetic similarity to determine species membership (a point acknowledged by Thompson, as evident from his example of the Arctic and Brazilian plant species). In some cases, the males from different species are more genetically similar to each other than they are to the females of their own species. Furthermore, genetic differences among members of a species can exceed those between different species. Genes presumed to be characteristic of a particular species can be entirely absent in the formation process of a specific individual due to deletion, while members of another species may share the exact same gene sequence due to genetic mutation. These occurrences reflect ongoing evolutionary processes within a species, which take place on the level of the individual and its genome, but not on the level of the species as such. While the members of a species are defined by their ability to reproduce with each other, the emergence of new traits does not necessarily establish reproductive barriers. Sometimes, minor genetic mutations that do not even affect appearance or behavior can be associated with an inability to reproduce with some or all other members of the species, while other mutations that have far-reaching effects are still compatible with reproduction.

As a theoretical consequence of these new insights, modern philosophy of biology has almost uniformly turned to the position that the biological species must be interpreted as a logical individual (cf. Ereshefsky 2017, sec. 2). While there are still some metaphysicians opposing this trend in favor of the concept of *historical* logical classes (cf. Griffiths 1999; Ereshefsky 2010), I find it unpromising to prolong this debate. The key arguments in this debate are already known, at least in principle, and they have not led neo-Aristotelian naturalism to abandon Thompson's evaluative logic. What I want to show in the rest of this article is that there is another tendency *within* neo-Aristotelian naturalism that implicitly conflicts with this specific logic. This introduces an argument that could have a much stronger impact on the future development of neo-Aristotelian naturalism, as it takes the form of an *immanent* critique, whereas the reference to philosophical biology could be easily waved aside as an external critique (cf. Thompson 2008, 19; Hacker-Wright 2009; Lott 2012a).

3 Local Ethical Supervenience and the Beneficial Character of Virtue

Philippa Foot purportedly adopts Michael Thompson's theory of life-forms, yet simultaneously identifies a problem with Thompson's formulation of it. However, her attempt to address this issue appears to introduce a new foundational premise—a different conception of what neo-Aristotelian naturalism is and should be about that deviates from Thompson's perspective. Alternatively, one could also argue that



Thompson's project was not completely aligned with Foot's from the outset when he endeavored to articulate a certain tendency he saw in Foot's thinking. When Foot starts to re-appropriate Thompson's interpretation of this tendency, she remarks that, in her view, Thompson did not adequately distinguish between "the teleological from the non-teleological attachment of predicates to a subject term that is the name of a species" (Foot 2001, 30).

In Foot's view, there can be general statements about the life-form of a species that *do not play a part* in the life of the individual in order to obtain goods (such as survival and reproduction), and these statements shouldn't be considered in the evaluation whether the individual is flourishing. For example, it is possible to declare that, in a general sense, "[t]he blue tit has a round blue patch on its head" (Foot 2001, 30). But on the assumption that the blue color of the head is not, for example, important for intraspecific recognition, Foot is willing to admit that "there would be nothing wrong with the blue tit in my garden in that it had a drabcoloured head" (Foot 2001, 30). And in the case of the waggle dance of honey bees, which seems to play a vital role in the gathering of food, Foot remarks: "[S]uppose it were not true after all that other bees found nectar by reacting to the movements of an individual returning to the hive; in that case, unless the dance played a part in the life of the dancer itself, unless it was something that a homecomer needed to do for its own good, there would be no merit in a bee's dancing and no 'natural defect' in an individual bee just because it did not dance." (Foot 2001, 109) However, Foot's attempt to distance herself from a problematic tendency in Thompson's formulation of the theory, even if the alteration seems rather minor at first sight, carries much larger implications than Foot realizes.

In my view, Thompson makes an *epistemological* point here, albeit one inseparable from his unique ontology: We cannot understand the individual organism independently of the life-form of a species, as is most clearly stated in the case of Swamp Thompson. Additionally, our *identification* of an individual as a member of a particular species *already involves* making evaluative judgments. Consequently, the life of the individual gains its ethical (or evaluative) meaning *only* in the light of the general propositions that can be stated about the species as such, while *all* such general propositions matter for evaluation. When Foot adds that we should *further evaluate* these general statements about the species in the light of the individual—and connect these statements with what is beneficial or good for it—she turns this theory on its head: She is giving ethical (or evaluative) meaning to the life-form *via the individual*. As a result, we end up with two very different kinds of teleology.

In Thompson's conception of teleology, the telos of the individual lies in its conformity to the life-form of its species, irrespective of whether such conformity is beneficial for the attainment of goods or not. The telos of the individual—or, in other words, what is considered 'good'—is therefore the realization of its *species-being* (and not the realization of its 'individual' being, which could, due to genetic mutations, deviate from the species norm). In a sense, Thompson's ethical (or evaluative) teleology is a by-product of his epistemology, based on his ontology. In Foot's model, however, the telos lies in the *attainment of goods for the individual*, while the life-form of the species is the supposedly best way to achieve this telos, which



is not completely identical with the telos.⁴ This explains why an individual bee is not deficient for not performing the waggle dance if it lost its evaluative meaning at some point in the evolutionary history of the species.

