

Aquinas on Definition and Essence

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ABSTRACT

The thesis presents a systematic investigation into Thomas Aquinas's metaphysical essentialism by focusing on his interpretation of Aristotle's *Metaphysics Z*. The investigation is centered on Aquinas's interpretation of the 'notion of the 'logical mode' that opens Aristotle's treatment of essence in Z 4. While much of the scholarly tradition has interpreted Aquinas's *modus logicus* as either preliminary or dialectical in nature, my work argues that Aquinas method is demonstrative and properly applied to the metaphysical field: it employs logical intentions as valid starting points for metaphysical conclusions.

Chapter 1 provides a conceptual and textual foundation for the *modus logicus*, arguing against its reduction to dialectics and showing its legitimacy as a metaphysical method.

Chapter 2 examines Aquinas's treatment of essence in terms of *per se* predications and real definitions in his *Commentary* on Z 4, identifying a set of logical and definitional criteria labelled under *the Predicative Simplicity Criterion* (PSC). These criteria establish the conditions for something X to be the essence of Y. Eventually, the treatment of Aquinas's *Commentary* on Z 4 is integrated with a passage from *Summa Contra Gentiles* II, 58, where Aquinas argues in *modus logicus* from the reality of *per se₁* predications to the reality of the ontological unity of the essence. I call it the *Predicative Simplicity Argument* (PSA).

Chapter 3 investigates the problem of the hylomorphic composition of sensible essences in Aquinas's interpretation of Z 10-11, showing how Aquinas applies his *modus logicus* to prove the reality of prime matter and the necessarily enmattered character of a sensible essence. This leads to a metaphysical account of essence as a unified and simple principle, despite its composite nature. Aquinas's perspective on Z 10-11 is also critically compared with some contemporary Aristotelian interpreters.

Chapter 4 analyzes Aquinas's *Commentary* on Z 12 and his solution to the problem of the unity of a *genus+differentia* definition. I show how the logical problem of the unity of the definition can be solved by showing its fundamental relation with the unity of the hylomorphic essence. I call Aquinas's model of the unity of the definition UTM (*Unitarian Transformative Model*). As a matter of fact, Aquinas's elaboration has a striking similarity with the discussions in contemporary ethics and philosophy of mind on additive vs transformative accounts of human rationality.

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Introduction

1. General Topic

The topic of this work is a reconstruction and presentation of the problem of definition and essence in a medieval theologian, namely Thomas Aquinas (1225-1274). I intend to undertake an investigation of Aquinas's essentialism, with the aim of elucidating the key characters of this model of thinking and the key role that his theory of definition and essence plays in his general metaphysical thought. In addition to the exegetical reconstruction, my goal is to assess the theoretical value of Aquinas's essentialism.

2. Context and motivation

In the last forty years, metaphysical essentialism has had a sort of renaissance in analytic philosophy, initially through the semantical approach of the works of authors such as Saul Kripke, Hilary Putnam and Alvin Plantinga.¹ The semantics of possible worlds have reintroduced a notion of essence characterized in a strongly 'modalist' fashion: among these authors, an essence has been generally identified with the set of necessary attributes of a thing.

This modal approach to essentialism, has been put in question particularly by Kit Fine. In a groundbreaking article Fine has showed the problematic consequences of identifying the essence of an object in terms of its necessary properties.² The famous example used by Fine concerns the relation between Socrates and its property as member of the singleton 'Socrates'. Despite being a member of the singleton 'Socrates' results to be necessary property of Socrates, it is also true that this property has nothing to do with *what* Socrates is. In criticizing the identification of the essence of an object with its necessary properties, Fine has also reintroduced a more genuine *Aristotelian* approach to the question of essence as what accounts for *what it is to be a certain thing*. Given the problematic nature of the identification of an

¹ Plantinga (1974); Putnam (1975); Kripke (1980)

² Fine (1994)

essence with its necessary properties, Fine has advocated for an abandonment of the modal approach and a return to an Aristotelian approach to the question of essence. This approach would be qualified as Aristotelian since it starts from the problem of a *real definition*. A real definition of an object would be the complete account that expresses the essential properties of the object in question. The Aristotelian approach, based on real definition, would have the advantage, in Fine's perspective, to allow to ground modality on essence, and not the other way around. Fine's proposal has been considered appealing by a growing number of philosophers, who have followed his suggestion to a return to a traditional form of Aristotelian essentialism.³ Nevertheless, despite the significant theoretical results of the general return of Aristotelian essentialism in contemporary metaphysics, the use of the notion of a real definition has remained, overall, quite underdeveloped.

At the same time, as Mauro Mariani and Gabriele Galluzzo have pointed out, the significant return of Aristotelian essentialism in contemporary metaphysics has certainly resulted in the exegetical flourish of studies concerning Aristotle's *Metaphysics Z*, the book dedicated to the treatment of substance.⁴ Among the central themes that have been the object of the interpretative debate, there is precisely the question of definition and essence, introduced by Aristotle in the section from Z 4 to 6 and further developed in the section from Z 10 to 12. Recently, the debates around Aristotle's theory of definition in *Met. Z* have been also integrated with a growing number of studies concerning the theory of definition of Aristotle's *Posterior Analytics*.⁵

Contextually, the Medieval reception of Aristotle's *Metaphysics Z* has been the object of important studies, among them Aquinas's reception of the doctrine of definition and essence in his *Commentary on Metaphysics Z* has been particularly explored.⁶

My work intends to build on this context: while the contemporary articulation of the notion of real definition in metaphysics has remained underdeveloped, yet the exegetical work that has been done concerning this notion in Aquinas's *Commentary on Metaphysics Z* allows to develop a systematic approach to the question of Aquinas's essentialism as based on the

³ Ellis (2001); Lowe (2006); Oderberg (2007); Takho (ed.) (2012); Feser (ed.) (2013); Greco J, Groff R.(eds.) (2013); Simpson, Koons, Teh (eds.) (2017); Simpson, Koons, Orr (eds.) (2021), Austin (2021).

⁴ Galluzzo, Mariani (2006), p.2.

⁵ Cf. Frede-Patzig (1988); Gill (1989); Witt (1989); Loux (1991); Wedin (2000); Charles (2000); Burnyeat (2001); Galluzzo-Mariani (2006); Charles (2010); Peramatizs (2011); Bronstein (2016).

⁶ Galluzzo (2007); Galluzzo (2013); Galluzzo, Amerini (ed.) (2014)

notion of real definition. In this way, my thesis aims to represent a genuine contribution to the contemporary Aristotelian and metaphysical debate concerning definition and essence.

3. Methodology

Relying on previous important exegetical work, particularly of Gabriele Galluzzo, I will base my investigation on a fine-grained reconstruction and textual analysis of significant passages of Aquinas's *Commentary on Met. Z*. Throughout my analysis, I will consider some important passages from the *Commentary on Z* 3, 4, 5, 10, 11 and 12. The analysis of these passages will be integrated with other parts of Aquinas's production: in particular I will take into account some passages drawn from *De Ente et Essentia* (1254-1256 c.), *Summa Contra Gentiles* (1259-1265 c.) *Summa Theologiae* (1265-1273 c.) *Super Boethium De Trinitate* (1257-1259 c.) and the *Commentary on the Posterior Analytics* (1270-1272 c.). The reason for this choice, lies precisely on the systematic and not exclusive exegetical nature of my investigation: complementing Aquinas's account of definition and essence in his *Commentary on Z* with other insights coming from other parts of his works, will allow me to develop a more complete picture of his essentialism from a theoretical point of view.

The thesis will be structured in four chapters that will follow the progression of Aquinas's *Commentary*. Chapter 1 will focus on an initial passage of his *Commentary on Z* 4. Chapter 2 will investigate Aquinas's interpretation of Z 4 and 5. Chapter 3 will be dedicated to the analysis his reading Z 10 and 11. Finally, Chapter 4 will look at Aquinas's *Commentary on Z* 12.

4. Argument and results

The central argument on which my approach to Aquinas's treatment of definition and essence in his *Commentary on Z* is based, concerns the interpretation of the nature of what Aquinas calls 'logical mode' (*modus logicus*).

Aristotle begins *Metaphysics Z* 4 declaring that he will be treating essence "in a logical mode" (λογικῶς). This statement has been interpreted variously. Sir David Ross sees it as limited to linguistic preliminaries that are merely introductory to the real metaphysical

investigation.⁷ Myles Burnyeat, conversely, has claimed that the logical expands to various sections of the entire book Z.⁸ Burnyeat identifies a twofold meaning in λογικῶς: a. it uses logical tools as principles of an enquiry towards metaphysical reality; b. it borrows logical tools from the the *Organon* (especially *Posterior Analytics* and the *Categories*). This interpretation of the meaning of λογικῶς, sets the way in which Burnyeat organizes the division in section of Aristotle's enquiry in Z: the logical sections will be characterized by this abstract and general approach that makes use of logical tools. When proper metaphysical principles are introduced, i.e. matter and form, Aristotle is then moving from a logical inquiry to a proper metaphysical one.

In my interpretation Aquinas's conception of this logical method towards essence is significantly different. In developing my view, I rely on the work of Gregory Doolan, which has recently given a general account of Aquinas's use of this logical methodology.⁹

From the analysis of passages from Aquinas's *Commentary on Γ, Z 4* and *Sup. Boet. De Tr.*, I give a definition of Aquinas's *modus logicus*:

Modus Logicus =def a method of reasoning that starts from the analysis of logical intentions and uses them as proper principles of demonstrative conclusions. This method contrasts with the method of dialectics. This method cannot be properly applied to any of the particular branches of science but can be properly applied and used only in logic and metaphysics.

Aquinas applies this *modus logicus* throughout the entirety of the enquiry towards essence of Z; differently from Burnyeat's interpretation of Aristotle, the introduction of the hylomorphic metaphysical principles, does not interrupt this logical approach. Conversely matter and form are introduced through an analysis that always starts from logical tools and are therefore integrated in it.

But how does Aquinas use logical intentions to draw proper metaphysical conclusions, given the that the former are concerned with beings of reason (*entia rationis*), whilst metaphysics is concerned with real being (*ens reale*)?

⁷ Ross (1924), II, p. 168

⁸ Burnyeat (2001), pp. 19-26.

⁹ Cf. Doolan (2019); (forthcoming).

As Doolan has showed, the answer can be found in a passage from Aquinas's *Commentary* on Γ 2: there Aquinas states that logical intentions, such as genus and species, are *per se* accidents of real being, that is to say, properties of real being.¹⁰ How is it possible for beings of *reason* to be properties of *real* being?

Genus and species, even if they exist as logical intentions, are nevertheless grounded in real being. In two different texts, from *De Potentia* and his *Commentary* on the *Sentences*, Aquinas recognizes this feature of genus and species. Even if these logical intentions do not have a direct reference in reality, as is the case with first intentions such as 'man', genus and species are, nonetheless, grounded in the real world.

In including genus and species among *per se* accidents of being, Aquinas wants to suggest that the way through which second intentions are understood does not exclusively depend on the operation of the intellect that understands them but also has an ultimate foundation in *real being*. This causal connection between logical realities and real being, is at the basis of Aquinas's application of the *modus logicus* in his *Commentary* on *Z*. If logical realities are causally grounded in ontological realities, it is possible to reason in a demonstrative way from effects (logical intentions) to the cause (essence). Using logical tools such as definitions and predications as starting points, Aquinas is able to formulate proper *quia* metaphysical demonstrations. My interpretation of Aquinas's *Commentary* on *Z*, will be, therefore, based on this interpretation of his *modus logicus*.

Having set the terms of Aquinas's *modus logicus* in Chapter 1, throughout Chapters 2, 3 and 4 I will identify the application of this method in the development of Aquinas' treatment of *Z*. In this way, I will also show the coherence and fruitfulness of Aquinas's logical-definitional approach for developing a systematic essentialist metaphysics.

We can briefly look at the results of the application of Aquinas's *modus logicus*:

In Chapter 2 I will analyze Aquinas's approach to the problem of essence in *Met. Z* 4. Aristotle focused the problem of essence on two questions: i) what is essence? ii) what things have essence? I will show how Aquinas's answer to the first question is centred on the logical approach of identifying essence in terms of *per se*₁ predications. I will integrate Aquinas's approach with some texts from his *Commentary* on *Posterior Analytics*. Using logical and definitional principles I will show six criteria that together set the sufficient

¹⁰ Doolan (2019), p. 687; (forthcoming), p. 12.

conditions for some X to be the essence of Y. These logical- definitional principles will be summed up under what I will call the *Predicative Simplicity Criterion* (PSC). Having set these conditions, I will eventually show a proper application of Aquinas's *modus logicus*, integrating his *Commentary on Z 4* with an argument from *S.C.G.* II, 58. The argument will be a proper *quia* metaphysical demonstration: starting from the logical reality of *per se* predications, I will show how Aquinas argues for the unity of essence and for its role of ontological unifier of the attributes of things. I called this argument the *Predicative Simplicity Argument* (PSA). Aquinas's PSA will be also critically compared with an argument for the reality of the essence formulated by the contemporary philosopher David Oderberg.¹¹ The answer to the second question (what things have essence?) will be also addressed through the *modus logicus*. According to Aquinas's first exclusive reading, only substances can be said to have an essence. I will shown how this answer is reached through definitional and predicative terms, with Aquinas's integration of the *Predicative Simplicity Criterion* (PSC) with what I have called the *Subjecthood Criterion* (SC). I will point out the theoretical continuity of this approach with the one developed by Aquinas in his derivation of the categories of being, reached, in *modus logicus* as well, through the analysis of denominative predications.

In Chapter 3 I will introduce the problem of the ontological parts of a sensible essence: matter and form. The crucial question we will address is that of the unity of sensible essence as a hylomorphic compound. Given that, as we have established in Chapter 2, the ontological feature of an essence is to be *unified* and *simple*, how is it possible to maintain this feature of the essence and at the same time its composite, hylomorphic reality? Through the analysis of Aquinas's interpretation of Aristotle's *Met.* Z 3, 10 and 11 I will propose an answer to this question. In particular I will show how Aquinas's answer to this question involves the application of his *modus logicus*, expounding how he formulates a logical argument for the reality of prime matter, through the analysis of denominative predications. The peculiar status of prime matter and its immediate unity with the substantial form is what guarantees the unity of a sensible essence and its relative simplicity (as non-composed of two different natures). Eventually, through the analysis of Z 10-11 I will show how Aquinas argues, against the different interpretation of the Arabic philosopher Averroes, for the enmattered character of the

¹¹ Oderberg (2011).

essence of sensible substances. Also, this argument is developed by Aquinas through his *modus logicus*, arguing from definitional and predicational premises to draw a conclusion concerning the ontological status of a sensible essence. Aquinas's perspective on Z 10-11 will be critically compared with some interpretative options among contemporary Aristotelian scholars, trying to show the points of similarities and differences.

In Chapter 4 I will complete the investigation by analyzing the logical problem of the unity of the definition. How a *genus+ differentia* definition can be said to form a unity? The solution will lie once again on the idea, implied by the *modus logicus* itself, of a fundamental causal relation between the logical reality of the definition and the ontological reality of the essence. The problem of the unity of the definition, can be solved by showing how the articulation of its logical structure fundamentally reflects the unity of the hylomorphic essence. Given that, as established in Chapter 3, for Aquinas a hylomorphic essence possesses a structure that is both composed *and* one and simple, by analogy the structure of a *genus+ differentia* definition is both a unity and a composition of two different intelligible dimensions. I will call Aquinas's model of the unity of the definition *Unitarian Transformative Model* (UTM). This will be motivated by the fact that Aquinas's account presents a striking similarity with some proposals of the contemporary debates in ethics and philosophy of mind on additive vs transformative accounts of human rationality. In the last section, I will also show how Aquinas's interpretation of the unity of the definition can help to respond to some contemporary criticisms of the doctrine of *genus+differentia*.

Chapter 1

The Logical Way to Essence

1. Introduction

Aristotle's *Metaphysics Z* deals with the notions of substance and essence. Aquinas's *Commentary on Met. Z* (c. 1270-72) is not a simple exegesis of the text, but together with a textual interpretation also contains Aquinas's proper theoretical elaboration of Aristotle's ideas. An investigation of Aquinas's *Commentary on Met. Z*, therefore, will allow us to reconstruct his general approach to the metaphysics of essence.

In this chapter, I will start with a brief overview of the issue of the 'logical' method in Aristotle's *Met. Z* 4 (Section 2).

Following Aristotle in *Met. Z* 4, Aquinas develops a 'logical' approach to the problem of essence. Drawing from some passages of his *Commentary on the Metaphysics*, I will argue that Aquinas uses a proper logical method in metaphysics, which is clearly distinct from dialectics (Section 3). From Aquinas's perspective, the use of this logical method in metaphysics is legitimate because of the affinity that exists between logic and metaphysics.

Relying on the interpretation of Gregory Doolan, I will then show how Aquinas's logical method is based on his account of the relationship between the logical reality of secondary intentions and the ontological reality of essence (Section 4). According to this account, the reality of secondary intentions is grounded in the reality of essence. Given this connection, therefore, it is legitimate to argue from some features of logical intentions to features of essence as reasoning from effect (logical intentions) to cause (essence). The logical method in metaphysics is therefore characterized by proper *quia* metaphysical demonstrations.

Clarifying the terms and establishing the nature of Aquinas's logical method is of fundamental importance, since this method constitutes the whole theoretical framework

in which he develops his metaphysical essentialism as is presented in his *Commentary* on *Met. Z*.