Of course, Foot's thinking about the relationship between natural goodness (or virtue) and benefit evolved over time. The early Foot "thought it necessary to show that virtue *must* benefit the agent" (Foot 2002a, 159 n6, my emphasis)—a tendency that was partly devalued in her later work. The later Foot admits that sometimes, such as in unfortunate circumstances or in the case of bad luck, the manifestation of a virtue can result in a loss for the ethical agent (cf. Foot 2001, 97; Lewis 2003, 36). But in her main work, Foot still emphasizes that "there must be a systematic connection between natural goodness and benefit" (Foot 2001, 42). And in a later interview she told Rick Lewis: "We cannot totally divorce the ideas of virtue and of happiness. There seems to be a necessary conceptual connection between them." (Lewis 2003, 36)

To explain the nature of this systematic connection, Foot contends that "it is a defect, a weakness, in an individual deer if it is slow of foot. Swiftness, as opposed to fierceness or camouflage, is what fits it to escape from its predators." (Foot 2001, 34) Here, Foot emphasizes the importance of the deer's swiftiness for its ability to attain goods, such as survival. But then she adds: "[W]hat is excellence, and what defect, is relative to the natural habitat of the species. Even in a zoo a fleeing animal like a deer that cannot run well is so far forth defective and not as it should be, in spite of the fact that, as this particular individual is by chance placed, this may be no disadvantage for defence or feeding or mating or rearing the young." (Foot 2001, 34) In this passage, Foot's perspective seems to align more closely with Thompson's, who regards the life-form of the species as the frame of reference that gives evaluative meaning to the individual activities. In Foot's view, the natural properties of the individual get their evaluative meaning in relation to the 'natural habitat', which is somehow metaphysically connected to the category of the species. But as I already mentioned, I do not think that Foot's point here is mainly epistemological, as if we could not *understand* what is happening here *at all* without referring to the species category (which also indicates that she doesn't fully buy into Thompson's ontology). If there were a permanent abundance of food for the entire species of bees at some point in the future, according to Foot we could, apparently, *understand* that a bee is able to '*find*' food, leading to the *good of survival*, without having to participate in the waggle dance beforehand, since an indication of a direction in which to find food would be superfluous. If we had to interpret such a deviating bee through the lens of Thompson's epistemology, we could only understand that this bee is *going astray*, not 'finding food', but

⁴ When I speak here of the 'good of the individual', this does not exclude the possibility that this good may be intrinsically intertwined with the good of the individual's progeny, kin, community, hive, or colony. That is, an individual may sacrifice its life for its offspring or hive, in order to participate in or realize the good of reproduction, or it may take potentially life-threatening risks in order to participate in a reciprocal social order that is necessary (in the sense of an Aristotelian necessity) for the attainment of goods as a community. While a bird may, due to bad luck, lose its life due to warning the flock and thereby attracting the predator's attention, such sacrifices are not unrelated to the individual's own good, given that this bird has often benefited (or could have benefited) from the warnings of other birds.



accidentally ‘bumping’ into flowers, while the actual good—conformity with the species being—has not been achieved by this bee.

What Foot wants to express here, in my view, is that virtue (or natural goodness) represents a certain kind of disposition (or trait), deemed as the best, most promising, and reliable way to attain goods (cf. Runge 2023, chap. 2.3). The idea of a natural habitat is needed by Foot as a frame of reference—as a necessary background condition—for the determination of what can count as such a good disposition (or trait). In this scenario, however, the individual with its specific biology is an independent, recognizable variable, not merely an abstract instantiation or ‘exemplar’ of the species. What is important for Foot is that the goods are not simply obtained by accident, as seems to be the case in the zoo example, but that there is a stable disposition that enables the individual to obtain goods with a certain regularity (even if chances of success might be quite low in general in certain life-forms). While the artificial insemination of thousands of mares with the semen of a three-legged stallion, incapable to run, does not make this stallion ‘good’, given that his reproductive success under the normal living conditions of the species was mere ‘good luck’ (cf. Foot 2001, 93 n16), the scenario of the non-dancing bee seems to have a different structure: Under the conditions of the updated habitat she has dispositions that are compatible with the survival of the hive, despite deviating from the norm. Thus, the traits of this non-dancing bee exemplify the systematic connection between natural goodness and benefit, qualifying her to be considered ‘a good bee’.

In the Somerville College Archive in Oxford, there exists a draft of *Natural Goodness* from September 1999, titled *The Grammar of Goodness*, which also contains numerous handwritten comments by Michael Thompson in the margins. Given Foot’s attempt to distance herself from certain aspects of Thompson’s conception of natural normativity, it is intriguing to note Thompson’s remark on the following passage:

“the Aristotelian categoricals give the ‘how’ of what happens in the life cycle of the species. And all the truths about what this or that characteristic does, what its purpose or point is, and in suitable cases its function, must be related to this life cycle. The way an individual *should be* is determined by what is needed for development, self maintenance [sic] and reproduction [...]”

Thompson comments here: “But note the underlying ‘circle’. The ‘life’ this is the ‘cycle’ of is nothing but what these propositions describe” (Foot 1999, chap. 3, 7).⁵ So, why did Foot, well aware that this account expresses a non-explanatory circle from the perspective of Thompson’s theory, still only replace ‘this life cycle’ with ‘the life cycle’ in the final version of the book (cf. Foot 2001, 32f.)? According to the interpretation I developed so far, Foot doesn’t commit the mistake of formulating a circular explanation here, because she also doesn’t fully subscribe to Thompson’s ontology and epistemology. In Foot’s epistemological framework, we can *understand* that under certain conditions, a bee may achieve the genuine good of self-maintenance by ‘finding food’ rather than accidentally bumping into flowers,

⁵ I thank Lesley Brown, Michael Thompson, and *The Fellows and Principal of Somerville College* for their kind permission to quote from this unpublished material.



even if this behavior does not conform to the general propositions that can be stated about the species. Consequently, we can also understand that a certain Aristotelian categorical, such as ‘bees perform the waggle dance in order to *find* food’, may no longer be considered a valid part of the evaluative description (or natural history-story) of the life of the species. In Foot’s account, understanding the good life of the individual evidently involves *more* than the general propositions about the life of the species describe! It also encompasses a *relation* of these propositions to more general elements, such as self-maintenance, which aren’t *fully* captured by the set of general propositions describing how members of the species normally find and gather food, organize their defense against predators, etc.