2. Aristotle's Logical Way in Z 4

At the beginning of *Metaphysics Z 4*, Aristotle declares his intention of starting the treatment of essence in a 'logical mode'. He writes: «and first let us say some things about it [the essence] in a logico-linguistic way (λογικῶς) »¹². This passage has given rise to a debate among Aristotelian scholars about the nature and the presence of this 'logical mode' in the opening passage of Z 4.¹³ What does Aristotle here mean by 'logical mode'? Sir David Ross, for example, thinks that Aristotle's 'logical mode' is to be interpreted simply as concerned with some "linguistic considerations" that are relative only to small sections of Z 4.¹⁴ These considerations are 'linguistic' as opposed to 'ontological', namely, to considerations about the reality of things. For this reason, linguistic considerations are strongly limited and only introductory to the proper metaphysical enquiry that Aristotle starts from Z 4 1030a27.

A very different interpretation has been given by Myles Burnyeat.¹⁵ Interestingly, Burnyeat thinks that the 'logical way' is not limited to Aristotle's treatment of the problem of essence in Z 4 but that it extends to chapters 5 and 6: these three chapters together form a unified treatment of essence developed in this 'logico-linguistic way'. Moreover, Burnyeat maintains that this logical methodology is not only found in these sections about essence from Z 4 to Z 6, but identifies its presence in other sections that cover the whole of the book Z. As a matter of fact, according to Burnyeat, all the four different candidates for the role of substance presented by Aristotle in Z 3 are investigated both in a logical way and in a metaphysical way.¹⁶ The logical treatment of essence in Z 4-6 has its respective metaphysical treatment in Z 10-11 where Aristotle introduces the notions of matter and form.

¹² Z 4, 1029b13, «καὶ πρῶτον εἶπωμεν ἓνια περὶ αὐτοῦ λογικῶς.» Trans. Reeve.

¹³ My brief overview of the debate is indebted to Galluzzo (2013), pp. 57-64.

¹⁴ Ross (1924), II, p. 168. Ross points out the semantic connection between λογικῶς and non-scientific modes of enquiry such as dialectic and sophistic, which suggests a context related to plausibility rather than truth.

¹⁵ Burnyeat (2001), pp. 19-26.

¹⁶ These four different candidates are essence, universal, genus, and subject.

At this point we can ask: what is Burnyeat's interpretation of the nature and exact meaning of Aristotle's logical methodology?

In Burnyeat's perspective, Aristotle's term λογικῶς in Z 4 has a twofold meaning:

1. A logical enquiry is an investigation into a certain domain that does not use the proper principles of the domain in question. In our case, a 'logical' investigation of essence will be an investigation into the metaphysical domain that does not make use of proper metaphysical principles. The metaphysical principles that Burnyeat has in mind here are the hylomorphic principles, i.e., matter and form. A logical treatment of essence, therefore, is one that abstracts from the proper principles of a sensible substance, i.e. matter and form.
2. This very general and abstract enquiry is logical also in a more specific sense: by λογικῶς, Aristotle is specifically referring to some logical tools and doctrines of the *Organon* (in particular *Categories* and *Posterior Analytics*), which he uses in the logical sections of *Metaphysics Z* as a starting point of the metaphysical treatment.

It is clear, therefore, that, appealing to this twofold meaning of λογικῶς, Burnyeat can interpret the structure of the entire book Z as articulated in distinct logical and metaphysical sections. For example, Z 4-6 is the logical section about essence: it is the logical section both because it is characterized by an abstract and general approach and because it borrows some logical tools from *Posterior Analytics* I, 4. By contrast, Z 10-12, which make use of the principles of matter and form, is the corresponding metaphysical section.

On Burnyeat's interpretation, in using the logical approach to a metaphysical problem, Aristotle is always led to an *aporia*, an unsolvable issue that necessarily requires that one moves from the abstract and general realm of logic to the use of proper metaphysical principles. In contrast with Ross's interpretation, Burnyeat's interpretation argues that the logical methodology cannot simply be limited to preliminary linguistic considerations that resemble a dialectical context but must use logical tools and doctrines as starting points of a proper metaphysical inquiry. Nevertheless, this logical

methodology is insufficient for a complete metaphysical investigation, which requires a shift to the use of proper metaphysical principles as starting points.

Burnyeat's interpretation of Aristotle's logical methodology in Z represents a very useful heuristic point of view for approaching Aquinas's own interpretation. As Gabriele Galluzzo has pointed out, Burnyeat's interpretation contains some significant points of similarities with those of some Medieval interpreters, Aquinas being one of them.¹⁷

3. Aquinas's *Modus Logicus*: a Method in Metaphysics

We can now approach Aquinas's own interpretation of Aristotle's logical approach to essence in Z 4 1029b13. The first peculiarity of Aquinas's interpretation to be noticed is that he considers book Z as logical 'all the way through'. Differently from Burnyeat's interpretation, Aquinas does not limit the presence of the logical methodology only to certain sections of the book. In his view, the logical method characterizes the totality of it. This is made clear by what Aquinas writes in his *Commentary*:

(T1) Having settled the issue about the order to be followed in treating of substances, the Philosopher now begins to settle the issue about sensible substances, as he had said he would; and this is divided into two parts. In the first part he settles the issue about the essence of sensible substances, by using logical and common arguments; and in the second, by considering the principles of sensible substances. He does this [the second] in Book VIII.¹⁸

Here Aquinas clearly illustrates what he takes to be the structure of Aristotle's discussion. With the start of Book Z, Aristotle begins his proper treatment of the issue of substances, and more particularly, of sensible substances. To do so, he divides the investigation into two parts: the first part uses the logical approach to the problem of the essence of substances, an approach that makes use of logical and common arguments.

¹⁷ Galluzzo (2013), p. 63. Among Medievals, the closest interpretation to Burnyeat's one is probably that of Averroes, especially for his explicit connection of the logical approach of Z with fundamental doctrines of the *Categories* and *Posterior Analytics*. For Averroes's logical approach, see Di Giovanni (2011).

¹⁸ *Exp. Met.*, VII, l. 3, n.1306: «Postquam determinavit Philosophus ordinem procedendi circa substantias, hic incipit determinare de substantiis sensibilibus, sicut praedixerat; et dividitur in duas partes. In prima determinat de essentia substantiarum sensibilium per rationes logicas et communes. In secunda per principia substantiarum sensibilium in octavo libro.». Translations are from John P. Rowan, with modifications.

The second part engages directly with the proper metaphysical principles of sensible substances, namely, matter and form. This second part, Aquinas points out, only starts at the beginning of Book H. This last consideration is of pivotal interest for our point here: if the investigation that uses as starting points the proper metaphysical principles of matter and form only begins in book H, this means that the whole of book Z is characterized by the logical approach. Of course, Aquinas does not intend to say that only book H is properly about metaphysics, whereas book Z is about logic. This is made clear in another passage of his *Commentary* on Z where Aquinas clarifies that the whole discussion of Z is directed towards the investigations of the realities that pertain to the domain of metaphysics.¹⁹ Therefore, the logical methodology must be at the service of an investigation that deals with metaphysical realities. Moreover, Aquinas does not seem to think that the involvement of the metaphysical principles of matter and form distinguishes a metaphysical investigation from a logical one. This a relevant difference from Burnyeat's interpretation, which maintains that the logical sections of Z are limited to those parts that do not mention the hylomorphic principles.

In (T1) the nature of this logical approach is briefly characterized by Aquinas as concerning 'logical and common arguments', which seems to indicate a level of analysis that starts in a general and abstract mode.

A more precise characterization is given by Aquinas shortly after in his *Commentary*:

(T2) He says, first then, that it is necessary to speak of sensible substances and to show what their essence is. Therefore, we should first discuss logically about the essence; for this science [metaphysics] has a certain affinity with logic, as was stated above, because they both are common. Hence the logical method is proper to this science, and it is fitting that [Aristotle] begins with the logical method. But he says that he is going to treat of essence in a way that is chiefly logical inasmuch as [in doing so] he investigates what essence is from the mode of predication; for this [mode] belongs properly to logic.²⁰

¹⁹ *Exp. Met.*, VII, l.13, nn.1575–1576.

²⁰ *Exp. Met.*, VII, l.3, n.1308: «Dicit ergo primo, quod de substantiis sensibilibus primo dicendum est, et ostendendum est in eis quod quid erat esse: ideo primum dicemus de eo quod est quod quid erat esse quaedam logice. Sicut enim supra dictum est, haec scientia habet quandam affinitatem cum logica propter utriusque communitatem. Et ideo modus logicus huic scientiae proprius est, et ab eo convenienter incipit. Magis autem logice dicit se de eo quod quid est dicturum, in quantum investigat quid sit quod quid erat esse ex modo praedicandi. Hoc enim ad logicum proprie pertinet.»

According to Aquinas, Aristotle wants to investigate the problem of the essence of a sensible substance ‘logically’ (*logice*). We can draw some fundamental features of Aquinas’s characterization of this logical method (*modus logicus*): it is a specific mode of procedure in the metaphysical investigation. This procedure is characterized by the analysis of modes of predication, which properly pertains to logic. The method is logical not because it treats metaphysical realities as logical, but because it uses the tools and the procedures of logic, more specifically predications, as a starting points for approaching the study of metaphysical reality of the essence.

This marks more clearly the difference between Aquinas’s interpretation and Burnyeat’s. For Aquinas, book Z can be called logical ‘all the way through’ since its logical character has nothing to do with the absence of reference to metaphysical principles like matter and form. What characterizes it as ‘logical’ has only to do with its proper starting point, which is the logical and linguistic point of view of predications. From this starting point, one can arrive at proper metaphysical conclusions that involve principles such as matter and form. There is no need, therefore, to divide book Z in distinct logical and metaphysical sections on the basis of the absence or presence of hylomorphic principles: claims about these principles can be obtained as the conclusions of argumentations that start from the analysis of predication.

But how does Aquinas justify the use of this *modus logicus* in the domain of a metaphysical investigation? How can this methodology be proper to both the sciences of logic and metaphysics? The first part of text (T2) makes clear that this is due to a fundamental affinity (*affinitas*) between logic and metaphysics: the two sciences are both characterized as being ‘common’ (*propter utriusque communitatem*). On this point about the affinity Aquinas refers to a passage from *Met.* Γ 2.²¹ Previously in his *Commentary* on the *Metaphysics* Aquinas has clarified that the proper object of investigation of metaphysics is being *qua* being, that is, being considered insofar as being and not insofar as a particular ‘portion’ or ‘kind’ of being.²² For example, physics is a science that studies being only *qua* subject to change and mathematics studies being only *qua* quantities. Therefore, characterizing the subject-matter of metaphysics as being *qua* being means

²¹ *Exp. Met.*, IV, l.4, n.573.

²² *Exp. Met.*, IV, l. 1, n. 530; *Exp. Met.*, IV, l. 1, n. 559. See also *In. De. Trin.*, q. 6, a. 1 co.

that metaphysics is concerned with being *in general*.²³ The point about affinity that Aquinas is making in (T2) concerns the subject matter of the two sciences. The subject matters of metaphysics and logic are both extended to the totality of being *qua* being. This is why logic and metaphysics are common.

But if logic and metaphysics share this common extension of the subject matter, namely the totality of being, what distinguishes them?

Aquinas replies to this question in a passage of his *Commentary* on Γ :

(T3) There are two kinds of beings: beings of reason and real beings. The expression *being of reason* is applied properly to those notions which reason derives from the objects it considers, for example, the notions of genus, species and the like, which are not found in reality but are a natural result of the consideration of reason. And this kind of being, i.e., being of reason, constitutes the proper subject of logic. But intellectual conceptions of this kind are equal in extension to real beings, because all real beings fall under the consideration of reason. Hence the subject of logic extends to all things to which the expression *real being* is applied. His conclusion is, then, that the subject of logic is equal in extension to the subject of philosophy, which is real being.²⁴

The distinction between the proper subject matter of metaphysics and that of logic corresponds to the distinction between two different kinds of *being (ens)*: real being (*ens naturae*) and being of reason (*ens rationis*).

Beings of reason are notions that reason derives as result of intellectual consideration. The examples that Aquinas uses to illustrate this kind of being are the notions of genus and species. Genus and species are logical intentions, notions that the

²³ On Aristotle's articulation of the notion of being *qua* being, see Shields (2012). On Aquinas's own elaboration, especially in relation to the problem of the proper subject-matter of metaphysics, see Wippel (2000), pp. 11-23; Reese (2022), pp. 89-144.

²⁴ *Exp. Met.*, IV, l.4, n.574: «Et hoc ideo est, quia ens est duplex: ens scilicet rationis et ens naturae. Ens autem rationis dicitur proprie de illis intentionibus, quas ratio adinvenit in rebus consideratis; sicut intentio generis, speciei et similium, quae quidem non inveniuntur in rerum natura, sed considerationem rationis consequuntur. Et huiusmodi, scilicet ens rationis, est proprie subiectum logicae. Huiusmodi autem intentiones intelligibiles, entibus naturae aequiparantur, eo quod omnia entia naturae sub consideratione rationis cadunt. Et ideo subiectum logicae ad omnia se extendit, de quibus ens naturae praedicatur. Unde concludit, quod subiectum logicae aequiparatur subiecto philosophiae, quod est ens naturae.»

human reason considers as universal or as object of *reason*.²⁵ In another way, genus and species are also described as concepts of concepts, and not concepts of real things. In this sense, they are called *second* intentions (e.g., ‘species’) as opposed to *first* intentions (e.g., ‘man’), which are concepts that reason forms about real things. Logic studies precisely these kinds of second intention; they are beings of reason (*entia rationis*) because, even if derived from real things, they do not exist in reality but only as concepts considered by reason.²⁶ On the contrary, real being (*ens naturae*) applies to the totality of what is found in reality and is studied by metaphysics.

Having clarified the different natures of real being and of being of reason, Aquinas underlines that they are, nonetheless, equal in extension: this is due to the fact that it is the totality of real being that falls under the consideration of the logician who studies second intentions.²⁷

In this way both the affinity and the difference between logic and metaphysics is clarified: both disciplines are common in the sense that they are both concerned with the totality of being, but metaphysics considers the totality of being as *real*, that is, as it exists in nature, while logic considers the totality of being not as *real* but insofar as it is *understood*.

Nevertheless, it is not yet clear how, in virtue of this affinity, one could proceed in a metaphysical enquiry through a logical mode. How is the logical analysis of second intentions applied to metaphysics? If logic is fundamentally concerned with second intentions, that is, with the way we *think* about things and not with how things *are* in reality, how is it possible to approach the reality of things by taking the tools and procedures of logic as a starting point?

²⁵ See *S.T.*, I, q. 16, a. 4, ad 2; *Exp. Met.*, VII, l. 13, n. 1570; *In. Sent.* I, d. 23, q. 1, art. 3.; *De. Pot.*, q.7, a. 9.

²⁶ On Aquinas’s distinction between first and second intentions, there is a vast secondary literature. Among many studies one can see Black (1999); Galluzzo (2010); Amerini (2013), (2022); Klima (2017); Cory (2020).

²⁷ In (T3) Aquinas clearly ascribes to Aristotle and supports the idea of the equality in extension between logic and metaphysics. Nevertheless, it must be pointed out that with the equality in extension Aquinas does not mean that to every logical reality (syllogism, propositions etc.) there corresponds a real being. Only the other way around: to every real being there corresponds a being of reason. In this sense, it would be more precise to say not that logic and metaphysics have the same extension but only that the subject of logic includes the totality of being considered by metaphysics.

The majority of Aquinas's interpreters solve this problem by identifying Aquinas's logical method in his *Commentary* on Z 4 with dialectics.²⁸ The logical approach is to be considered only as a preliminary and dialectical investigation used in metaphysics, rather than a method proper to metaphysics that is capable of arriving at final conclusions concerning real being.

This interpretative option seems to be confirmed by Aquinas's explicit association of the *modus logicus* with dialectics. As a matter of fact, the branch of logic that deals with common intentions is identified by Aquinas precisely with dialectics.²⁹ The dialectician reasons about real being in general from the consideration of the logical intentions that are common to real being. For example, the dialectician can draw a conclusion about the necessity for hate and love to belong to the same power of the soul on the basis of the logical principle that contraries belong to the same thing.³⁰ Therefore, a conclusion concerning real being, in this case about a power of the soul, is reached through the use of a principle that pertains to the domain of logic.

The association of Aquinas's logical method with dialectics, therefore, seems to allow a coherent reading of the problem of its use in a metaphysical investigation. A logical approach in metaphysics would be possible by virtue of the affinity between the domain of logic and the domain of metaphysics. Nevertheless, the method would remain, properly speaking, dialectical and not metaphysical.

In a passage of his *Commentary* on Γ , Aquinas clearly illustrates the difference between the dialectician and the metaphysician: the metaphysician can draw proper demonstrative conclusions about real being, because he argues from the real principles of being. On the contrary, the dialectician can draw conclusions about real being that only have a provisional and probable value, because he does not reason from the proper principles of real being, but only from extrinsic principles, which are based on the second intentions of logic as common to real being.³¹ Every conclusion about real being reached

²⁸ Cf. Schmidt (1966); McInerney (1971); Doig (1972); te Velde (1996); Dewan (2006).

²⁹ *In Phys.*, VII, l. 8, n. 1.