To maintain the notion that there must be a systematic and not merely accidental connection between natural goodness and benefit, I believe it is necessary for neo-Aristotelian naturalism to be based on a logical structure that is compatible with local ethical supervenience. To address the issue that arises otherwise, let us reconsider Foot’s previously mentioned zoo example but relocate it to a natural setting, thus removing the complicating influence of the humans who oversee the zoo. Imagine, instead, an almost inaccessible area filled with dense thorny thickets, offering little space for movement, where a group of deer accidentally finds itself, unable to leave at will. Let us assume that this habitat provides enough food for the deer to survive and to rear their offspring. Despite the near-inaccessibility of this area, it is conceivable that occasionally a deer may escape the thicket or that some deer from the nearby forest may wander into the thicket and become ensnared too. The presence of such a barrier does not prompt the emergence of a new species, as it does not in the case of the zoo-deer and the forest-deer, which are still considered to belong to the same species. According to Foot, as we can assume, both the deer in the thicket and those in the zoo possess a natural defect because they are slow of foot, even though this may not pose a disadvantage for the thicket-deer to attain the goods of survival or reproduction, since their predators cannot enter the thicket either.

Now suppose that due to some kind of plate tectonics, a new, exceptionally swift predator species, which previously inhabited a different region, invaded the forest and killed all forest-deer. Yet, it is conceivable that after several centuries the thicket-deer population still survives and reproduces. If, over time, humanity forgot about deer and their swiftness, and some future neo-Aristotelian naturalists explored the thicket, they might believe they had discovered a new species that survives by hiding in secluded locations (cf. Thompson 2004a). Therefore, if we were external observers of this development—we could be rational Martians, for example—we would notice that the assumed evaluative meaning of the natural properties of the thicket-deer changed. In this later era, if a deer happened to leave the thicket, it would be deemed a deficient exemplar of its species because it would most likely fall victim to the still prevailing, exceptionally swift predators. This assessment would hold true despite the occasional instance where one of these escaped deer might survive in the forest for an extended period, possibly enjoying the newfound freedom to run around.

The intriguing aspect about this scenario is that, although the ethical standards changed over time, the local context and the individual natures of the first generation



of supposedly deficient deer and their flourishing descendants *remained unchanged throughout this development*, as we can assume here. It is even conceivable that, through some miraculous accident, one flourishing member of a later generation lives a life *identical* to the life of a member of the earlier deficient generation of deer (possessing the exact same genes, engaging in the exact same interactions, etc.). Yet, the evaluative properties that are ascribed to these individuals that have identical lives in an identical local context are assumed to be different. That the other deer outside of the thicket were killed by a new predator or that they survived could be a development that occurred completely unnoticed by the deer in the thicket. Consequently, this account of evaluative (or ethical) change contradicts local ethical supervenience. The scenario just mentioned does not necessarily imply that Thompson's theory is flawed, since he openly affirms that physically identical beings in equivalent local contexts can be evaluated differently (as in the case of the Arctic and the Brazilian plant species). But the case of the deer in the thicket nevertheless makes it very clear, I think, that without local ethical supervenience we cannot really say, as Foot wants to, that there is a *systematic* connection between natural goodness (excellence) and benefit to the individual, but the connection seems to be somewhat arbitrary.

In the case of the thicket deer, only some things outside of the individual's local context changed, while the natural properties of the individuals and the thicket remained constant. But how could this affect what counts as benefit in the local context of the individual? Why would it be evaluatively relevant that, for example, humans remembered that it was once important for deer to be swift? Foot explicitly asserts that we, as evaluating observers who make judgments about natural goodness, are not allowed to look back into evolutionary history to make assumptions about what is functional for the currently living individuals of a species (cf. Foot 2001, 29). Or, when looking back is not allowed, why would it be evaluatively consequential that some reproductive relations to other members of the species who adhered to the traditional way of life still persisted? The reproductive relations of the group of thicket-deer with the group of forest-deer can be maintained by processes that do not have to be relevant for the individual deer in the thicket (they are, therefore, part of the global context and not of the local context). After all, it does not make any difference to them whether one deer escaped the thicket and reproduced with the forest-deer or became lost in the thicket and perished unnoticed. Neither of these possibilities can be verified by the individual thicket-deer. Therefore, the ongoing reproductive relations have no bearing on what can be considered *a benefit to the individual*. This species-essentialist understanding of the life-form undermines Foot's premise of the beneficial character of natural goodness, which is also the theoretical basis of any eudaimonist virtue ethics. In terms of evaluation, there is a structural difference between a group of deer, whose traits *regularly* facilitate survival and reproduction under the conditions of a new and stable environment, which they found by accident, and a three-legged stallion, which under normal conditions wouldn't be able to survive, but through good luck (such as artificial insemination) successfully reproduced.

The delineated tendency in neo-Aristotelian naturalism that focuses on the attainment of goods for the individual, which I have tried to demonstrate by analyzing



Foot's position, is interestingly also expressed in Hursthouse's main work. (I am neglecting here her later articles in which she seems to align more closely with Thompson's later thoughts.) In *On Virtue Ethics*, she asserts that the "overall summing-up evaluation [of an individual] [...] *supervenes* on the evaluations of its relevant aspects" (Hursthouse 1999, 203, my emphasis). These aspects—the parts, operations, etc., of an individual—are themselves "evaluated in relation to the relevant ends," the most important of them being survival and reproduction (Hursthouse 1999, 203). Just as Foot, Hursthouse understands virtue or natural goodness as the most reliable way to obtain goods under the conditions of the natural habitat of a species (cf. Hursthouse 1999, 173). Of particular interest to us here is Hursthouse's use of the notion of supervenience.

Hursthouse acknowledges that assuming a general life-form of a species inherently involves some degree of imprecision, as there is always potential for debate regarding whether a certain group within the species is still to be evaluated in the light of the traditional life-form of the species or if it already constitutes a *sub-species* with a slightly different life-form. But unlike Foot, Hursthouse provides a criterion that can assist us to decide these ambiguous cases. She suggests that if a subset of the members of a certain species "has adapted well to what is a hostile environment [for the original species]," this "can be a ground for reclassifying it as a subspecies" (Hursthouse 1999, 203). Therefore, an initial judgment that a particular individual is defective can "be withdrawn with hindsight, if it was decided that the species *x* needed to be subdivided, or if it looked as though its members were developing a new characteristic way of going on" (Hursthouse 1999, 203). This approach seems compatible with local ethical supervenience. In the spirit of (the pre-millennial) Hursthouse we could say: When it is possible to think of a group of individuals that their parts, operations, etc., are consistent with the most reliable way of realizing the goals of attaining goods like survival, reproduction, etc., in the given environment of that group, then we can classify this way of living as a life-form of a (sub-)species with this particular environment as new natural habitat. Therefore, the first generation of thicket-deer could be reclassified as a sub-species of deer with hindsight, as it becomes increasingly evident over time that they have established a new, reliable way of obtaining goods.

Hursthouse's interpretation of evaluative (or ethical) change, however, *could not* be articulated within the assumed epistemological boundaries of Thompson's project. According to Thompson, we could never really understand that an individual actually realized *goods* in an environment that is at the same time interpreted as hostile to the species in general, just as we could not say that the Arctic plant realized 'goods' in Brazil or that a relocated three-legged Earth's cat 'flourished' by living to the standards of a different life-form on Twin Earth. Rather, we would be forced to describe such an individual as lacking a sense of its natural habitat, only surviving in this hostile, unnatural environment by accident and thereby missing the real good of realizing its species-being, which is expressed in the set of general sentences about the life-form of the species. As I have already explained, I do not think that this epistemology is inevitable, especially because the species as a reproductive community is not even an ontologically fitting category to connect it with Thompson's concept of life-form but is better understood as a logical individual. However, I do not want



to go any further in the criticism of this epistemology and will instead focus on the alternative tendency within neo-Aristotelian naturalism that is represented by Foot and (the pre-millennial) Hursthouse.

What seems to be characteristic of neo-Aristotelian naturalism in general is the notion that ethical evaluations cannot solely focus on the individual as such; rather, they depend on a wider context in which the individual has to be situated (which is why individual ethical supervenience is rejected in all approaches). This wider context also serves as the common ground that aligns Foot and Hursthouse with Thompson. But I see no compelling reason why this wider context must necessarily be located on the *species-level*. When the species category no longer captures what is pertinent for the individual in its local context anymore, Foot and Hursthouse are *already* willing to accept a level below the generality of the species and postulated a new evaluative category: the sub-species (cf. Foot 2001, 21). However, while the category of the species describes a real object with definite boundaries—a logical individual that is defined by ongoing reproductive relations between its parts—the sub-species is, like race, a completely arbitrary category (cf. Hull 1998, 363). The rationale for Hursthouse and Foot to stick to the species-level (or something analogous, like the level of the sub-species) appears to stem mainly from their aspiration to formulate an ethical theory that is compatible with the logical structure of ordinary language, which is the source of inspiration for their ethical program. But from an ethical point of view, the distinctive content of their virtue-ethical approach seems to be the emphasis on certain dispositions—presupposing a habitat as background condition—that reliably guide the individual to the attainment of goods (which are thought as beneficial for the individual). The focus on the species-level, however, is not optimal for fulfilling this function, especially under conditions of an ongoing evolution, which—unfortunately for neo-Aristotelian naturalism—is the normal state of affairs on our planet.

We have seen that the conceptual connection between the life-form category and the category of the species has already been loosened through the introduction of the sub-species. The famous biologist Ernst Mayr, for example, wrote “that introducing the term and concept of subspecies was the entering wedge of the destruction of a purely essentialistically defined species” (Mayr 1982, 593). On the whole, I think it would be clearer to abandon the species category at all as an ethical (or evaluative) frame of reference because the sub-species has features that no longer fit into the species-essentialist logic. In our deer example, it might in principle be possible for an individual deer to live the first part of its life successfully in the forest and the second part successfully in the thicket because both ways of living are valid life-forms (as we might recognize at least in hindsight). But the transition from one way of living to the other implies an evaluative break in the biography of the individual because the two ways of living require different qualities or dispositions of the individual. The former flourishing thicket-deer might first become a deficient forest-deer after changing its location, and it will only develop the proper dispositions that are necessary for this new way of living, such as swiftness, after a while (if it does not die first). Foot herself presented a similar case when she admitted in one of her latest interviews: “Certainly, things change all the time. Now that foxes are becoming urban creatures, they need different things, speed being, for example,



less important because food can be obtained without it.” (Voorhoeve 2003, 38) But it would be a strange use of language to say that a fox or a deer changed its *sub-species* during its own lifetime, which, by the way, could not only happen once but many times.