³⁰ *In Post An.*, I, l. 20, n.5: «Sed hoc dialectica facit, quia ex communibus intentionibus procedit arguendo dialecticus ad ea quae sunt aliarum scientiarum, sive sint propria sive communia, maxime tamen ad communia. Sicut argumentatur quod odium est in concupiscibili, in qua est amor, ex hoc quod contraria sunt circa idem.»

³¹ *Exp. Met.*, IV, l. 4, n. 574.

through dialectics, as in the example concerning the powers of the soul, will not have a proper demonstrative value.

The identification of Aquinas's logical method with dialectics would lead to a characterization of the method that is, after all, not totally different from Burnyeat's interpretation of Aristotle. In both cases, the logical approach to essence will turn out to be only a provisional and fundamentally insufficient enquiry into real being. Proper metaphysical conclusions will only be reached when the enquiry will use proper metaphysical principles, such as matter and form, as starting points.³² A crucial difference between Burnyeat's and Aquinas's interpretation of Z would still remain. While for the former the proper metaphysical investigation already starts in certain sections of book Z, for Aquinas this only happens in book H.

The identification of Aquinas's *modus logicus* in Z 4 with dialectics has many points of strength, and it seems suggested by some of Aquinas's texts. Nevertheless, I believe it presents some significant weaknesses.

First of all, if the logical method to investigate essence is to be identified simply with a dialectical method, it is not clear why Aquinas should say that, as we have seen in (T2), "the logical method is proper to this science [metaphysics]" (*huic scientiae proprius est*).³³ Even if dialectics can be used in metaphysics, it cannot be in any way proper to it because the dialectical method does not allow proper metaphysical demonstrations. Aquinas's *modus logicus* in Z 4, however, seems to be *properly* applied to the metaphysical investigation. For this reason, the identification of the *modus logicus* in Z with dialectics seems to be unsuitable.³⁴

Moreover, there is no evidence that Aquinas thinks that the investigation of book Z is merely provisional. For at the beginning of Book H, he writes:

(T4) Having dealt with substance by means of the logical method in Book VII, i.e., by examining the definition and its parts and other things of this kind which are considered from the viewpoint of logic, the Philosopher now intends in Book VIII to deal with sensible substances through their

³² This is the interpretation of Aquinas's *Commentary on Met. Z* given by Dewan (2006), pp. 143-161.

³³ *Exp. Met.*, VII, l.3, n.1308.

³⁴ It can also be observed that if Aquinas interprets the whole discussion of book Z as conducted through the *modus logicus*, as I think he undoubtedly does, it is hard to imagine that he attributes a merely dialectical and provisional nature to the entirety of a central and fundamental book of the *Metaphysics*.

proper principles, by applying to those substances the things that were investigated above by means of the logical method.³⁵

In this passage, Aquinas summarizes the whole discussion of Book Z and puts it in connection with the treatment that is about to start in book H. Book Z deals with the logical problem of the parts of definition and leads to conclusions with regard to the ontology of matter and form. These conclusions must now be applied to an analysis that starts directly from these hylomorphic principles.³⁶ There is no trace here of a conception for which the conclusions of book Z are only provisional or probable. On the contrary, the logical method has produced significant results that book H will use. The logical approach of book Z and the direct hylomorphic analysis of book H stand in a complementary relationship, but Aquinas in no way suggests any kind of epistemic inadequacy in the *modus logicus* of Z, as suggested instead by Lawrence Dewan.³⁷

I do not find any evidence in Aquinas's account of the idea that the logical approach is fundamentally inadequate and does not give access to the real quiddity. It is true, as Dewan underlines, that Aquinas thinks that the logical approach has to be completed with a more direct metaphysical approach, but this does not make the results of the logical approach less significant. On the contrary, the logical approach in Z already anticipates the introduction of the metaphysical principles of matter and form that will receive a fuller investigation in book H. One can see, for example, how the logical approach of Z 10 and 11 is already integrated by Aquinas with the hylomorphic analysis of substances.³⁸

Given all this, I think that the identification of the *modus logicus* in the *Commentary* on book Z with dialectics must be rejected. Nonetheless, the problem of how to account for a proper *metaphysical* application of the *modus logicus* still stands.

³⁵ *Exp. Met.*, VIII, l.1, n. 1681: «Postquam determinavit Philosophus in septimo de substantia modo logico, considerando scilicet definitionem et partes definitionis, et alia huiusmodi quae secundum rationem considerantur; in hoc libro octavo intendit de sensibilibus substantiis determinare per propria principia, applicando ea quae superius inquisita sunt logice, ad substantias illas.»

³⁶ We will analyze in Chapter 3 Aquinas's interpretation of the problem of the parts of a real definition in Z 10 and 11.

³⁷ Cf. Dewan (2006), p. 152. He writes: «St. Thomas makes it a major point that the logical consideration is inadequate, does not give us the real quiddity, and requires completion by the properly scientific metaphysical treatment.»

³⁸ I will analyze Aquinas's account of the relationship between definition and hylomorphic analysis in chapter 3.

A convincing interpretation has recently been formulated by Gregory Doolan.³⁹ Firstly, Doolan highlights a passage from Aquinas's *Commentary* on Boethius's *De Trinitate*.

Aquinas writes:

(T5) I reply that a method of proceeding in the sciences is called rational in three ways. In one way, because of the principles from which we begin; for instance, when we proceed to prove something beginning with mental beings, like genus, species, opposite, and concepts of this sort, which the logicians study. In this sense a method will be called rational when in a science we use the propositions taught in logic; namely, when we use logic as having a teaching function in the other sciences. But this method of proceeding cannot belong properly to any particular science: it will fall into error unless it proceeds from its own proper principles. However, logic and metaphysics may properly and suitably use this method, because both are universal sciences and in a sense treat of the same subject.⁴⁰

In this passage, Aquinas is discussing the question of whether and how one should proceed rationally (*rationabiliter*) in the different natural sciences. He identifies and compares three different modes of proceeding 'rationally' in scientific enquiries. The first two are considered 'rational' in the sense that are concerned with *rationes* and are therefore associated with logic in general. The third method is called 'rational' in virtue of being operated by the rational power of the soul.⁴¹

The first method considered in this passage is a logical method. Aquinas's characterization of this method can be summed up in this way:

³⁹ Doolan (2019); Doolan (forthcoming). My interpretation initially developed independently from Doolan's work. Nevertheless, when professor Doolan kindly showed me his work, I realized that what I was trying to argue had already been spelled out, in a much better way, by him. My interpretation of the *modus logicus*, therefore, is based on his excellent work.

⁴⁰ *Sup. Boet. De Tr.*, q. 6, a.1: «Responsio. Dicendum ad primam quaestionem quod processus aliquis, quo proceditur in scientiis, dicitur rationabilis tripliciter. Uno modo ex parte principiorum, ex quibus proceditur, ut cum aliquis procedit ad aliquid probandum ex operibus rationis, cuiusmodi sunt genus et species et oppositum et huiusmodi intentiones, quas logici considerant. Et sic dicitur aliquis processus esse rationabilis, quando aliquis utitur in aliqua scientia propositionibus, quae traduntur in logica, prout scilicet utimur logica, prout est docens, in aliis scientiis. Sed hic modus procedendi non potest proprie competere alicui particulari scientiae, in quibus peccatum accidit, nisi ex propriis procedatur. Contingit autem hoc proprie et convenienter fieri in logica et metaphysica, eo quod utraque scientia communis est et circa idem subiectum quodammodo.» All translations from *Sup. Boet. De Tr.* are taken from Armand Maurer slightly modified.

⁴¹ Here I will only consider the first two kinds of methodology.

- 1) This method is ‘rational’ because of the nature of its starting points (*principia*), i.e., the principles from which we proceed to demonstrate something (*procedit ad aliquid probandum*), which are propositions about beings of reason/second intentions such as genus and species.
- 2) The logical analysis implied in this method has a teaching function with respect to the science in which it is applied.⁴²
- 3) Described as such, this method *cannot be properly applied* to any of the particular sciences, because a demonstrative/appropriate method in a particular science has to start from the proper principles of that science.
- 4) However, there are two sciences in which this method is *suitably* and *properly* applied: one is of course logic and the other is metaphysics. This is because they are both concerned with being in general.

As for the *modus logicus*, the method described here takes logical tools and intentions as starting points of the investigation in the domain of the science in which it is applied. In (T5), Aquinas specifies some other pivotal features: this methodology cannot be applied to any of the particular sciences, which need to start from their proper principles. This suggests that the method *cannot be identified* with dialectics: as a matter of fact, the dialectical method can be applied in all the different particular sciences. This is confirmed also by the fact that the second method of rational procedure that Aquinas lists in his *Commentary* on Boethius’s *De Trinitate* in contraposition with this first method is clearly identifiable with a form of dialectics. This second methodology is characterized by the fact that it proceeds from arguments that are commonly held (as common opinions) and draws conclusions that are merely probable and preparatory to proper scientific demonstrations, which require that the proper principles of that science are introduced.⁴³

⁴² Aquinas here refers to the standard distinction between *logica docens* and *logica utens*. The first is the ‘pure’ study of logical realities, the second concerns its application to particular sciences. On this distinction one can see Schmidt (1972) pp.66-87.

⁴³ *Sup. Boet. De Tr.*, q. 6, a.1: «Alio modo dicitur processus rationalis ex termino in quo sistitur procedendo. Ultimus enim terminus, ad quem rationis inquisitio perducere debet, est intellectus principiorum, in qua resolvendo iudicamus; quod quidem quando fit non dicitur processus vel probatio rationabilis, sed demonstrativa. Quandoque autem inquisitio rationis non potest usque ad praedictum terminum perducere, sed sistitur in ipsa inquisitione, quando scilicet inquirenti adhuc manet via ad utrumlibet; et hoc contingit, quando per probabiles rationes proceditur, quae natae sunt facere opinionem vel fidem, non scientiam. Et sic rationabilis processus dividitur contra demonstrativum. Et hoc modo rationabiliter procedi potest in qualibet scientia, ut ex probabilibus paretur via ad necessarias probationes. Et hic est alius modus, quo

Therefore, by contrast, the first way of procedure must be identified with a demonstrative method that uses logical intentions as *proper* to the science in question. Finally, and most importantly, Aquinas specifies that this demonstrative method does not properly belong to logic only, but also to metaphysics. This is by virtue of their somehow common subject matter: the totality of being, real in metaphysics and mental in logic.⁴⁴

The characterization of this first rational procedure that emerges from text (T5) leaves little room for doubt that the methodology that Aquinas describes is the same *modus logicus* that Aquinas sees applied in the treatment of essence in Z 4:⁴⁵ all the features described overlap with those that we have found in Aquinas's *Commentary* on Z 4, with the additional clarification that this method is appropriate to properly metaphysical demonstrations (T5).

We can now sketch a definition of Aquinas's *modus logicus* in Z 4:

Modus Logicus =def a method of reasoning that starts from the analysis of logical intentions and uses them as proper principles of demonstrative conclusions. This method is contrasted with the method of dialectics. This method cannot be properly applied to any of the particular branches of science but can be properly applied and used only in logic and metaphysics.

4. Logical intentions as *per se* accidents of being *qua* being

Now that we have clarified the *demonstrative* and *non-dialectic* nature of the logical approach to essence in Aquinas's interpretation of *Met. Z*, we still have to answer the question: why is it appropriate to use logical intentions as proper principles of metaphysical demonstrations, given that metaphysical are demonstrations concerned with *real being*?

logica utimur in scientiis demonstrativis, non quidem ut est docens, sed ut est utens. Et his duobus modis denominatur processus rationalis a scientia rationali; his enim modis usitatur logica, quae rationalis scientia dicitur, in scientiis demonstrativis, ut dicit Commentator in I *Physicorum*.»

⁴⁴ Aquinas identifies logic and metaphysics as the only two sciences that can use logical intentions as proper to their method also in another text, *S.C.G.* II, c.75, n.7: «Species enim recepta in intellectu possibili non habet se ut quod intelligitur. Cum enim de his quae intelliguntur sint omnes artes et scientiae, sequeretur quod omnes scientiae essent de speciebus existentibus in intellectu possibili. Quod patet esse falsum: nulla enim scientia de eis aliquid considerat nisi rationalis et metaphysica.»

⁴⁵ Cf. pp. 4 and 5.

Doolan suggests that the answer to this question can be found in some texts in which Aquinas points out a certain relationship between logical intentions such as genus and species and real being.⁴⁶

One example of this is in his Commentary on *Metaphysics* Γ 2. Aquinas writes:

(T6) It belongs to one science to consider *being qua being*, and all the *per se* accidents of being. (...) And it considers [all] of what has been noted above, namely, same and diverse, similar and dissimilar, equal and unequal, negation and privation, and contraries, all of which we have said above are *per se* accidents of being. And it considers not only these, but it also considers prior and posterior, genus and species, whole and part, and other such items for the same reason: because these too are accidents of being inasmuch as it is being.⁴⁷

In this text, Aquinas points out that the subject matter of metaphysics is *being qua being*, that is, as we have seen, real being considered as being and not as limited to a certain kind or portion of being.⁴⁸ To study being *qua* being, Aquinas specifies, also includes to study what he calls the *per se* accidents of being. *Per se* accidents of being are necessary properties of being *qua* being, properties that follow from the principles of being *qua* being. Aquinas sometimes refers to *per se* accidents of being as ‘properties’ or ‘proper passions’ of being.⁴⁹ Being common to the totality of being *qua* being, these properties are also often called by Aquinas *communia*. In the passage quoted, Aquinas lists some of them: same and diverse, similar and dissimilar, equal and unequal etc. Moreover, and more importantly here, he lists genus and species among the *per se* accidents of being.

At a first glance, the presence of genus and species among the *per se* accidents of being looks odd. If *per se* accidents of being are common properties of being *qua* being,

⁴⁶ Doolan (2019), p. 687; (forthcoming), p. 12.

⁴⁷ *Exp. Met.*, IV, 1.4, n. 587: «Quod ad unam scientiam pertinet considerare ens secundum quod est et ea quae per se illi insunt.(...) Et est considerativa eorum quae dicta sunt, scilicet eiusdem et diversi, similis et dissimilis, aequalis et inaequalis, negationis et privationis, et contrariorum; quae supra diximus esse per se entis accidentia. Et non solum est considerativa istorum, de quibus ostensum est singillatim propriis rationibus, quae cadunt in consideratione huius scientiae; sed etiam considerat de priori et posteriori, genere et specie, toto et parte, et aliis huiusmodi, pari ratione, quia haec etiam sunt accidentia entis in quantum est ens.»

⁴⁸ Cf. p.7

⁴⁹ *Exp. Met.*, IV, 1.4, n.571.

how can genus and species, which are second intentions formed by our intellect, be among them? Which is to say, how is it possible for beings *of reason* to be properties of *real being*?

As Doolan suggests, the answer to this question lies in the fact that genus and species, even if they exist as second intentions, are nevertheless grounded in real being.⁵⁰ In two different texts, from *De Potentia* and his *Commentary* on the *Sentences*, Aquinas recognizes this feature of genus and species. Even if these logical intentions do not have a direct reference in reality, as is the case with first intentions such as ‘man’, genus and species have, nonetheless, a remote foundation in the real world. Genus and species refer to real things, not as real things are in themselves, but *insofar* as they are *understood*. Second intentions are in fact the result of a second operation of the intellect that, having understood real things, reflect on them. This means that reason forms these concepts only after reflecting on them as objects of understanding.⁵¹

In including genus and species among *per se* accidents of being, Aquinas wants to suggest that the way through which second intentions are understood does not exclusively depend on the operation of the intellect that understands them but also has an ultimate foundation in *real being*. Which is to say, the principles of real being are the ultimate, causal foundation for the way in which second intentions such as genus and species are structured and conceived by the intellect. As Doolan elegantly puts it, real being is not only able to be understood, but it is also able to be *understood as understood*.⁵²

This causal connection emerges in other places. In the *De Ente et Essentia*, Aquinas says that «by essence a thing is knowable and is ordered to a genus and a species.»⁵³ In his *Commentary* on *Z*, he says that the essence «is neither a genus, a species or an individual, but is the formal principle of all of these.»⁵⁴

The causal connection between essence as a real principle of being and second intentions is what makes genus and species *per se* accidents of real being: the way in

⁵⁰ Doolan (2019), p. 667; (forthcoming), p. 13.

⁵¹ *Super. Sent.*, l. 1, d. 2, q. 1 a. 3; *De potentia*, q. 7, a. 6.

⁵² Doolan (forthcoming), p.13

⁵³ *De Ente et Essentia*, c.2, ed. Porro., p.78: «Res per essentiam suam et cognoscibilis est, et in specie ordinatur vel genere.» All translations from *De Ente et Essentia* are from Joseph Kenny OP, with modifications.

⁵⁴ *Exp. Met.*, VII, l. 2, n.1275: «Hoc autem quod quid erat esse hic ponitur, sed ibi praetermittitur, quia non cadit in praedicamentorum ordine nisi sicut principium. Neque enim est genus neque species neque individuum, sed horum omnium formale principium.»

which being is structured determines also the way in which being is conceptualized as an object of understanding.

The characterization of logical second intentions as *per se* accidents of being allows us to understand how the *modus logicus* can properly be applied to metaphysical demonstrations. While the logician considers these intentions insofar as they are intentions, the metaphysician can use them as starting points for his investigation insofar as they are *per se* accidents of real being and, therefore, are grounded in real being.