To understand the nature of these changes, it is necessary to implement a more dynamic understanding of life-forms into the structure of neo-Aristotelian naturalism. Foot was well aware that “many tricky questions can be raised [...] about adaptation to new environments, but this introduces a dynamism into the model,” a dynamism which Foot could not envision to be compatible with the species-essentialist logic anymore (Foot 2002b, 165). But now, many decades later, we should consider whether we really cannot say: So much the worse for species essentialism then! The acceptance of local ethical supervenience gives us a theoretical instrument, pioneered by Hursthouse, to understand when a deviation from the traditional way of living is legitimate and can, thereby, become a new valid life-form. If we could think of the thicket-deer as an expression of a more general way of living—which could, in principle, also be established on the species level—then we had attained a new and valid evaluative frame of reference. This would enable us to decouple our evaluations from the category of the species as a reproductive community, allowing us to make more fine-grained judgments about the living beings in our evolving biological world.⁶ Finally, neo-Aristotelian naturalism would be compatible with local ethical supervenience. In this case, the life-form cannot be identified with the essence of the species anymore, but it serves as an ethical (or evaluative) frame of reference in which we have to situate the individual in order to determinate what can count as a good disposition, trait, or virtue for them.

4 Conclusion

In this article, we have explored an internal tension within neo-Aristotelian naturalism, arising from two conflicting tendencies that shape the perspective of its primary proponents. One tendency finds its expression in the focus on the life-form of the species, generating uniform, fixed evaluative standards for the ‘exemplars’ of the species, while the other focuses on stable dispositions or traits that enable individuals to attain goods with a certain regularity, thereby seeking for more than mere conformity of the individual with the species-being. Although these foci may appear intertwined at first sight, a thorough examination revealed that the premises underlying the first tendency implied the rejection of local ethical supervenience, whereas the second tendency required its acceptance. While I have attempted to provide evidence that Foot defended the significance of the second tendency against Thompson’s formulation of the theory, considerable exegetical efforts have been made by other notable scholars to interpret Foot more in alignment with McDowell (cf. Hursthouse 2018) or the later Thompson (cf. Hacker-Wright 2021). One plau-

⁶ While this article is the first to underscore the concept of supervenience in this context, recent years have seen a growing interest in a more nuanced framework as opposed to species essentialism (cf. Merriam 2009; Moosavi 2022a; Runge 2023).



sible explanation for these diverging interpretations may be that Foot's main work itself contains ambiguities, making it not only impossible to unequivocally assign her to one of the particular camps that emerged later in response to challenges she could not foresee, but also exegetically inappropriate to attempt to do so. In any case, I believe that even if one were to find my exegetical suggestions less convincing overall, our subsequent discussion would remain intriguing from a systematic point of view. Thompson's contentious rejection of local ethical supervenience may pose a challenging notion for many more traditional adherents of meta-ethical naturalism, and the implied rejection that there is no systematic connection between virtue (natural goodness) and benefit in the local context of the individual may be deemed unacceptable by numerous eudaimonists, who could find an alternative perspective in my suggested interpretation of Foot.

Admittedly, my suggestion for the future trajectory of neo-Aristotelian naturalism diverges from recent trends in discourse development. Throughout this article, I have leaned heavily on Foot's radical proposition that we can understand the general meta-ethical structure of ethical judgments by drawing analogies between the evaluations of sub-rational and rational beings—an idea that she upheld as its staunchest defender, against all resistances of her contemporaries. However, following Foot's passing, the standing of this analogy has gradually diminished, even among proponents sympathetic to neo-Aristotelian naturalism. In fact, many contemporary scholars now view the analogy as potentially misleading or outright false (see, e.g., Lott 2012a, 8; Crary 2016, 189–190; Settegast 2020, 205). Accepting the validity of this analogy seems to imply a certain openness to engage with the empirical, biological world—otherwise we would not know anything about the life-forms of sub-rational beings and, therefore, could not use this knowledge to inform one side of the analogy. Yet, if one were to apply the same empirical approach to understand our own life-form, this would raise concerns about an undesirable convergence of ethics with sociobiology, and it was feared that such a path might lead neo-Aristotelian naturalism to devolve into a form of vulgar evolutionary ethics as a result (cf. FitzPatrick 2000; Thompson 2008, 31).⁷

Therefore, Thompson and others have sought to gain access to the ethical content of the human life-form by applying a different method (cf. Thompson 2004a; Hacker-Wright 2012). This method draws inspiration from Elizabeth Anscombe, who posited the notion that certain knowledge, such as knowledge of my leg being bent upon waking, does not require 'empirical investigation' (cf. Anscombe 2000, §§ 8 and 28; see also Thompson 2011; Thompson 2013, 713). Even with closed eyes and nestled under a blanket, I could still have internal knowledge that my leg is bent (that is, I do not need to open my eyes to verify this empirically). This knowledge is 'without observation' and therefore, in a certain sense, *a priori*. While Anscombe employed this example to elucidate the kind of knowledge we have of our intentions, Thompson and others began to argue that similarly, it should be possible to have

⁷ There is an expanding body of literature that argues for seeking a compatibility of neo-Aristotelian naturalism with modern biology not as a *reductio ad absurdum*, but as a valid possibility (cf. Moosavi 2020; Moosavi 2022b; Runge 2023).



a priori knowledge about the fact that human beings are, for example, thinking and acting beings.