Reasoning from logical predications to real being is appropriate precisely by virtue of this causal connection. On Aquinas's interpretation, reasoning from effects (predications and intentions) to the cause (essence as a principle) will allow one to proceed through genuine metaphysical demonstrations. More precisely, a demonstration that starts from the effects to arrive at their cause is called a *quia* demonstration in Aquinas's terminology.⁵⁵ In our analysis of Aquinas's interpretation of the logical approach to essence, we will see different examples of this kind of demonstration.

Aquinas's *modus logicus* should not suggest that he is committed to a form of rationalistic isomorphism between logic and metaphysics: structures of thought and structures of reality remain distinct from Aquinas's perspective. Aquinas clearly distinguishes between *modi essendi*, *modi intelligendi* and *modi predicandi*. This means that logical predications are not directly isomorphic with being. Between real being and predication there is the mediation of the intellect. Logical intentions, being grounded in real being, reflect real being. But, at the same time, since real being is mediated by our way of understanding it, logical intentions are structurally different from real being, and in this sense they refract it.⁵⁶ It is for this reason, as pointed out by Doolan, that Aquinas's logical approach to essence tends to reach conclusions through a *via negativa*, that is, reaching conclusion about how things *are not*. Logical intentions do not present the same structure of real being, so it is not possible to argue positively about real being from logical intentions. But logical intentions, being ultimately grounded in real being, can give us conclusion about how things *cannot* be in real being. Otherwise, the structure of logical intentions would not be explicable or possible.

⁵⁵ On Aquinas's *quia* demonstration, see Reese (2022), pp. 60-77.

⁵⁶ 'Refract' is an expression found in Buersmeyer (1987) p. 86. Doolan (2019) p. 667 points out the relevance of the distinction between *modi essendi*, *modi intelligendi* and *modi predicandi*.

Aquinas's interpretation of the logical approach of *Met. Z*, therefore, can be understood only in terms of his peculiar theoretical elaboration of this *modus logicus* as a precise method in metaphysical demonstrations. Aquinas's whole interpretation of the content of book *Z* is strongly intertwined with his theoretical elaboration and therefore cannot be reduced simply to an exegetical reconstruction of Aristotle's text.⁵⁷

For this reason, investigating Aquinas's logical approach to essence in his *Commentary* on *Z* will allow me to spell out a general reconstruction of his essentialism. As I will show, Aquinas develops a systematic approach to the metaphysics of essence that starts from the point of view of real definitions and predications.⁵⁸ In doing this, I will also consider Aquinas's *De Ente et Essentia*, integrating it with his *Commentary* on *Z*. As we will see, there is a fundamental continuity between Aquinas's accounts in these two texts.

5. Conclusion

We can briefly summarize the results of this chapter. We started with a brief and general introduction to the question of the 'logical' method that Aristotle introduces at the beginning of *Z* 4. We then analyzed Aquinas's interpretation of this problem, integrating his *Commentary* on *Z* 4 with other passages drawn from his *Commentary* on the *Metaphysics*. Relying on Gregory Doolan's interpretation, I have argued that Aquinas's logical method must be sharply distinguished from a mere dialectic method, but it is a method properly applied in metaphysical demonstrations that use as starting points logical intentions. This account is based on the idea of a relation of grounding between logical intentions (effects) and the ontological reality of essence (cause). This relation allows proper metaphysical *quia* demonstration that argues from the reality of logical intentions to the reality of essence.

Far from being the feature of a rationalistic account characterized by a total isomorphism between logic and metaphysics, Aquinas's logical method is also fundamentally characterized by an approach that follows a *via negativa*: using logical

⁵⁷ On the question of the presence of Aquinas's own philosophical commitments in his commentaries on Aristotle's work, see Wippel (2007) pp. 240-272.

⁵⁸ As said in the introduction, an investigation of Aquinas's essentialism as fundamentally structured around the problem of real definitions can also be an interesting contribution to the contemporary debate in metaphysics. Kit Fine has proposed to spell out the question on essence starting from the question of a real definition. See Fine (1994).

tools as effects allows to argue about how things *cannot be* from a metaphysical point of view. This feature depends on the fact that the structure of logical intentions does not simply reflect the structure of the ontological essence as grounded in it. In fact, given the intermediation of the role of the human intellect, logical intentions are also dissimilar in their structure from ontological essences.

Aquinas thinks that this logical method is applied by Aristotle throughout the entirety of *Met. Z*. Following his interpretation of *Met. Z*, our investigation of Aquinas's metaphysical essentialism will be therefore centered on this logical method. From Chapter 2, I will show how Aquinas develops an ontology of the essence, starting from the logical point of view of definition and predication.

Chapter 2

Essence and *Per Se* Predication

1. Introduction

In this chapter, I will analyze Aquinas's interpretation of the problem of essence in Aristotle's *Met. Z 4*. Having settled in Chapter 1 the problem of the nature of the logical method conceived by Aquinas, I will here show how this logical approach is applied to the problem of essence.

The problem of essence in *Z 4* is centered around two questions: i) What is an essence? ii) What things have essence?

I will firstly show how Aquinas's 'logical' answer to the first question ('what is an essence?') is based on the identification of the essence of a thing with what is predicated *per se* of that thing (Section 2). I will argue that Aquinas draws fundamental conclusions about the features of an essence starting from the logical analysis of *per se* predications in their relationship of interdependence with real definitions. Furthermore, integrating the argumentation of the *Commentary* on *Z 4* with a passage from *S.C.G. II*, 58, I will argue that from Aquinas's account it is possible to deduce a proper logical-predicative proof of the unity of an essence and its role as principle of unity and being of a thing (Section 3). I call this Aquinas's *Predicative Simplicity Argument* (PSA). The argument is not simply dialectical, but metaphysical since it is a proper *quia* demonstration, arguing from the effect (*per se* predication) to the cause (essence).

I will then analyze Aquinas's answer to the second question: 'what things have essence?'. The logical and predicative criteria spelled out by Aquinas will also be applied to the investigation of this issue. I will argue that Aquinas's treatment of this problem makes a joint use of two different predicative and logical criteria: the *Predicative Simplicity Criterion* and the *Subjecthood Criterion*. As a result of the use of these two criteria Aquinas's position will be that, properly speaking, only substances have an essence (Section 4). Nevertheless, we will see also how, in a qualified and secondary sense, accidents and accidental compounds can also be said to have an essence (Section 5)

2. Definition and *Per Se* Predication

After having established his way of proceeding in a ‘logical way’, in *Met. Z 4* Aristotle raises two questions concerning the problem of essence. The first question is: what is an essence? The logical approach to this first question consists in identifying the essence of a thing with what is said *per se* of that thing.⁵⁹

We can now look at Aquinas’s interpretation of this first problem, where his logical way to essence will find a concrete articulation.

At the beginning of his *Commentary*, Aquinas writes:

(T1) Regarding essence it should first of all be borne in mind that it must be predicated of a thing *per se*; for those things which are predicated of a thing accidentally do not belong to its essence. For by the essence of a thing we mean the proper answer which can be given to the question asking what it is. And when we ask what a thing is we cannot give a proper answer by mentioning attributes which belong to it accidentally; for when someone asks what man is, one cannot answer that he is white or sitting or musical. Hence none of those attributes which are predicated of a thing accidentally belong to its essence; for it is not the case that being musical is the being for you.⁶⁰

Aquinas’s logical answer to the question ‘what is an essence?’ closely follows Aristotle’s one. The essence is identified with what can be predicated *per se* of a thing. Aquinas immediately motivates this identification of the essence with what can be predicated *per se* of something by pointing out that the essence of a thing is the complete and exhaustive answer to the question that asks ‘what is it?’. Here it is important to properly grasp what the exact link between a *per se* predication and the answer to the question ‘what is it?’ is.

⁵⁹ Cf. *Z 4*, 1029b13-14: «τι ἐστὶ τὸ τί ἦν εἶναι ἐκάστου ὃ λέγεται καθ’ αὐτό.»

⁶⁰ *Exp. Met.*, VII, l.3, n 1309: «Hoc autem primo sciendum est de eo quod quid erat esse, quod oportet quod praedicetur secundum se. Illa enim quae praedicantur de aliquo per accidens, non pertinent ad quod quid erat esse illius. Hoc enim intelligimus per quod quid erat esse alicuius, quod convenienter responderi potest ad quaestionem de eo factam per quid est. Cum autem de aliquo quaerimus quid est, non possumus convenienter respondere ea quae insunt ei per accidens; sicut cum quaeritur quid est homo, non potest responderi, quod sit albus vel sedens vel musicus. Et ideo nihil eorum, quae praedicantur per accidens de aliquo, pertinent ad quod quid erat esse illius rei: non enim musicum esse, est tibi esse.»

According to Aquinas, a real definition is the formula which gives a complete and satisfactory answer to the question ‘what is it?’ (*quid est?*). The essence is the answer to the question ‘what is it?’ and this answer can only be given by way of a real definition.

This clearly emerges in a passage from *De Ente et Essentia*:

(T2) And because that by which a real thing is constituted in its proper genus or species is what is signified by the definition expressing what the thing is, philosophers sometimes use the word “quiddity” for the word “essence.” This is what the Philosopher often calls *what something was to be*, i.e., that by which it belongs to something to be what it is. (...) The name “quiddity,” however, is taken from what is signified by a definition, which is the whatness of a thing.⁶¹

Here Aquinas refers to the doctrine of genus and species, which we can leave aside for now; we shall return to it later in the next chapter.⁶² What interests us in this passage is that Aquinas identifies the definition as what signifies ‘what the thing is’. Other than ‘essence’, the ‘what it is’ of a thing can be expressed by the term ‘quiddity’, from the Latin word *quidditas*. The word derives precisely from the expression *quid est*, literally the ‘what is’. The quiddity is the ‘whatness’ of something as expressed by a real definition. A real definition, therefore, signifies the whatness (*quidditas*) of a thing and thus answers the question ‘what is it?’ (*quid est*).⁶³

For this reason, introducing the problem of essence in terms of the question ‘what is it?’ means introducing the question of essence starting from the definitional point of view. At the same time, through the introduction of the question ‘what is it?’, Aquinas is connecting the notion of a real definition with that of a *per se* predication. There is an interdependence between definition and *per se* predication in the logical approach to essence. What is the nature of this interdependence?

To answer this question, we need to examine in more depth the features of a *per se* predication and its relation of fundamental interdependence with a real definition. We

⁶¹ *De Ente et Essentia*, c.1, ed. Porro, p.78: «Et quia illud, per quod res constituitur in proprio genere vel specie, est hoc quod significatur per diffinitionem indicantem quid est res, inde est quod nomen essentiae a philosophis in nomen quidditatis mutatur (...) Quidditatis vero nomen sumitur ex hoc, quod per diffinitionem significatur.»

⁶² Cf. pp.62-63

⁶³ The *quid est* question is the second of the four types of scientific questions that Aquinas draws from Aristotle in his Commentary on *Posterior Analytics*. See *In Post. An.* II, l.1, n.2.

can look at a passage from Aquinas's Commentary on *Post. An.* I, 4, where the problem of a *per se* predication is treated.

He writes:

(T3) Therefore, the first way of saying something *per se* is when that which is attributed to a subject pertains to its form or essence. And because the form and essence of a thing are signified by its definition, the first mode of that which is *per se* is when the definition itself or something expressed in the definition is predicated of the thing defined. This is what he means when he says, "Essential attributes are such as belong to their subject as elements in its essential nature," i.e., included in the definition which indicates *what* it is (...) He states further that all those items which are found universally in the definition expressing what a thing is are attributed to it *per se*.⁶⁴

The first mode of a *per se* predication occurs when the predicate that is attributed to a subject is contained in the essence/form of the subject. Since the essence/form is signified by the real definition, therefore the first mode of *per se* predication occurs when the real definition of a subject is predicated of that subject. The essential attributes of a thing are such as they belong to their subjects as parts of their essential nature, as 'rational' and 'animal' belong to the subject 'human being'. This rule of predication is directly drawn from the fundamental feature of the real definition as the signification of the *what it is* of a thing.

We can sum up Aquinas's point:

1. A *per se* predication pertains always to the whatness of a subject.
2. A whatness is signified by a real definition.
3. A *per se* predication is always the predication of something in the real definition.

⁶⁴ *In Post. An.* I, l. 10, nn. 3–4: «Primus ergo modus dicendi *per se* est, quando id, quod attribuitur alicui, pertinet ad formam eius. Et quia definitio significat formam et essentiam rei, primus modus eius quod est *per se* est, quando praedicatur de aliquo definitio vel aliquid in definitione positum, et hoc est quod dicit quod per se sunt quaecumque insunt in eo, *quod quid est*, idest in definitione indicante *quid est* (...) Et subiungit quod quaecumque universaliter insunt in ratione dicente *quid est*, *per se* attribuuntur alicui.» All translations from Aquinas's *Commentary on Posterior Analytics* are drawn from Fabian Larcher, with slight modifications.

A criticism that has been raised against the general approach of Z 4 points out a certain vacuity and circularity implied by the identification of essence with what can be *per se* predicated.⁶⁵ The circularity would be implied by the fact that in Z4 the notion of essence is explained through the notion of *per se* predication, while in *Post. An.* I, 4, the notion of *per se* predication is explained through the notion of essence and definition. The fact that in his *Commentary* on Z 4 Aquinas does not introduce directly the notion of a real definition but introduces it through the question ‘what is it?’ can help to avoid this risk of circularity: both the notion of *per se* predication and the notion of definition and essence, in their interdependence, are answers to the question ‘what is it?’, which is the fundamental one. An essence can be defined in terms of *per se* predication because it is supposed to answer the question ‘what is it?’, and *per se* predication can be explained as the only possible predication suitable to answer the question ‘what is it?’.⁶⁶

The nature of the interconnection between *per se* predications and essence in (T1) from Aquinas’s *Commentary* on Z 4 is fundamentally the same as that expressed in (T3): in both cases Aquinas is talking about *per se* predications in the first mode (*per se₁*).

In (T1) Aquinas considers the mode of predication alternative to a *per se* predication, namely a *per accidens* predication. It is clear, Aquinas points out, that a *per accidens* predication cannot properly answer the question ‘what is it?’. A predication is *per accidens* insofar as it expresses attributes that belong accidentally to the thing. Aquinas gives an example: when someone asks, ‘what is a man?’ he cannot answer that man is white or musical. The reason for this is that the predicates ‘musical’ or ‘white’ are coincidental with the subject ‘man’ as there are some human beings that are not musical or white.⁶⁷ The question ‘what is a man?’ is not about some features that man could have or not have, like the case of ‘being white’ or ‘being musical’, but it is about what it means to be a human being, or to put it better, what accounts for what a human being is *in itself*. This is the meaning of Aquinas’s final remark in (T1), drawn from Aristotle’s text, that «it is not the case that being musical is the being for you»: with this claim, Aquinas is not referring to the essence of an individual *qua* individual, but *qua* human being. The structure of accidental predications is, therefore, unsuitable for expressing the quiddity

⁶⁵ Witt (1989) pp. 101-142; Galluzzo, Mariani (2006), p.68.

⁶⁶ This is something pointed out by Nevitt (2015), p. 29.

⁶⁷ Aquinas points out that in a being *per accidens*, such as ‘the man is musical’, ‘to be’ means nothing but ‘to happen’ (*accidere*). Cf. *Exp. Met.*, V, l.9, n.887.

of a thing. Moreover, these attributes could be possibly predicated of other things. An accidental attribute, therefore, is not co-extensive with the thing. Conversely, an essential attribute must necessarily be coextensive with the thing of which it is predicated. It must be pointed out that co-extensiveness is only a necessary condition, but not a sufficient one for being an essential attribute. For example, ‘risible’ is an attribute that is co-extensive with ‘human being’ but it does not belong to the essence of a human being. Nevertheless, whenever an attribute is not co-extensive with a thing, this is sufficient for saying that the attribute is not predicated as the essence of the thing.

Aquinas’s approach in his *Commentary* on Z 4 is in fundamental continuity with his *Commentary* on *Post. An.* I,4. As in that case, there is a deep interrelation between these two features of a real definition, namely, being the exhaustive answer to the question ‘what is it?’ and being always predicated *per se*: a *per se* predication always predicates an essential predicate of the subject, either the whole definition (‘rational animal’) or a part of the definition (‘animal’).

The interrelation between real definition and *per se* predication has an additional implication: it is not only the case that a real definition is always predicated *per se* of the subject, but also that it is predicated as the same thing of the subject, or as *identical* with the subject. When a real definition is predicated, there is a special type of identity between subject and predicate. Without this identity, a real definition would not be able to express the complete and exhaustive whatness of a thing, since it would not be able to express what a thing is in itself. The identity, therefore, is an identity between subject and predicate. This identity between subject and predicate expresses the identity between a thing and its whatness/essence.⁶⁸

The identity between a thing and its essence is clearly stated by Aquinas in his *Commentary* on Z6: «it is evident, from this analysis, that whatever exist is, (...) *one and the same* with its essence»⁶⁹. Nevertheless, the identity between a thing and its essence, and the correlated identity between subject and essential predicate, holds only from a definitional point of view. This is something that Aquinas clearly explains in his *Commentary* on Z 11: a thing is identical with its essence only if a thing is considered as universal, such as ‘man’ or ‘human’. From a logical point of view, the subject of the

⁶⁸ In talking about predications that possess this special identity with the subject, Aquinas refers to them also as *in quid* predications. Cf. *Exp. Met.*, VII, l.13, n.1570; *S.C.G.*, I, 25, n.5

⁶⁹ *Exp. Met.*, VII, l.6, n. 1371: «Ex his itaque rationibus manifestum est, quod unum est et idem, (...), unumquodque et quod quid erat esse eius.»

predication is, therefore, a universal subject, and not an individual such as Socrates. As a matter of fact, an individual is not definable *qua* individual, and the consideration of it is outside the definitional level.⁷⁰ Finally, it should be noted that the identity between subject and predicate only holds when the *whole* definition is expressed in the predicate and not only one of its parts: for example, the identity is between being human and being a rational animal but not between being human and being animal.

Related to the feature of identity, there is the semantic notion of *convertibility* between *definiens* and *definiendum* in a real definition.⁷¹ Given the identity between the predicate and the subject, it follows that the subject must be convertible with the predicate. For example: ‘human’ is convertible with ‘rational animal’

Aquinas’s logical approach to essence, therefore, is centered around the idea of a strict interdependence between real definitions and predications. From the analysis of this interconnection, we can start to sum up Aquinas’s logical approach to the problem of essence as based on certain conditions.

The following are the necessary conditions for X’s being the essence of Y:

1. X is the complete and exhaustive answer to the question ‘what is Y?’
2. X is predicated *per se* of Y
3. X is identical with Y
4. X is coextensive with Y
5. X is convertible with Y

Establishing these conditions can help us to see the special kind of predication that is implied when an essence X is predicated of a subject Y. The ‘special’ nature of this predication is determined by the peculiarity of its structure.

Normally, a predication has a *complex* structure. We have a complex structure when an attribute X is predicated of a subject Y in terms of something (X) being said of *something else* (Y). For example, any kind of predication that is structured in terms of a

⁷⁰ *Exp. Met.*, VII, l. 11, n. 1536. The individual, which is beyond the logical level, is introduced only after the introduction of the hylomorphic analysis. This is because, through the hylomorphic analysis, *individual* matter is introduced, which is what individuates a substance. We will analyse more in depth the problem in the next Chapter.

⁷¹ Cf. *In Post. An.* l.3, n.4.

certain X predicated of a subject Y where the predicate X qualifies in a certain way the subject Y is a predicatively complex structure. Therefore, accidental predications such as ‘man is musical’ or ‘man is white’ present precisely this kind of predicatively complex structure.

By contrast, an essential predication has a predicatively simple structure, which means that it is not structured in terms of an attribute X being predicated as a property of a subject Y. This is because, in a predicatively simple structure, the attribute X is not attributed to a subject Y as something said of something else but is attributed to the subject as the *same* thing of the subject of predication.⁷² The attribute X in an essential predication is a special kind of attribute, because it does not qualify the subject Y or assign a property to a subject Y. Therefore, an essential predication, being predicatively simple, is a unique and special type of predication.

The five conditions that we have drawn from Aquinas’s ‘logical’ approach to essence, therefore, can be summed up through what we can call the *Predicative Simplicity Criterion* (PSC).⁷³

PSC= an essential predication cannot be structured in terms of something (X) said of something else (Y), but as something (X) said of a (Y) as the same thing of (Y).

Aquinas’s use of the PSC to establish the uniqueness of essential predications can also help us to face a certain concern that has been pointed out by Charlotte Witt about the effectiveness of Aristotle’s logical treatment of essence in Z 4.⁷⁴

Witt’s objection runs as follows: the identification of essence with *per se* predication is problematic since it describes essence in terms of a property. Treating essence as a property raises some fundamental problems:

1. A property is always predicated of something as *posterior* to the thing of which it is predicated. But the essence plays the role of making the thing what it is. In other

⁷² Once again, the identity condition holds only when the whole essence is predicated.

⁷³ Aquinas never explicitly formulates this criterion. But it can be found implicitly for example in *Exp. Met.*, VII, l.9, n.1323.

⁷⁴ Witt (1989), pp. 175-179.

words, it is a *principle* of the thing. But a principle of a thing cannot be posterior to the thing.

2. If essence is described as a property, it is not clear what makes a thing a unified reality and not an aggregate of properties.
3. If essence is described as a property, it is not clear how one is supposed to distinguish an essential attribute from a merely necessary attribute.

The first problem is centered on the idea that the logical description of an essence as a property is in contradiction with its ontological role as a principle.

The immediate answer to the first problem that Aquinas's discussion suggests is that describing the essence as what is predicated *per se* is not describing it in terms of a property, precisely in virtue of the special character of essential predications as established by the PSC. Essential attributes are predicated differently from properties or property-attributes, and they are not predicated as *posterior* to the thing, but as *constitutive* of the thing. In Aquinas's interpretation of Z 4, therefore, there is no risk of a tension between the logical starting point that describes an essence in terms of *per se* predication, and the fact that the enquiry about essence is an enquiry about an ontological *principle* of things.

The second problem raised by Witt is that the description of the essence as a property makes it hard to account for the unity of a thing. However, Aquinas's PSC implies a *unity* between the predicate X and the subject Y, since the attribute X is not predicated of Y as something said of something else, but as the *same* thing. The nature of a simple predication is therefore suitable to express *one, unified* reality common to subject and predicate. Nevertheless, it is difficult to draw a positive conclusion concerning the unity of the essence as an ontological principle from the predicative rules established with the PSC, especially considering the fact that a thing has a plurality of essential predicates, such as 'rational' and 'animal', in the case of 'human'. That said, I think that from Aquinas's perspective, there is a way to answer to this second concern raised by Witt. I will take it into account in the next section.

The third problem raised by Witt has to do with the problem of the distinction between essential and merely necessary predicates. Similarly, to what we have already said about the essential predicates being *constitutive* of the thing and, therefore, not posterior to the thing, the essential attributes are distinguishable from mere necessary

attributes by virtue of the ontological priority of the former over the latter. In its constitutive role, essential attributes will be the ground of necessary attributes. Necessary attributes are called by Aquinas *propria*, since they follow necessarily from the essence of something as its proper principle. As necessarily caused by the essence, these attributes pertain exclusively to the things that possess that essence.

The causal and constitutive role of essential attributes with respect to necessary attributes is at play in the deep interconnection between a real definition and its explanatory character, a fundamental feature of Aquinas's theory of a real definition. A real definition is explanatorily basic, given that the essential attributes that are spelled out in a real definition ground and explain all the other necessary attributes of the object defined.⁷⁵

For example, the real definition 'rational animal' is what *explains* and *grounds* the necessity of the attribute 'risible' to every human being, since rationality and animality are causally related to the property of risibility. A real definition is, therefore, always *causal* and *explanatory*.⁷⁶ This character of a real definition can be revealed through the practice of *propter quid* scientific demonstrations. We have a *propter quid* demonstration when the real definition plays the role of the middle term in the syllogistic deduction; it follows from this that what is demonstrated in the conclusion of a *propter quid* demonstration is not only that the attribute/property necessarily belongs to a subject, but also *why* this is the case. The conclusion is necessary precisely in virtue of the causal and explanatory efficacy of the real definition of a subject. A *propter quid* demonstration is, for this reason, identified by Aquinas as the highest form of scientific deduction (*demonstratio potissima*).⁷⁷

⁷⁵ Cf. for example *In Post. An.* II, l.7, n.9. An exhaustive review of texts on this problem, and more generally an overview of the problem the causal-explanatory connection between essence and *propria* can be found in Wippel (2000), pp. 266-275.

⁷⁶ In the last twenty years, there have been a considerable number of studies on the relation between definition and explanation in Aristotle's *Posterior Analytics* and *Metaphysics*. See Charles (2000); (2010) and Peramatzis (2018). On Aquinas's own account of the same problem, the literature is less vast, but one can find an excellent example in Amerini (2013).

⁷⁷ There is also, in Aquinas's perspective, a secondary form of *propter quid* demonstration in which the middle term contains not the real definition of a subject but the definition of a property. In Aquinas's perspective and contrary to Albert the Great's interpretation, this kind of demonstration is secondary because it can be reduced to a further *propter quid* demonstration in which the middle is the real definition of the subject that possesses that property. On this see the excellent study of Reese (2022), pp. 77-88. On the Medieval debate on the highest form of scientific demonstration see also Wallace (1972) and Longeway (2002).

Here is an example of a *propter quid* demonstration of the highest form according to Aquinas:

- (1) A human being is a rational animal.
- (2) A rational animal is risible.
- (3) A human being is risible.

The causal-explanatory power of the real definition expressing the essential attributes ('rational animal') of the subject ('human being') that figures in the middle term is made manifest in the conclusion where the property 'risible' is attributed necessarily to the subject 'human being' by virtue of its real definition as 'rational animal'.

Following Aristotle, precisely because real definitions are what *ground* scientific deductions, Aquinas denies the possibility of a scientific deduction of real definitions, as this would imply an infinite regress and a petition of principle. Nevertheless, as we have seen, a real definition can be *manifested* in its causal-explanatory role through scientific demonstrations. When a real definition is manifested, the essential attributes are manifested in their ontological priority with respect to the necessary attributes of which they are the causal ground and, therefore, distinguished by them.⁷⁸

Therefore, we can reply to the third objection raised by Witt: essential attributes are distinguished from mere necessary attributes by virtue of their ontological priority. This is made manifest through the causal-explanatory role that a real definition possesses as a middle term of a *propter quid* scientific demonstration.

In Aquinas's perspective, *propria* are *per se* predications of the second type, whilst, as we have seen, essential attributes are *per se* predications of the first type. What is the feature of *per se* predications of the second type and what is it that distinguishes them from *per se* predications of the first type? In the following lines of his *Commentary* on

⁷⁸ In the contemporary metaphysical debate, a proposal to account for the distinction between essential attribute and necessary attributes, similar to Aquinas's one, has been made by Gorman (2005). As I pointed out in the introduction, much of the debate in contemporary essentialism has been centered on how to distinguish essential attributes from mere necessary attributes. Aquinas' theory of definition and demonstration can bring an important contribute to the debate.

Z4, Aquinas discusses precisely the problem of how to distinguish *per se*₁ from *per se*₂ predications, and which of the two is that appropriate to essential predications.

Aquinas writes:

(T4) He excludes from the quiddity of a thing any attribute that is predicated *per se* as properties are predicated of subjects. He says that not even everything that is predicated *per se* of a thing belongs to its essence. For a property is predicated *per se* of its proper subject as color is predicated of surface. Yet the essence of a thing is not something that is found in a thing *per se* in the way that white is found in surface; because *being a surface* is not *being white*; i.e., the quiddity of surface is not that of whiteness.⁷⁹

At the very beginning of (T4) Aquinas makes clear what type of *per se* predication is being discarded by Aristotle as a suitable candidate for the role of essential predication. Aquinas identifies this type of *per se* predication with that of a property predicated of its proper subject. He illustrates this point with the example of a colour predicated of a surface. The colour ‘white’ is predicated *per se* of the subject ‘surface’ because the proper subject of a colour in a material, three-dimensional substance is a surface. Nevertheless, ‘white’ is not predicated of ‘surface’ in the same in which the essence of a thing is predicated of that thing. According to Aquinas, the reason for this is that the essence of a thing is always predicated of that thing as *its* quiddity, that is, if the essence gives the answer to the question ‘what is it?’. ‘White’ does not belong to the quiddity of ‘surface’. A *per se* predication of the type ‘the surface is white’, therefore, does not respect the first condition that we have established for an essential predication.

It could be noticed that a subject-property predication such as ‘the surface is white’ does not meet two other conditions established for essential predications: identity and convertibility. Being white or whiteness cannot be identical with a surface. From this, a problem clearly follows with the convertibility condition as well: ‘white’ and ‘surface’ are not convertible, since there are surfaces that are not white.

⁷⁹ *Exp. Met.*, VII, l. 3, n. 1311: «Deinde cum dicit: *Neque etiam*, excludit ab eo quod est quod quid est, quod praedicatur secundum se, sicut passiones de subiectis; dicens: neque etiam hoc omne quod praedicatur secundum se de aliquo, pertinet ad hoc quod quid erat esse eius. Praedicatur enim per se passio de proprio subiecto, sicut color de superficie. Non tamen quod quid erat esse est, quod ita inest alicui secundum se, sicut superficie inest album; quia non superficie inest *album esse*, idest hoc ipsum quod quid est superficies, non est quod quid est album. Alia enim est quidditas superficie et albedinis.»

Aquinas further analyzes the problem:

(T5) And not only is being white not the quiddity of surface, but neither is the combination of the two, namely of surface and whiteness, i.e., to be a white surface, or being a white surface. For the quiddity or essence of a white surface is not the quiddity or essence of a surface. And if we were asked why, we could answer, "Because white inheres in a surface," i.e., because when I say "white surface" I mean something which adheres to surface as extrinsic to its essence and not as intrinsic to its essence. Hence this whole, which is a white surface, does not belong to the essence of surface.⁸⁰

Here Aquinas is pointing out that the impossibility for the attribute 'white' to be predicated essentially of 'surface' can be extended also to the case of a composite such as 'white surface'. 'White surface' cannot be predicated as the essence of 'surface', since, again, 'white surface' does not answer the question 'what is a surface?'. This emerges clearly from the fact that in the composite 'white surface' 'white' is not an attribute that specifies the intrinsic essence of surface, but it is predicated as an *extrinsic* attribute of surface. As we have seen, contrary to this case, an essential attribute of a thing is supposed to be predicated of that thing as intrinsic to what the thing is itself. In no way, whiteness can be considered an intrinsic part of the essence of a surface.

The case of 'white' predicated of 'surface' or of 'white surface' predicated of 'surface' is an example of the second type of *per se* predication that Aristotle lists in *Post. An.* I, 4.

In his *Commentary on the Posterior Analytics*, Aquinas explains the second type of *per se* predication as the predication in which the subject is contained in the definition of the predicate.⁸¹ This type of *per se* predication is grounded in the fact that a property contains in its definition and essence a reference to its proper subject. This is precisely the case of the predication 'the surface is white'. The *per se* predication of 'white' of

⁸⁰ *Exp. Met.*, VII, l. 3, n. 1312: «Et non solum hoc quod est esse album non est quod quid est superficie; sed nec ipsum compositum ex utrisque, scilicet superficie et albedine, quod est esse superficiem albam vel esse superficiei albae. Quidditas enim vel essentia superficiei albae, non est quidditas vel essentia superficiei. Et si quaeratur quare? Responderi potest quia hoc adest ei, idest, quia cum dico superficiem albam, dicitur aliquid quod adhaeret superficiei tamquam extrinsecum, et non tamquam intrans essentiam eius. Unde hoc totum quod est superficies alba, non est de essentia superficiei.»

⁸¹ *In Post. An.* I, l. 10, n. 4: «Oportet etiam quod definitio eius significans esse ipsius contineat in se subiectum.»

‘surface’ is due to the fact that, in order to account for what being white essentially is, there needs to be a reference to its proper subject, namely, a surface. In other words, being white is an attribute that can exclusively exist as property of a surface. Conversely, though, the essence of a surface does not include any reference to whiteness.

Aquinas further expands on these two types of *per se* predication in his *Commentary on Met. Z*:

(T6) Now properties are predicated of their proper subjects in this way because their proper subjects are given in their definitions, as nose is given in the definition of snub and number in the definition of even. And certain attributes are predicated essentially in such a way that subjects are not included in their definitions, as animal is predicated *per se* of man, but man is not included in the definition of animal. Therefore, since those attributes which are predicated accidentally do not belong to a thing's quiddity, and neither do those which are predicated essentially in whose definitions subjects are given, it follows that those attributes belong to a thing's quiddity in whose definitions subjects are not given.⁸²

Aquinas explicitly formulates a distinction between the *per se* predications that are involved when a property is attributed to a subject and the *per se* predications involved when an essential property is attributed to a subject. In the former *per se* predications the definition of the predicate contains a reference to its subject. For example, in the definition of ‘snub’ there is a proper reference to its subject of inherence, i.e., a nose. Or in the definition of ‘even’, there will be a reference to a number. Conversely, essential attributes do not contain a reference to their subject. For example, being animal is an essential attribute of a human being and its definition does not contain any reference to a human being. As we have seen, *per se* predications of the first type are those involving

⁸² *Exp. Met.*, VII, l. 3, n. 1313: «Praedicantur autem passiones de propriis subiectis ea ratione, quia propria subiecta in earum definitionibus ponuntur, sicut nasus ponitur in definitione simi, et numerus in definitione paris. Quaedam vero ita praedicantur per se, quod subiecta in eorum definitionibus non ponuntur, sicut animal per se de homine; nec homo ponitur in definitione animalis. Cum ergo ea quae praedicantur per accidens non pertineant ad quod quid est, nec illa quae praedicantur per se in quorum definitionibus ponuntur subiecta, relinquitur quod illa pertineant ad quod quid est, in quorum definitionibus non ponuntur subiecta. Et ideo concludit dicens, quod haec erit ratio in singulis, quod quid erat esse, in qua ratione dicente ipsum, idest describente praedicatum non inerat ipsum, idest subiectum; sicut in ratione animalis, non inerat homo. Unde animal pertinet ad quod quid est homo.»

essential predications, i.e., those in which the attributes are contained in the proper essential definition of its subject. *Per se*₁ and *per se*₂ predications have opposite features. *Per se*₁ predications are such that the predicate is contained in the definition of the subject. *Per se*₂ predications are such that the subject is contained in the definition of the predicate. In Aquinas's perspective, therefore, the absence of a reference to the subject in the definition of the predicate is used, through a negative way, to identify a necessary condition of a *per se*₁, essential predication: X is predicated essentially of Y, only if X, in its definition, does not contain any reference to Y. The meaning of this condition has to do with the idea that the *definiens* (e.g., 'rational animal'), having an explanatory role with respect to the *definiendum* (e.g. 'human'), should not make reference to the *definiendum*.