The newfound relevance of a priori insights has brought neo-Aristotelian naturalism into closer alignment with neo-Kantian constitutivism, which derives ethical standards from the (a priori) analysis of the nature of our agency (see, e.g., Korsgaard 2008; Korsgaard 2009). While in neo-Kantian constitutivism this analysis focuses on the concept of the person as such, neo-Aristotelian constitutivism posits that there are differences in the nature of agency, depending on the nature of the species of the respective agent (cf. Lott 2012b, 429–431). Although this theoretical shift may seem promising to many, there are those, myself included, who fear that neo-Aristotelian naturalism—when conceived as a form of a priori-style constitutivism—is at risk of severing its connection with the anti-Kantian intuitions and aspirations upon which its program was based in the beginning, thereby blurring the line between Kantian and Aristotelian approaches.⁸ In the same vein, one might think that the endeavor to safeguard Foot’s naturalistic ethics from the threat of descending into a vulgar evolutionist ethics has gone too far, sacrificing Foot’s most radical and genuine insight—that “[i]n moral philosophy, it is useful [...] to think about plants” (cited from Hursthouse 1999, 196). Although space constraints prohibit a thorough exploration of the positive implications that the suggested changes in the meta-ethical foundation of neo-Aristotelian naturalism would have for the ethical evaluation of rational beings, allow me to briefly illustrate how the issues discussed here translate into the realm of rational beings within the Footian framework.

In her work *Natural Goodness*, Foot explores the possibility that there might be rational beings on another planet who “would find it impossible to think calmly about *their own* future” (Foot 2001, 17 n16). She suggests that, for them, it might be rational to establish a kind of ‘buddy system’ in which individuals are paired up to think about their partner’s future and make all future-related decisions for them. In contrast, human rationality is more autonomy-oriented. While marriage is seen as an acceptable constraint on human autonomy, the decision to become integrated into a buddy system as an adult would be considered as irrational, interfering with a good, flourishing human life. The focus of legitimate practical rationality is therefore species-dependent, analogous to how other traits, such as having wings, may have different functions depending on the species, serving blue tits in flight but penguins in swimming. In her unpublished notebooks archived at Somerville College, Foot contemplates a seemingly more radical scenario in which Martians would be nervous at the mere thought of the distant future, rendering the option of establishing a buddy system impractical. For humans, it would be deemed irrational not to quit smoking upon learning of its adverse health effects, even if the repercussions will occur only decades later (Foot 2001, 61, 72). Foot suggests, however, that the rationality of the nervous Martians would not be compromised if they chose to avoid such future-oriented thoughts altogether (Foot June 16th, 2006). Just as ostriches no longer use their wings to fly, it seemingly belongs to the natural history-story of these nervous Martians that they do not use their rationality to think about

⁸ This does not imply that an a priori-style constitutivism cannot also be a valid form of neo-Aristotelian naturalism, but it may differ significantly from what Foot originally envisioned.



the distant future. Interestingly, in a notebook entry dated May 20th, 2006, Foot addresses a problem in this context similar to those we have discussed regarding the evaluation of non-rational beings that deviate from the assumed life-form of their species. There she considers the case of a Martian born with a deviant, human-like rationality—meaning, he wouldn't be nervous at all when thinking about his own future. In principle, he could continue smoking like the other Martians and conform to the species norm of not thinking about the future. Foot thinks, however, that this deviant Martian might fare better if he used his human-like rationality to quit smoking and thereby live longer. She wonders, therefore, whether recognizing that this deviant use of rationality results in a benefit or good for this Martian would lead to a tacit abrogation of her view that practical rationality is species-dependent. Then she poses the question of whether it would be possible to construct a (fictional) natural-history story of the species of Martians and their typical rationality, in which dying sooner could be considered as better for them, but she doesn't come up with a clear solution.

Within the framework of Thompson's epistemology and ontology, it appears possible to straightforwardly justify that the Martian in question is simply a defective member of his species. It would be considered an accident that this abnormal Martian doesn't die as early as Martians normally do, but he doesn't attain any ethically relevant goods by living longer, nor is he considered a good, flourishing Martian by employing his intellect in this abnormal way. Only after the species as a whole undergoes a change of essence could such intellectual activities be considered a legitimate expression of genuine Martian rationality. The problem that Foot describes here simply isn't comprehensible within Thompson's framework, and thus, it dissipates.

Foot recognition that the scenario described poses a genuine challenge for her theory can be grasped through my proposed interpretation of her evaluation of the case of the non-dancing bee. If we can understand that a bee can achieve the good of survival despite deviating from the general propositions that can be stated about the species, then it might similarly be possible to understand that the deviant Martian uses his abnormal intellectual activity to achieve goods like health, even though this clearly conflicts with the species-essentialist model of evaluation that Foot still endeavors to uphold. As argued in this article, it seems untenable to maintain both of her premises simultaneously: species essentialism *and* the idea that the concept of natural goodness is systematically related with a benefit of the individual. While Thompson's framework has effectively supplanted this original tendency in Foot within the current discourse, I believe it would be a promising avenue for future research to consider whether sacrificing species essentialism could be a valid option to preserve Foot's other, genuinely Footian premise, which she sought to defend against Thompson's formulation of the theory. If we embrace the proposed transition and adopt local ethical supervenience as a metaethical foundation for neo-Aristotelian naturalism, this certainly introduces a dynamism into the model about which many tricky questions can be raised. While I may not yet have answers to all of these questions, such drawbacks are typical for a paradigm shift, and I have endeavored to address some of the emerging problems of such an approach elsewhere (cf. Runge 2023).