At this point, we can modify our list of conditions, adding a last one:

1. X is the complete and exhaustive answer to the question 'what is Y?'
2. X is predicated *per se*₁ of Y
3. X is identical with Y
4. X is coextensive with Y
5. X is convertible with Y
6. X does not contain a reference to Y

Each of these conditions is necessary and they are jointly sufficient for X being the essence of Y.

3. *Modus Logicus in action: the Predicative Simplicity Argument*

In Aquinas's account of Z 4, there is no tension between the logical and the ontological description of an essence, or to put it in Witt's terms, there is no tension between approaching essence as a property or approaching it as a principle.⁸³

⁸³ A clarification here is needed: in Witt's terms, Aquinas conceives an essence both as a property and as a principle. But for 'property' Witt simply means the logical essential 'predicate' or 'attribute'. As we have seen, in Aquinas's own terms, describing essential predicates in terms of properties is misleading.

In Aquinas's perspective there is a strict interdependence between the logical/definitional approach and the ontological one. This is visible in the interchangeable usage that Aquinas does of the expressions *quod quid erat esse* and *quid est*. The first denotes the ontological aspect of the essence as a principle of being. Essence is that through which a thing has being or that principle that makes a thing to be what it is.⁸⁴ The second expression (*quid est*) denotes a logical aspect. Approaching the essence from the logical point of view of the question 'what is it?' and from the related logical problem of *per se* predications is not in discontinuity with the ontological approach that identifies essence as a principle of being and unity of a thing.⁸⁵

The interdependence between the logical and the ontological levels seems to be simply taken for granted by Aquinas in developing his interpretation of Z 4. The continuity between the description of essence as whatness (*quid est*) and essence as principle (*quod quid erat esse*) is simply affirmed but not properly demonstrated. It is important to verify this aspect of Aquinas's approach, since it ultimately addresses the question of whether and to what extent the logical approach to essence is suitable and justifiable. Without showing how the interconnection between the logical and ontological level is possible, it seems difficult to avoid the problem of an ultimate weakness in the description of essence in terms of *per se* predications. The weakness would come from introducing an ontological notion without explaining this notion in proper ontological terms, but only in logical ones. This was, after all, at the core of Witt's criticism of the approach of Z 4. In particular, her second objection, which we left unaddressed, concerned the difficulty to account for the (ontological) unity of the essence, if the essence is described in terms of (logical) *per se* predicates.⁸⁶

In my interpretation, it is possible, from Aquinas's perspective, to address the problem of the relationship between the logical and ontological level and in this way also to answer Witt's objection.

To do this, it is necessary to look back at what we have established in Chapter 1 in our analysis of Aquinas's *modus logicus*. We identified the foundation of the interrelation between the logical and the ontological levels in the causal relation between logical intentions (effects)

⁸⁴ Cf. *De Ente et Essentia*, c.1, ed. Porro, p. 78: «Et hoc est quod Philosophus frequenter nominat quod quid erat esse, id est hoc per quod aliquid habet esse quid.»

⁸⁵ The connection between the logical and semantic aspect of Aquinas's essentialism and its ontological aspect, is nicely spelled out by Klima (2002a).

⁸⁶ Cf. pp. 28-29.

and essence (cause).⁸⁷ In this case, the causal relation holds between the logical description of an essence as what is predicated *per se*₁ of something and the ontological level that describes an essence as a principle. In other words, the reality of *per se*₁ predications is made possible by and grounded in the reality of essence as principle of the being and unity of a thing.

Even if Aquinas does not explicitly formulate this point in his *Commentary* on Z 4, I want to argue that this procedure is somehow implicit in his line of argumentation. Moreover, while in his *Commentary* on Z there is no argument that explicitly shows the causal connection in which *per se*₁ predications are treated as real effects of the essence, a similar argument can be found in Aquinas's *Summa Contra Gentiles*, II, c. 58 and in *Summa Theologiae* I, q. 76, a. 3.

Here I will focus my attention particularly on *Summa Contra Gentiles*, II, c. 58: I will show how Aquinas's argument there can be fruitfully integrated with the treatment of *per se* predications and essence in the logical approach of his *Commentary* of Z 4.

The context of the passages from *S.C.G.* II, c. 58 is the discussion of the metaphysical issue of the unicity or plurality of substantial forms in a material substance. This is an issue about the hylomorphic constitution of material substances. Since I will introduce the discussion of the hylomorphic analysis starting from the next chapter, I will not here focus my attention on this problem. Nevertheless, Aquinas's argumentation can be translated from the context of the discussion of the problem of the unicity of the substantial form to a problem concerning the essence as ontological principle.

I want to argue that this move is justifiable for two reasons: first of all, in Aquinas's account, the reality of essence is ontologically very close to the reality of a substantial form. For example, in *De Ente et Essentia*, Aquinas states that: essence «is also said to be form (*forma*)»⁸⁸. The same point is stated in his *Commentary* on *Post. An.* I, 4 where Aquinas associates the notions of form and essence, describing both of them as what is expressed by an essential definition and is predicated *per se*₁ of a thing.⁸⁹ As he also points out in his *Commentary* on Z 11, form and essence are fundamentally on a *par* as ontological principles.⁹⁰ As we will properly discuss in the next Chapter, in a sensible substance the only thing that differentiates its form from its essence is the presence of matter in its essence in addition to its

⁸⁷ Cf. pp. 16-17.

⁸⁸ *De Ente et Essentia*, c.1, ed. Porro p.78: «Dicitur etiam forma».

⁸⁹ *In Post. An.* I, l. 10, n.3.

⁹⁰ *Exp. Met.* VII, l. 7, n. 1531.

form; but, in any case, it is the substantial form that plays the main ontological role in being responsible for the constitution of the essence of a sensible thing.⁹¹ These preliminary remarks intend to make the point that it is legitimate to translate ‘form’ as ‘essence’ in our reinterpretation of Aquinas’s argument.

What about the problem of unicity/ plurality of forms? How is this related to the problem of the reality of an essence as an ontological principle? In Aquinas’s perspective denying the unicity of a substantial form is equivalent to denying the reality of a single unified nature in a thing, that is to say, the reality of an essence as a single ontological principle.⁹²

Aquinas’s argument in *S.C.G.* II, 58 can be used, therefore, to draw a conclusion concerning an ontological feature of essence, namely, its unity. Having established these preliminaries, we can now look at Aquinas’s argument.

He writes:

(T7) Things attributed to the same thing according to diverse forms are predicated of one another by accident; a white thing is said to be musical by accident, because whiteness and music are accidental to Socrates, for example. Accordingly, if in us the intellective, sensitive, and nutritive soul are diverse powers or forms, then the things that appertain to us according to those forms will be predicated of one another by accident. Now, it is with respect to the intellective soul that we are said to be men; to the sensitive soul, animals; to the nutritive soul, living beings. It follows that the predication, man is an animal, or an animal is a living thing, will be by accident. But this predication is through itself, since man, as such, is an animal, and animal, as such, is a living thing. It is by the same principle, therefore, that one is a man, an animal, and a living thing.⁹³

⁹¹ In immaterial substances such as Angels, form and essence don’t differ at all.

⁹² Of course, pluralists concerning substantial forms would precisely deny this. This point, however, does not matter for my present concern. What does matter is that, in terms of Aquinas’s reasoning, it is perfectly legitimate to translate the argument about the unicity of the substantial form into an argument concerning the unity of essence. The argument wants to show that the essence of a thing must be one single ontological principle.

⁹³ *S.C.G.*, II, c. 58, n.3: «Quae attribuuntur alicui eidem secundum diversas formas, praedicantur de invicem per accidens: album enim dicitur esse musicum per accidens, quia Socrati accidit albedo et musica. Si igitur anima intellectiva, sensitiva et nutritiva sunt diversae virtutes aut formae in nobis, ea quae secundum has formas nobis conveniunt, de invicem praedicantur per accidens. Sed secundum animam intellectivam dicimur homines, secundum sensitivam animalia, secundum nutritivam viventia. Erit igitur haec praedicatio per accidens, homo est animal; vel, animal est vivum. Est autem per se: nam homo secundum quod est homo, animal est; et animal secundum quod est animal, vivum est. Est igitur aliquis ab eodem principio homo, animal et vivum.» Trans. by Anderson modified.

Aquinas is considering the option for which the essence of a thing is dependent on a plurality of forms/essences, so that the nature of this thing is the result of these different forms which are responsible for its different attributes. For example, suppose that in a human being there are three souls/substantial forms, namely, the vegetative soul, the sensitive soul, and the intellectual soul, so that a human being would be said 'human' by virtue of the intellectual soul, 'animal' by virtue of the sensitive soul, and 'living' by virtue of the vegetative soul. The attributes that flow from different forms/essences, Aquinas points out, are predicated accidentally one of another. This follows from what we have said concerning the rules of *per se*₁ predications. Different attributes flowing from different forms/essences cannot be predicated one of the other in a *per se*₁ mode.

As we have established, *per se*₁ predications are in fact predications where the attribute is identical with the form/essence of the subject. Therefore, if a thing were said to be 'human' according to one form/essence and to be 'animal' according to a different form/essence, it would be impossible to say that 'human is animal' is a *per se*₁ predication. In the same way, an animal will not be said to be living by itself, but only by virtue of a different form/essence. It is evident that this is an absurd consequence, since when I predicate 'living' of 'animal' I predicate something that an animal is in itself, that is, I predicate 'living' in a *per se*₁ mode. And when I predicate 'animal' of 'human', I predicate 'animal' as something that human is in itself, that is, I predicate it in a *per se*₁ mode. But in the plurality of forms/essences scenario a human being will be human only by virtue of the attribute 'rationality' and will be an animal only by virtue of the attribute 'animality'. These two attributes will be predicated accidentally one to another.

If I have to answer the question, 'what is an animal?' it seems absurd to give an answer for which being an animal *as such* does not comprehend in itself the property of being living. In other words, I cannot think about what it is for something to be human without thinking about it as something intrinsically living and animal. Conversely, this is not normally the case for things that are predicated accidentally: I can think about what it is for something to be musical without thinking of it as intrinsically white. The negation of the unity of the essence seems to have the awkward consequence of the possibility that genuine *per se*₁ predications will collapse into accidental predications.

Without a single essence, I cannot predicate the attributes of a human being in a *per se* mode, but only accidentally. This means that it is impossible to properly answer the question ‘what is it?’. The only thing one can do is to point to some attributes that are nevertheless accidentally united one to each other. The impossibility of a proper answer to the question ‘what is it?’ seems to imply the commitment to an ontology really at odds with respect to our normal way of talking and thinking about things. Differently from what our common use of language would suggest, defining *what* a thing is would not be really different from describing certain features of a thing.⁹⁴ In our common way of thinking, conversely, when we ascribe certain properties or qualities, we are taking for granted that these properties and qualities are qualities of something.⁹⁵ This something, in order to possess these properties or qualities, is supposed to have a certain *unity* in itself. In other words, the reduction of definitions to accidental descriptions seems to lead us to a contradiction: in trying to deny the distinction, we affirm it.⁹⁶

If we want to maintain the reality of *per se* predications as the answer to the question ‘what is it?’, it is necessary, therefore, to posit the unity of essence as an ontological principle. To guarantee the predicative simplicity of *per se* predications, it is necessary to posit a *unified* and *simple* reality, which is not composed. The essence must be real not simply as a *unity*, but also as a *unifier*: the essence confers unity on the object whose essence it is.⁹⁷ Precisely in its role of *unifier*, we can understand the reality of essence as an ontological principle: the essence is the principle of unity of a thing. The ‘logical’ description of essence as the whatness of the thing (*quidditas*) or as what can be

⁹⁴ The distinction between definition and description is pointed out efficaciously by McCabe (2008) p.23.

⁹⁵ Moreover, as Elizabeth Anscombe has pointed out, in our linguistic practice we tend to ascribe to things an established range of properties that they can possibly have. For example, it doesn’t make any sense to ask ‘can bacteria think?’ since we know that this property could be never ascribed to bacteria on the basis of what they *are*. In other words, our linguistic practices reveal that we implicitly ascribe essences to things. On this, see Anscombe (2005). Anscombe’s insight that ‘essence is expressed by grammar’ and Aquinas’s logical approach to essence that I am articulating, would deserve further investigations. Unfortunately, I cannot do it here.

⁹⁶ As a matter of fact, in Aquinas’s perspective the whatness of a thing and its distinction from its accidents/properties is the first object grasped by the intellect. This is a fundamental distinction without which it would be almost impossible to conceive the knowledge of reality. This first act of intellectual cognition of the essence, of course, is not the knowledge of any *specific* essence, as grasped by a real definition. That knowledge requires an empirical and logical investigation, and it is often very limited. In Aquinas’s perspective both things are true: our knowledge is mainly a knowledge of essences and through essences (in a generic way). Nevertheless, the complete account of a specific essence as signified in a real definition is really hard to reach. On this question see the excellent article of Block (2023).

⁹⁷ This is nicely put by Sorabij (1980), p 194.

predicated *per se*₁ of a thing, and its ontological description (*quod quid erat esse*), are closely intertwined, since the reality of *per se* predications is guaranteed precisely by the ontological role of the single essence as what gives unity to a thing. Being the principle of the unity of a thing, the essence is also the principle of *being* of the thing. According to Aquinas, what gives being to a thing is always also what gives unity to a thing.

As a matter of fact, we have seen that the notion of essence, in its ontological meaning (*quod quid erat esse*), is so called precisely as it refers to the principle ‘through which a thing has being’.⁹⁸

We can see how Aquinas’s arguments in *S.C.G.* II, 58 can be organically integrated with the logical treatment of essence in his *Commentary* on Z 4: the argument is a proper application of the *modus logicus* that we have described and that is supposed to guide the treatment of book Z as Aquinas interprets it. Starting from the logical reality of *per se* predications (effects), the argument reaches the conclusion of the ontological unity of the essence (cause). Reasoning from effect to cause, the argument is a proper metaphysical *quia* demonstration. The argument also fundamentally follows a *via negativa* since it comes to posit the necessary reality of a principle, arguing from how things *cannot* be: the unity of an essence as the only principle of being and unity of a thing is proved by the absurdity of the conclusions that one would need to draw if this unity is denied.

We can now systematize the argument that I will call the *Predicative Simplicity Argument* (PSA).

PSA:

1. To define an object is to answer the question ‘what is it?’.
2. The ‘what is it?’ of an object is identified either by a single essence or by different attributes flowing from different essences/forms.
3. Assume that an object has multiple essences/forms. Then the definition of it could be identified only in terms of the attributes that flow from different essences/forms.
4. Attributes flowing from different essences/forms cannot be predicated *per se*₁ of one another.

⁹⁸ The idea that the form/essence is what gives both being and unity to a thing is affirmed both in *S.C.G.* II, 58 and in *S.T.* I, 76, a.3. The convertibility of being and unity is analyzed by Aquinas in *De Veritate* I,1. On this idea, one can see Klima (2000).

5. Therefore, attributes flowing from different essences/forms would be predicated accidentally of one another. (From Premise 4)
6. Therefore, the real definition of a thing would be identified only through accidental predications of different attributes. (From Premises 2 and 5)
7. Real definitions can be predicated of a subject only through *per se* predications of attributes (6 Conditions and *Predicative Simplicity Criterion* that we established in paragraph 4).
8. Therefore, the definition of a thing would be identified through *per se* predications of accidental attributes (from Premises 6 and 7) which is a contradiction.
9. By *reductio* (from Premise 3), any object must have only a single essence.
10. Therefore, the essence, the ontological principle of the being and unity of a thing, is one.

The argument can be called PSA because it argues from the reality of *per se* predications, as identified by the *Predicative Simplicity Criterion*, to the reality of essence as a simple, non-composed principle of unity that makes predicative simplicity possible.⁹⁹

We can, therefore, give an answer to Witt's objection. If it is true that identifying essence in terms of *per se* predicates leaves the ontological unity of the essence unproved, this feature can nonetheless be seen as the only possible ground of the reality of *per se* predicates.

The argument has a strong resemblance with one that has been recently developed by the contemporary metaphysician David Oderberg. In a 2011 article, Oderberg presents what he calls the 'Unity Problem'.¹⁰⁰ The problem can be summed up in the following way: if the essence of an object can be reduced to a set of necessary properties, what does hold them together? In virtue of what certain necessary properties K are always and only found in a certain kind of object X? For example: why electrons are always and only

⁹⁹ Here I think that it is important to clarify an aspect. Simplicity and unity are deeply interrelated but are not exactly the same condition. As a matter of fact, a sensible essence in Aquinas's perspective is one but is not totally simple, since it is composed of form and matter. Nevertheless, as we will see, given the peculiar status of prime matter, a sensible essence is still non-composed and therefore simple, in terms of composition of natures. We will deal with this problem in more depth in the next chapter.

¹⁰⁰ Oderberg (2011).

elementary particles carrying unit negative electrical charge? Oderberg takes into account three possible solutions: appealing to laws of nature, to brute facts or to a strong metaphysical notion of essence as the ‘origin’ or ‘principle’ of unity. Oderberg argues against the first two options and, therefore, draws the conclusion that, in order to solve the ‘Unity Problem’ is necessary to posit the reality of metaphysical essences as unifiers of properties.¹⁰¹

There is a certain resemblance of Oderberg’s argument with our PSA. In our PSA, the problem is how to account for the essential unity of different essential attributes that otherwise would be predicated accidentally one of each other, compromising the unity of the object. Oderberg’s argument is concerned with a similar problem, even if it is not articulated from the point of view of the problem of *per se* predications. Moreover, Oderberg argues not against the idea that the essence of a thing can be described in terms of a plurality of forms, but against a reduction of an essence to a set of necessary properties. Both in Aquinas’s and Oderberg’s cases, though, the necessity of a single ontological unifier needs to account for the non-accidentality of the co-presence of different attributes in an object. In both cases, this ontological principle of unity is also *simple* and *unified* in itself: an essence or form. Of course, also in Oderberg’s case this simple and unified structure, the form or essence, can be predicated of a thing through essential attributes such as ‘rational animal’, that constitute the real definition of a thing, but these essential attributions must be sharply distinguished from the mere attribution of necessary properties. Oderberg’s account is in continuity, therefore, with what we have found in our analysis of Aquinas’s *Commentary* on Z 4: essential predications are special type of predications that cannot be reduced to the attribution of a property to a subject. The special status of *per se*/essential predications was established through the *Predicative Simplicity Criterion* and the Six Conditions.

Finally, Oderberg’s argument stresses the importance that the ontological role of essences as unifiers of properties determine the fact that essences *cause* the necessary properties of the object of which they are essences: essence grounds modality. Even if

¹⁰¹ Oderberg (2011), pp. 87-94. In Oderberg’s perspective, the fact that an essence must be a unifier and a simple unity in itself associates this notion with the one of form. Of course, the simple unity of the essence/form can be still expressed in a composite way through a real definition such as ‘rational animal’. Moreover, the form is also joint with matter. We will consider the problem, from Aquinas’s perspective, of how to account both for the unity and composition of definition and essence in Chapter 3 and 4.

this idea is not specifically pointed out in our presentation of Aquinas's PSA, it is certainly implied by it.

As we have seen, Aquinas explicitly develops the idea of a causal connection between the essence of an object and the necessity of certain properties, the *propria*. The essence, therefore, grounds the necessity of the *propria*: in causing these *propria* it also explains *why* these properties always occur. These necessary properties are predicated of their subject through the second mode of a *per se* predication, since their definition involves a reference to the subject they belong to. For example, the definition of the necessary property 'risible' involves a reference to 'human being'. The role of essence as principle of being and unity of a thing, therefore, is intertwined with its role as the ground of the necessity of the properties of the object. Also on this point, Aquinas's and Oderberg's respective accounts are overall in a deep theoretical continuity.

Comparing Aquinas's PSA with the one developed by David Oderberg is helpful to sum up the main features of an essence developed by Aquinas's logical approach to the problem 'what is essence?' in his *Commentary* on Z 4. These are the following:

1. The essence is the single ontological principle of being and unity of an object and it is in itself a simple and unified structure.
2. It is always signified through a real definition as the answer to the question 'what is it?'
3. It is always predicated *per se*₁ of an object, that is, it is attributed to an object through a unique type of predication, different from predications of properties and accidents (*Predicative Simplicity Criterion* and Six Conditions).
4. It grounds the necessity of properties that are always related to a certain thing. These necessary properties or *propria* are predicated of the thing in the *per se*₂ mode.

4. The Exclusive Reading

We can see how Aquinas's logical approach in his *Commentary* on Z 4, integrated with his argument in *S.C.G.* II, 58 is able to reach significant conclusions on the question 'what is an essence?'

Nevertheless, there might be a fundamental problem in grounding the notion of essence in the interdependence between predications and real definitions. For, according

to this perspective, it seems possible to ascribe an essence to every object about which the question ‘what is it?’ can be asked. Is this really the case?

This problem introduces the second question that Aquinas faces in his *Commentary* on Z 4: which kind of realities can be said to possess an essence?

In order to answer this question, Aquinas considers different candidates. The first candidate is an accidental compound such as ‘white man’.

He writes:

(T8) We must also inquire whether there is a concept of the essence (*ratio eius quod quid erat esse*) of all those things which are composites of accidents and subjects, i.e., whether they have a definition which is a concept signifying their essence; and also, whether the essence itself that the definition signifies is intrinsic to them, i.e., whether they have a quiddity or something that can answer the question “what is it”. For example, white man is a composite of subject and accident. The question, then, is whether there is an essence of white man as such.¹⁰²

Once again, Aquinas approaches the problem of essence starting from the logical point of view of definitions: it introduces the question of whether accidental compounds have an essence by asking whether they have a definition.

In investigating the problem of the definition and essence of accidental compounds such as ‘white man’, Aquinas starts with an analysis of the different kinds of predications that involve a property and a subject.

He writes:

(T9) Now there are two ways in which a thing is said to be one with another accidentally or non-essentially: first, in the sense that we say “Man is white” and second, in the sense that we say “A white thing is a man”; because one of these is defined by addition, whereas the other is not. For in the definition of man it is not necessary to include the definition of white or the word ‘white’,

¹⁰² *Exp. Met.*, VII, l. 3, n. 1316: «Et ideo prescrutandum est, cum aliqua sit definitio substantiarum compositarum ex formis et materiis, si etiam cuiuscumque istorum compositorum ex accidentibus et subiectis est ratio eius quod quid erat esse, idest si habent definitionem quae est ratio significans quod quid erat esse. Et iterum si est in eis hoc ipsum quod quid erat esse quod significat definitio, idest si habent aliquam quidditatem sive aliquid quod potest responderi ad quid. Sicut hoc ipsum quod est albus homo, est quoddam compositum ex subiecto et accidente; utrum scilicet albo homini sit quod quid erat esse ei in quantum huiusmodi.»

but in the definition of white it is necessary to include man, or the word ‘man’, or his definition, provided that man is the proper subject of white, or whatever its proper subject happens to be.¹⁰³

Fundamentally there are two types of predication: an example of the first one is ‘a man is white’. In this case ‘white’ is predicated accidentally of ‘man’ because in the definition and essence of man there is no reference to being white. Another kind of accidental unity is exemplified by the proposition ‘a white thing is a man’. In both cases, the predicate is accidental to the subject: it is accidental for a man to be white, and it is accidental for a white thing to be a man. In this second case the accidental inherence is given by the fact that in the definition of ‘white’ is necessary to make reference to the proper subject in which whiteness inheres, which is taken to be a man in this case. Aquinas wants to focus the attention on this second type of accidentality. This second type of accidental unity has a definition by addition (*ex additione*): to define the essence of the property ‘white’ requires a reference to the proper subject of inherence.

If defining the property ‘white’ requires a reference to its proper subject of inherence ‘man’, then there will be no real difference between the property ‘white’ and the composite ‘white man’:

(T10) It is evident that, if white has an essence and definition, it does not have a different one from that which belongs to white man; for since a subject is included in the definition of an accident, white must be defined in the same way that white man is, as has been stated. This is made clear as follows: white does not have a quiddity but only the thing of which it is predicated, man or white man.¹⁰⁴

It is clear, therefore, that if accidents such as being white possess an essence and a definition, this definition will not be really different from that of ‘white man’.

¹⁰³ *Exp. Met.*, VII, l. 3, n. 1319: «Quod autem aliquid dicatur alteri esse unum per accidens, est dupliciter, ut uno modo homo est albus, et alio modo album est homo. Horum enim aliud quidem est ex additione, aliud vero non. In definitione enim hominis non est necessarium quod addatur definitio albi, vel nomen eius; in definitione vero albi necesse est quod ponatur homo, vel nomen hominis, vel eius definitio, si homo proprium subiectum eius est, vel aliquid aliud quod est eius proprium subiectum. »

¹⁰⁴ *Exp. Met.*, VII, l. 3, n. 1322: «Item patet, quod si album habet quod quid erat esse et definitionem, non habet aliam quam illam quae est albi hominis: quia cum in definitione accidentis ponatur subiectum, oportet quod hoc modo definiatur album, sicut albus homo, ut dictum est. Et hoc sic patet: quia hoc quod est album non habet quod quid erat esse, sed solum hoc de quo dicitur, scilicet homo vel homo albus.»

In (T9) Aquinas is assuming that a man is the proper subject of inherence of the property 'white' just for the sake of the argument. This is not really the case, since the proper subject of inherence of the colour 'white' is not a substance but a surface.¹⁰⁵ What matters for Aquinas here is not so much the discussion of the proper subject of inherence of the property 'white', but the assumption that every accident, *qua* accident, cannot be defined without a reference to its proper subject of inherence and therefore, it cannot be said to have an essence independently from the subject of inherence. Therefore, accidents do not seem to qualify as possessors of a proper essence independently from the essence of the composite (white man) or the subject (man).

There is an apparent problem with Aquinas's identification of the essence of white with the essence of a white man. The way in which the subject 'man' is present in the definition of 'white man' and the way in which it is present in the definition of 'white' seem to be considerably different. In the first case 'man' is directly and properly part of the definition and essence of 'white man'. In the case of 'white', conversely, the subject 'man' (taken for granted that 'man' is the proper subject) seems not to be present. When we want to define the property 'white', we are considering it in *abstraction* from its proper subject of inherence.

Nevertheless, as Gabriele Galluzzo has pointed out, Aquinas's point here is precisely that the 'abstract' way of considering accidents, that is, to consider them as properties independently from their inhering in a substance, is not the right way to think about them when we have to define them.¹⁰⁶ For example, an accident like whiteness is appropriately defined not in abstraction from its subject of inherence, but only in terms of a thing having a certain property, like 'white man'. This is because whiteness as an accident taken abstractly does not enjoy any independent existence. From an *existential* point of view there are only things that possess property of being white like 'white man' or 'white surface'. Of course, there is nothing illegitimate in itself in defining a property as taken in the abstract way. But in that case, the subject of inherence will still be present, even if only indirectly, in the definition. For example, the definition of 'whiteness' will make an indirect reference to 'surface' even if 'surface' is external to the essence 'whiteness'. The question about which kinds of things can be said to possess an essence is a question about the ontological status of actual things in reality and, from this point of view, there is no

¹⁰⁵ *Exp. Met.* VII, l.3, n.1311.

¹⁰⁶ Galluzzo (2013), p. 262.

difference between the essence ‘whiteness’ and ‘white man’, because whiteness only exists as inhering in a white thing.

If accidents cannot be said to have a proper essence independently from the essence of the compounds, the next step of Aquinas’s investigation is to ask whether these compounds such as a white man can be said to have a proper essence.

Once again, according to the logical approach, asking whether composite realities such as a white man have essences is the same thing as to ask whether there is a proper and complete answer to the question ‘what is a white man?’. It seems reasonable to think that, after all, there is such an answer so that a white man will have an essence. Following Aristotle, Aquinas points out that this idea would sound even more plausible, if we signify the composite thing ‘a white man’ with a single term.

As he writes:

(T11) And since someone might perhaps say that white man is two things and not one, he therefore adds that white man might have one name, say, *garment*. The question about this one thing, then, i.e., garment, will be whether it has any whatness, so that we can say what a garment is. For then just as this word *man* signifies some composite, namely, rational animal, in like manner the word *garment* signifies some composite, namely, white man. And thus just as man has a definition, in a similar way it seems that garment can have a definition.¹⁰⁷

Aquinas considers an easy negative answer to the question of whether compounds such as a white man have an essence. The negative answer would be based on the idea that white and man are *two* things and not one. But let’s assume that the composite thing ‘white man’ can be signified through the single term *garment*. It seems entirely plausible to ask, ‘what is a garment?’. For just as ‘man’ signifies a composite, i.e., rational animal, so ‘garment’ would signify a composite, i.e., white man. So there is no stronger reason to deny that ‘white man’ has a definition than to deny that ‘man’ has a definition.

¹⁰⁷ *Exp. Met.*, VII, l. 3, n. 1317: «Et quia forte aliquis posset dicere quod albus homo sunt duae res et non una, ideo subiungit, quod hoc ipsum quod dico albus homo, habeat unum nomen quod causa exempli sit vestis. Et tunc quaestio erit de isto uno, scilicet de veste, utrum habeat quod quid est, ut possimus dicere quid est vestem esse? Tunc enim, sicut hoc nomen homo significat aliquid compositum, scilicet animal rationale, ita et vestis significat aliquid compositum, scilicet hominem album. Et ita sicut homo habet definitionem, ita vestis poterit habere definitionem, sicut videtur.»

A composite such as a white man differs from the quality ‘white’ (*aliquale*), because it is something determinate (*aliquid*) and, therefore, seems to be a suitable candidate for being the possessor of an essence. The weakness of this argument, though, is pointed out by Aquinas:

(T11) [Aristotle] says that *white man*, or *garment*, which is supposed to stand for “white man” is not one of those terms which are predicated essentially but is rather one of those which are predicated accidentally; for a white man is one thing accidentally and not essentially, as was stated above.¹⁰⁸

Our analysis of Aquinas’s logical approach to essence and *per se* predications has already pointed out a fundamental difference between simple things like man and composites one like a white man. The first seem to have a proper, *per se* unity: this is showed by the fact that when I predicate the essence ‘rational animal’ of ‘man’ I predicate it in a *per se* mode. Conversely, a white man does not present this *per se* unity, but only a *per accidens* one: the quality ‘white’ and the subject ‘man’ are two different things. I can say what a ‘man’ is without making any reference to the quality ‘white’. Appealing to the fact that ‘white man’ could technically be reduced to a single term such as ‘garment’ does not eliminate the fundamental difference between an accidental unity and an essential unity.

The difference relevant here is once again one that has been established through the *Predicative Simplicity Criterion*: ‘white man’ implies a predicatively complex structure in which something Y (‘white’) is said of something else X (‘man’). A predicatively complex structure is a structure that lacks a genuine unity between subject and predicate. The predicate ‘white’ is not predicated *intrinsically* of the subject ‘man’. Therefore, not having an internal predicative unity, a composite thing such as a white man, cannot even have a genuine unity with the attribute Y.¹⁰⁹

108 *Exp. Met.*, VII, l. 3, n. 1318: «Dicit ergo primo, quod hoc ipsum quod dico, *albus homo*, sive *vestis* quae hoc ponitur significare, non est aliquod eorum quae dicuntur secundum se, immo est aliquid eorum quae dicuntur per accidens. Hoc enim, quod est, homo albus, est unum per accidens, et non per se, ut superius est habitum.»

¹⁰⁹ It is important to bear in mind that a case such as the composite ‘white man’ is logically different from the case of a genus-differentia composite such as ‘rational animal’. I will discuss in depth the problem in Chapter 3.

An accidental composite, therefore, lacks a sufficient degree of unity for having a proper essence. Aquinas makes this point:

(T12) The fact that essence belongs only to something is shown as follows: the essence of a thing is what that thing is; being the whatness of a thing, means being a-something. Hence those things which do not signify something do not have an essence. But when something is predicated of another as an accident is predicated of a subject, this is not some definite thing. For example, when I say “a man is white” I do not signify that it is some definite thing, but that it is of some quality. For to be some definite thing belongs to substances alone.¹¹⁰

Here Aquinas is connecting the feature of predicative simplicity and internal unity with another feature, that is, being a *something* (*aliquid*). If the essence of a thing coincides with the whatness of a thing (as established by the PSC), it follows that only a something (*aliquid*) can be said to have an essence. Despite the appearances, a composite such as a white man does not have the internal unity that makes it a determinate thing (*aliquid*). The notion of *aliquid* connects the criteria of unity and simplicity with the criterion of *something determinate*.

This notion of *aliquid* was already present in his *Commentary* on Z 3, where Aquinas sets two criteria for the status of substancehood: being something determinate (*hoc aliquid*) and separable (*separabile*).¹¹¹ A substance must enjoy a complete and independent existence. In Z 3 Aquinas refers to substance not simply as *aliquid*, but as *hoc aliquid*, i.e., *this something*, highlighting the fact that it is a particular object.

The term *aliquid* in (T12) and its association with the idea of substance points out the theoretical connection between Aquinas’s approach to substance with the one developed by Aristotle in the *Categories*: a substance is a particular physical thing that is *primary*, in virtue of its existential independence and completeness. A primary substance is what grounds the existence of all the other properties that inhere in it.

¹¹⁰ *Exp. Met.*, VII, l. 3, n. 1323: «Et quod id quod quid erat esse, non sit nisi eius quod est aliquid, ex hoc patet: quod quidem quid erat esse, est quod aliquid erat esse. Esse enim quid, significat esse aliquid. Unde illa quae non significant aliquid, non habent quod quid erat esse. Sed quando aliquid de aliquo dicitur, ut accidens de subiecto, non est hoc aliquid: sicut cum dico, homo est albus, non significatur quod sit hoc aliquid, sed quod sit quale. Esse enim hoc aliquid convenit solis substantiis.»

¹¹¹ *Exp. Met.*, VII, l.2, n. 1229.

We have seen that the idea of existential dependence was already implied in the *reductio* operated by Aquinas between accidents and accidental compounds. A predicatively complex structure involves always a relation of existential dependence between some X and some Y. The thing Y is, therefore, a more fundamental entity on which X depends. Y is, therefore, a *hoc aliquid*.