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References

- Anscombe, Gertrude Elizabeth Margaret. 2000. *Intention*. Cambridge, MA: Harvard University Press.
- Ayala, Francisco J. 1970. Teleological explanations in evolutionary biology. *Philosophy of Science* 37 (1), 1–15. <https://doi.org/10.1086/288276>.
- Crary, Alice. 2016. *Inside ethics: On the demands of moral thought*. Cambridge, MA: Harvard University Press.
- Currie, Gregory. 1990. Supervenience, essentialism and aesthetic properties. *Philosophical Studies* 58 (3), 243–257. <https://doi.org/10.1007/BF00368285>.
- Ereshefsky, Marc. 2010. What's wrong with the new biological essentialism. *Philosophy of Science* 77 (5), 674–685. <https://doi.org/10.1086/656545>.
- Ereshefsky, Marc. 2017. Species. In *The Stanford encyclopedia of philosophy*, ed. by Edward N. Zalta. Fall 2017 Edition. <https://plato.stanford.edu/archives/fall2017/entries/species/>.
- FitzPatrick, William J. 2000. *Teleology and the norms of nature*. New York, NY: Garland.
- Foot, Philippa. 1999. *The grammar of goodness (with comments by Michael Thompson)*. Unpublished manuscript SC/LY/SP/PF/6-1 in Somerville College Archives, University of Oxford (The Fellows and Principal of Somerville College © Lesley Brown and Michael Thompson).
- Foot, Philippa. 2001. *Natural goodness*. Oxford: Clarendon Press.
- Foot, Philippa. 2002a. Morality as a system of hypothetical imperatives. In *Virtues and vices and other essays in moral philosophy*, ed. by Philippa Foot. Oxford: Clarendon Press, 157–173.
- Foot, Philippa. 2002b. Rationality and virtue. In *Moral dilemmas and other topics in moral philosophy*, ed. by Philippa Foot. Oxford: Clarendon, 159–174.
- Foot, Philippa. 2006. *Note book Dec 2005 to June 2006*. Unpublished manuscript SC/LY/SP/PF/6-1 in Somerville College Archives, University of Oxford (The Fellows and Principal of Somerville College © Lesley Brown).
- Ghiselin, Michael. 1974. A radical solution to the species problem. *Systematic Zoology* 23 (4), 536–544. <https://doi.org/10.1093/sysbio/23.4.536>.
- Ghiselin, Michael. 1997. *Metaphysics and the origin of species*. Albany, NY: State University of New York Press.
- Griffiths, Paul E. 1999. Squaring the circle: Natural kinds with historical essences. In *Species: New interdisciplinary essays*, ed. by Robert Andrew Wilson. Cambridge, MA: MIT Press, 209–228.
- Hacker-Wright, John. 2009. What is natural about Foot's ethical naturalism? *Ratio (New Series)* 22 (3), 308–321. <https://doi.org/10.1111/j.1467-9329.2009.00434.x>.
- Hacker-Wright, John. 2012. Ethical naturalism and the constitution of agency. *Journal of Value Inquiry* 46 (1), 13–23. <https://doi.org/10.1007/s10790-012-9321-5>.
- Hacker-Wright, John. 2021. *Philippa Foot's Metaethics*. Cambridge: Cambridge University Press.
- Harrison, Gerald K. 2017. The dubious moral supervenience thesis. In *Supervenience and normativity*, ed. by Bartosz Brozek, Antonino Rotolo, and Jerzy Stelmach. Cham: Springer International Publishing, 89–104.



- Hull, David. 1976. Are species really individuals? *Systematic Zoology* 25 (2), 174–191. <https://doi.org/10.2307/2412744>.
- Hull, David. 1989. *The metaphysics of evolution*. Albany, NY: State University of New York Press.
- Hull, David. 1998. Species, subspecies, and races. *Social Research* 65 (2), 351–367.
- Hursthouse, Rosalind. 1999. *On virtue ethics*. Oxford: Oxford University Press.
- Hursthouse, Rosalind. 2012. Philippa Ruth Foot 1920–2010. In *Biographical memoirs of fellows of the British Academy XI*, ed. by Ron Johnston. Oxford: Oxford University Press, 179–196.
- Hursthouse, Rosalind. 2018: The Grammar of Goodness in Foot's Ethical Naturalism. In: John Hacker-Wright (Hg.): Philippa Foot on Goodness and Virtue. Cham: Palgrave Macmillan, S. 25–46.
- Kim, Jaegwon. 1993. *Supervenience and mind: Selected philosophical essays*. New York, NY: Cambridge University Press.
- Korsgaard, Christine M. 2008. *The constitution of agency: Essays on practical reason and moral psychology*. Oxford: Oxford University Press.
- Korsgaard, Christine M. 2009. *Self-Constitution: Agency, identity, and integrity*. Oxford: Oxford University Press.
- Kripke, Saul. 1980. *Naming and necessity*. Cambridge, MA: Harvard University Press.
- LaPorte, Joseph. 2004. *Natural kinds and conceptual change*. Cambridge: Cambridge University Press.
- Lewis, Rick. 2003. Philippa Foot. *Philosophy Now* 41, 33–37.
- Li, Gaojie et al. 2019. Heterophylly: Phenotypic plasticity of leaf shape in aquatic and amphibious plants. *Plants* 8 (10), 1–13. <https://doi.org/10.3390/plants8100420>.
- Lott, Micah. 2012a. Have elephant seals refuted Aristotle? Nature, function, and moral goodness. *Journal of Moral Philosophy* 9 (3), 353–375. <https://doi.org/10.1163/174552412X625727>.
- Lott, Micah. 2012b. Moral virtue as knowledge of human form. *Social Theory and Practice* 38 (3), 407–431. <https://doi.org/10.5840/soctheorpract201238323>.
- Mayr, Ernst. 1982. Of what use are subspecies? *The Auk* 99 (3), 593–595. <https://doi.org/10.1093/auk/99.3.593a>.
- McLaughlin, Brian P. 2006. Supervenience. In *Encyclopedia of cognitive science*, ed. by Lynn Nadel. Chichester: John Wiley & Sons, Ltd, 1–13. <https://doi.org/10.1002/0470018860.s00114>.
- McLaughlin, Brian P. and Karen Bennett. 2021. Supervenience. In *The Stanford Encyclopedia of Philosophy*, ed. by Edward N. Zalta. Summer 2021 Edition.
- Merriam, Garrett (2009): Rehabilitating Aristotle: A Virtue Ethics Approach to Disability and Human Flourishing. In: Christopher Ralston und Justin Ho (Hg.): Philosophical Reflections on Disability. Dordrecht (u.a.): Springer, S. 133–151. <https://plato.stanford.edu/archives/sum2021/entries/supervenience/>.
- Moosavi, Parisa (2017): On the Relevance of Evolutionary Biology to Ethical Naturalism. In: Gary Keogh (Hg.): The Ethics of Nature and the Nature of Ethics. Lanham, MD: Lexington Books, S. 37–51.
- Moosavi, Parisa (2018): Neo-Aristotelian Naturalism and the Evolutionary Objection: Rethinking the Relevance of Empirical Science. In: John Hacker-Wright (Hg.): Philippa Foot on Goodness and Virtue. Cham: Palgrave Macmillan, S. 277–307.
- Moosavi, Parisa (2020): Is the Neo-Aristotelian Concept of Organism Presupposed in Biology? In: Martin Hähnel (Hg.): Aristotelian Naturalism: A Research Companion. Cham: Springer International Publishing, S. 329–342.
- Moosavi, Parisa (2022a): Natural goodness without natural history. In: Philosophy and Phenomenological Research 104 (1), S. 78–100. <https://doi.org/10.1111/phpr.12751>.
- Moosavi, Parisa (2022b): Neo-Aristotelian Naturalism as Ethical Naturalism. In: Journal of Moral Philosophy 19 (4), S. 335–360. <https://doi.org/10.1163/17455243-20223474>.
- Putnam, Hilary. 1997. The meaning of 'meaning'. In *Mind, language and reality*, ed. by Hilary Putnam. Cambridge: Cambridge University Press, 215–271.
- Runge, Richard Friedrich (2023): *Eine kritische Theorie der Tugendethik*. Frankfurt (u. a.): Campus.
- Settegast, Sascha. 2020. Good reasons and natural ends: Rosalind Hursthouse's hermeneutical naturalism. In *Aristotelian naturalism: A research companion*, ed. by Martin Hähnel. Cham: Springer International Publishing, 195–207.
- Smith, Michael. 1994. *The moral problem*. Malden, MA: Blackwell.
- Teller, Paul. 2009. Supervenience. In *A companion to metaphysics*, ed. by Jaegwon Kim, Ernest Sosa, and Gary S. Rosenkrantz. Malden, MA: Wiley-Blackwell, 589–591 (2nd edition).
- Thompson, Michael. 1995. The representation of life. In *Virtues and reasons: Philippa Foot and moral theory: Essays in honour of Philippa Foot*, ed. by Rosalind Hursthouse, Gavin Lawrence, and Warren Quinn. Oxford: Clarendon Press, 247–296.



- Thompson, Michael. 2004a. Apprehending human form. In *Modern moral philosophy*, ed. by Anthony O'Hear. Cambridge: Cambridge University Press, 47–74.
- Thompson, Michael. 2008. *Life and action: Elementary structures of practice and practical thought*. Cambridge, MA: Harvard University Press.
- Thompson, Michael. 2011. Anscombe's *Intention* and practical knowledge. In *Essays on Anscombe's Intention*, ed. by Anton Ford, Jennifer Hornsby, and Frederick Stoutland. Cambridge, MA: Harvard University Press, 198–210.
- Thompson, Michael. 2013. Forms of nature: 'First', 'second', 'living', 'rational' and 'phronetic'. In *Freiheit: Stuttgarter Hegel-Kongress 2011*, ed. by Gunnar Hindrichs and Axel Honneth. Frankfurt am Main: Klostermann, 701–735.
- Thompson, Michael. 2004b. What is it to wrong someone? A puzzle about justice. In *Reason and value: Themes from the moral philosophy of Joseph Raz*, ed. by R. Jay Wallace et al. Oxford: Clarendon Press, 333–384.
- Voorhoeve, Alex. 2003. The grammar of goodness: An interview with Philippa Foot. *Harvard Review of Philosophy* 11, 32–44.
- Witt, Charlotte. 2011. *The metaphysics of gender*. New York, NY: Oxford University Press.

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