What is valid for whiteness is also valid for a white man. ‘White man’ does not have the internal unity spelled out by the PSC, so it cannot have the existential independence of a *hoc aliquid*. These independent and fundamental entities are substances. Therefore, the only things that can be said to have an essence are substances (*substantiis*).¹¹²

This identification between the doctrine of substance articulated in Z 4 and Aristotle’s doctrine in the *Categories* makes Aquinas’s reading of book Z fundamentally at odds with the one of almost every contemporary Aristotelian scholar. As we will see more in detail in the next Chapter, this is due to the fact that Aristotle already from Z 3 seems to abandon the notion of substance embraced in *Cat.* 2a11–19; 3a8–10, which was articulated on the basis of the *Subjecthood Criterion*: primary substance has to be identified with the ultimate subject of predications.¹¹³

In interpreting *Met. Z*, Aquinas, instead, does not see Aristotle operating under any substantial modification of the position given in the *Categories*, and, therefore, embraces an extreme compatibilist view.¹¹⁴

In Aquinas’s extreme compatibilist reading, the *Subjecthood Criterion* of the *Categories* and the *Predicative Simplicity Criterion* are harmoniously integrated. This clearly emerges already in Aquinas’s *Commentary* on Z 3.

¹¹² It must be noticed the coherence of Aquinas so called quasi-definition of substance given *In. Sent.* IV, d. 12, q. 1, a. 1 with what I am articulating here. There, Aquinas defines a substance as ‘that which has a quiddity to which it belongs to exist not in another.’ On this text see Gilson (1974); Doolan (2012). On Aquinas’s theory of substance see Wippel (2000) pp. 197-228.

¹¹³ In *Met. Z* 3, Aristotle in introducing the hylomorphic analysis seems to give the primary role of substantiality to form, in virtue of its ontological priority. On this question in Aristotle, see Wedin (2000); Peramatzis (2011). On Aquinas’s solution to this problem in book Z, see Galluzzo (2013) pp.245-249. We will deal in more depth with the question of the hylomorphic analysis and its relationship with this problem in Aristotle and Aquinas in Chapter 3.

¹¹⁴ Among Aristotle’s scholars, there are different ways to account for a less strong compatibility between the doctrines of the *Categories* and *Metaphysics*. For example, see Wedin (2000) and Burnyeat (2001).

He writes:

(T13) Hence [Aristotle] concludes that it is necessary to establish the truth *about this*, i.e., about this subject or first substance, because such a subject seems in the truest sense to be substance. Therefore in the *Categories* it is said that such substance is said to be substance properly, primarily and maximally. For substances of this kind are by their very nature the subjects of all other things (...). And secondary substances also have this nature only by reason of these first substances; for man is white inasmuch as *this* man is white. Hence it is evident that the division of substance given here is almost the same as that given in the *Categories*, for by subject here is understood first substance.¹¹⁵

Here, the *Subjecthood Criterion* of the *Categories* is reestablished as still at work in the articulation of substancehood in the *Metaphysics*: in searching for the ultimate subject of all the predications, this criterion is able to identify the things that ground the existence of all the other properties that inhere in them. In doing this, it identifies what is said to be substance *primarily* and *maximally*. First substance, therefore, as spelled out in the *Categories*, is the concrete, particular physical thing.

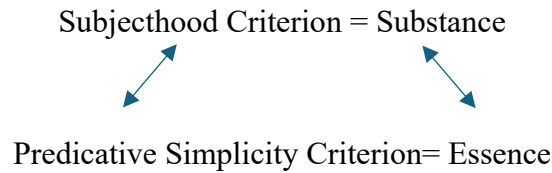
Aquinas's point here is confirmed by our analysis of his *Commentary* on Z 4. As we have just seen, Aquinas uses the *Predicative Simplicity Criterion* in conjunction with the idea of existential independence implied in the expression *hoc aliquid*. The idea of existential independence is exactly what is spelled out by the *Subjecthood Criterion* of the *Categories*.

Only what is the subject of all the other predications and is not predicated of anything else can be said to have a genuine *predicatively simple* structure. At the same time, only what has a predicatively simple structure can be said to have internal unity. Therefore, only primary substances, that is, only things that enjoy a fundamental and independent existence, can be said to have a genuine *internal unity*, that is, the condition for something to have an *essence*. Nevertheless, if only primary substances can be said to have an

¹¹⁵ *Exp. Met.*, VII, l. 2, n. 1274-1275: «Unde concludit quod determinandum est *de hoc*, idest de subiecto vel de substantia prima, quia tale subiectum maxime videtur substantia esse. Unde in *Praedicamentis* dicitur quod talis substantia est quae proprie et principaliter et maxime dicitur. Huiusmodi enim secundum se omnibus aliis substant (...). Et hoc etiam non habent nisi ratione primarum. Homo enim est albus in quantum hic homo est albus. Unde patet quod fere eadem est divisio substantiae hic posita, cum illa quae ponitur in *Praedicamentis*. Nam per subiectum intelligitur hic substantia prima »

essence, this does not make them the proper object of definition: a particular substance does not have an essence *qua* particular but possesses an essence that makes it a member of a determined species. The essence spelled out by the definition, therefore, will be the essence of the universal subject ‘man’ (the species).¹¹⁶

Having said that, we can schematically express the mutual interdependence of these two principles in Aquinas as follows:



At the core of Aquinas’s theoretical framework, there is his account of the relationship between logic and metaphysics that we have shown in the articulation of his *modus logicus*.

This is confirmed by the fact that, as Gregory Doolan has pointed out, when Aquinas has to derive the articulation of the Aristotelian categories, he applies the same *modus logicus* of Z 4: through the analysis and division of different kinds of ‘denominative’ predication, treated as effects or *per se* accidents of being *qua* being, he reasons back to their proper cause, i.e., the different categories of accidents that divide real being. Denominative predications are that type of predications that involve the inherence of a distinct nature in a subject.¹¹⁷ For example: ‘man is white’. Denominative predications, therefore, are the accidental predications that we have analyzed as predicatively complex structures. Denominative predications, in their different modes, reveal how accidents, in their different modes, are really distinct in nature from substance. Substance is instead revealed, as the *Subjecthood Criterion* establishes, from what stands as the ultimate subject of which everything is predicated.

¹¹⁶ Aquinas’s notion of *hoc aliquid* as an individual object that is a full-fledged member of a natural kind, is nicely articulated by Galluzzo (2007), pp.438-450. As Galluzzo notices, Aquinas does not situate essence into the division of the *Categories*, essence is neither a primary substance (individual) nor a secondary substance (genus and species) but is the formal internal principle of an individual (primary substance) that makes the individual being part of a species (secondary substance). Therefore, if primary substances are the ground of secondary substances, the essence is the ontological principle of both.

¹¹⁷ Doolan (2019), pp. 677-680. Aquinas’s derivation of modes of being (categories) from mode of predications can be found in *In Phys.* III, l.5, n.15 and *Exp. Met.* V, l. 9., n.15

In Aquinas's methodology for the derivation of the categories of being we see an application of the *modus logicus*: deriving conclusions about modes of being from modes of predication. Moreover, in using this methodology, we can see that Aquinas also in this case integrates what we called the *Predicative Simplicity Criterion* and the *Subjecthood Criterion*: the former is involved in the analysis of the different modes of denominative predications, which are predicatively complex predications that involve a reference to a subject of inherence, the latter is involved in the identification of this subject of inherence with a substance.

Overall, this strongly joint reading of Aristotle's analysis of substance in the *Categories* and in the *Metaphysics* depends upon Aquinas's original theoretical elaboration of what Aristotle means by logical method. This method is applied by Aquinas both in his interpretation of the division of being of the *Categories* and in the enquiry regarding essence in his *Commentary on Metaphysics Z*.

The logical approach to essence therefore, far from being simply focused on an approach to essence that would tend to attribute an essence to everything of which the question 'what is it?' can be asked, is able to arrive at the ontological solution of the problem of what things have essences.¹¹⁸ Only substances have essence.

At this point, we can also understand that Aquinas operates with a joint reading of the two questions of Z 4, 'what is an essence?' and 'what things have an essence?': the *Predicative Simplicity Criterion* is what sets the solution to both problems.

5. The Inclusive Reading

After having given his own elaboration of what the exegetes have called the 'exclusive' solution of Aristotle in Z 4 (only substances have essences), Aquinas integrates it with a more 'inclusive' view of the problem of the essence of accidents and accidental compounds. This inclusive solution is somehow based on a reevaluation of the idea that an essence can be attributed to whatever about which an answer to the question 'what is it?' can be given.

¹¹⁸ It should be noticed that Aquinas explicitly rejects a simple identification of what things have essences with the things of which we can ask 'what it is?'. See *Exp. Met.*, VII, l.4, n.1325-1327.

As Aquinas writes:

(T14) For the fact that it belongs to the others *in some sense*, i.e., in a qualified sense, is clear from the fact that in each of the other categories some reply may be made to the question "what is it" For we ask of what sort a thing is, or what its quality is, as "what is whiteness?" and we answer, "color". Hence it is evident that quality is one of the many things in which whatness is found.¹¹⁹

Nevertheless, in Aquinas's perspective, this reevaluation should not be read as contradictory with what has been previously established. Properly speaking, only substances can be said to have an essence. As a matter of fact, Aquinas points out that the whatness of a thing can be found in accidents only in a qualified sense. There is a secondary sense, therefore, in which also accidents and accidental compounds can be said to have an essence.

This distinction about different ways of having an essence corresponds to different ways of conceiving essence and definition:

(T15) Aristotle says, first, that it is necessary to say, as was stated in the foregoing solution, that there is no definition and whatness of accidents but only of substances; or according to another solution it is necessary to say that the terms 'definition' and 'whatness' are used in many senses. For in one sense 'whatness' signifies substance and this determinate thing, and in another sense, it signifies each of the other categories, such as quantity, quality and the like. Moreover, just as being is said to belong to all the other categories, although not in the same way, but primarily to substance and secondarily to the others, in a similar fashion whatness belongs in an unqualified sense to substance, but *in another sense to the others*, i.e., in a qualified sense.¹²⁰

¹¹⁹ *Exp. Met.*, VII, l. 4, n.1332: «Quod enim *aliquo modo*, idest secundum quid, aliis conveniat quid est, ex hoc patet, quod in singulis praedicamentis respondetur aliquid ad quaestionem factam per quid. Interrogamus enim de quali sive qualitate quid est, sicut quid est albedo, et respondemus quod est color. Unde patet, quod qualitas est de numero eorum, in quibus est quod quid est.»

¹²⁰ *Exp. Met.*, VII, l. 4, n.1331: «Dicit ergo primo, quod dicendum est, sicut in praedicta solutione est dictum, quod quod quid est et definitio non sit accidentium, sed substantiarum: aut oportet secundum alium modum solvendi dicere, quod definitio dicitur multipliciter sicut et quod quid est. Ipsum enim quod quid est, uno modo significat substantiam et hoc aliquid. Alio modo significat singula aliorum praedicamentorum, sicut qualitatem et quantitatem et alia huiusmodi talia. Sicut autem ens praedicatur de omnibus praedicamentis, non autem similiter, sed primum de substantia, et per posterius de aliis praedicamentis, ita et quod quid est, simpliciter convenit substantiae, *aliis autem alio modo*, idest secundum quid.»

The solution previously established (only substances have essences) must be specified in the following way: an essence properly and primarily pertains only to substances; in a secondary and derivative way, though, it pertains also to the accidents that are parts of the categories of being. This depends upon the fact that the *existential* dependence on substance that accidents have is also mirrored by a corresponding *essential* dependence. As being is said to pertain primarily to substance and secondarily to accidents that depend on it for their being, in the same way an essence is said to pertain primarily to substance and secondarily to accidents. Accidents have their own essence, but this essence is only secondary and dependent upon the primary and proper essence of the substance.

As Aquinas explains:

(T16) However, a quality does not have whatness in an unqualified sense but the whatness of a quality. For when I ask what man is, and one answers "animal", the term 'animal', since it belongs in the genus of substance, not only designates what man is, but also designates a what, i.e., a substance, in an unqualified sense. But when one asks what whiteness is, and someone answers "colour" this word, even though it signifies what whiteness is, does not signify what something is in an unqualified sense, but of what sort it is. Hence a quality does not have whatness in an unqualified sense, but with some qualification. For this kind of whatness is found in quality, as when we say that colour is the whatness of whiteness; and this kind of whatness is substantial rather than substance.¹²¹

We can see here the inclusive perspective from which an essence can be attributed to any kind of thing of which the question 'what is it?' has an answer. Nevertheless, the reevaluation of the idea that accidents have somehow an essence is only possible through embracing the ontological perspective that distinguishes different degrees of essence as parallel to the different existential status of substance and accidents.

¹²¹ *Exp. Met.*, VII, l. 4, n.1333: «Non tamen simpliciter in qualitate est quid est, sed quid est qualitatis. Cum enim quaero quid est homo, et respondetur, animal; animal, quia est in genere substantiae, non solum dicit quid est homo, sed etiam absolute significat quid, id est substantiam. Sed cum quaeritur quid est albedo, et respondetur, color, licet significet quid est albedo, non tamen absolute significat quid, sed quale. Et ideo qualitas non habet quid simpliciter, sed secundum quid. Invenitur enim in qualitate quid huiusmodi, ut cum dicimus quod color est quid albedinis. Et hoc quid, magis est substantiale quam substantia.»

The idea of different degrees of definition and essence is associated by Aquinas with an analogical structure that characterizes the relationship between substance and the other categories:

(T17) For by reason of the fact that all the other categories get the notion of being from substance, the mode of being of substance, i.e., being a what, is therefore participated in by all the other categories according to a certain proportional likeness; for example, we say that, just as animal is the whatness of man, in a similar fashion color is the whatness of whiteness, and number the whatness of double; and in this way we say that quality has whatness, not whatness in an unqualified sense, but a whatness of a particular mode.¹²²

As all the other categories are said to have being from substance, they are also said to have essence from substance. The being and essence of the substance will be unqualified, whilst the being and essence of accidents will be qualified and relative. There will be an analogical proportion. This structure is spelled out by Aquinas:

(T18) For the truth is that whatness and definition are not predicated of substance and accidents either equivocally or unqualifiedly and according to the same meaning, i.e., univocally, but as the term ‘medical’ is predicated of different particulars in reference to one and the same thing, although it does not signify one and the same thing in the case of all the things of which it is predicated; nor is it also predicated equivocally. For a body is said to be medical because it is the subject of the art of medicine, and an activity is said to be medical because it is performed by the art of medicine, as purging; and an instrument, such as a syringe, is said to be medical because it is used by the art of medicine. Thus, it is clear that the term ‘medical’ is not used in a purely equivocal sense of these three things, since equivocal things have no relationship to some one thing. Nor again it is used univocally according to the same meaning, for the term ‘medical’ is not predicated in the same sense of one who uses the art of medicine and of something that assists the art of medicine to produce its effect, but it is predicated analogically in reference to one thing, namely, to the art of medicine. And similarly, essence and definition are not predicated of

¹²² *Exp. Met.*, VII, l. 4, n. 1334: «Propter hoc enim quod omnia alia praedicamenta habent rationem entis a substantia, ideo modus entitatis substantiae, scilicet esse quid, participatur secundum quamdam similitudinem proportionis in omnibus aliis praedicamentis; ut dicamus, quod sicut animal est quid hominis, ita color albedinis, et numerus dualitatis; et ita dicimus qualitatem habere quid non simpliciter, sed huius.»

substance and accident either equivocally or univocally, but in reference to one thing. For they are predicated of an accident in relation to substance, as has been explained.¹²³

Aquinas reconstructs here this analogical relation. Essence and definition are not said univocally of substance and accidents, but neither equivocally. The essence of accidents is said only *analogically* with respect to the essence of substances. This type of analogy is called by Aquinas analogy of proportion or attribution.¹²⁴ It consists in the fact that the different meanings of essence that are attributed to accidents are organized around the core meaning of essence established by substance. The ontological priority of the substance is associated with a certain ontological multiplicity. Aquinas quotes Aristotle's example of the predication 'medical', which is said analogically of different things by virtue of their reference to a core meaning, i.e., the art of medicine. In the same way the essence of substance will be the principal analogate of the essence of accidents.

Accidents will be said to have an essence only insofar as this essence has a reference to the proper and primary essence of the substance in which they inhere. We can see here how substance and accidents bear a relation both of existential and essential dependence: an accident is said to have being only in reference to the being of the substance in which it inheres; likewise, an accident is said to have an essence only in reference to the essence of the substance in which it inheres.

It is clear how, in Aquinas's perspective, this new solution to the problem of the essence of accidents is only a qualification of the *Exclusive Reading* that we have

¹²³ *Exp. Met.*, VII, l. 4, n. 1337: «Non enim est rectum quod quod quid est et definitio dicatur de substantia et de accidentibus, neque aequivoce, neque simpliciter et eodem modo, idest univoce. Sed sicut medicabile dicitur de diversis particularibus per respectum ad unum et idem, non tamen significat unum et idem de omnibus de quibus dicitur, nec etiam dicitur aequivoce. Dicitur enim corpus medicabile, quia est subiectum medicinae; et opus medicabile, quia exercetur a medicina, ut purgatio et vas medicinale, quia eo utitur medicina, ut clystere. Et sic patet quod non dicitur omnino aequivoce medicinale de his tribus, cum in aequivocis non habeatur respectus ad aliquod unum. Nec iterum univoce dicitur secundum unam rationem. Non enim est eadem ratio secundum quam dicitur medicinale id quo utitur medicina, et quod facit medicinam. Sed dicitur analogice per respectum ad unum, scilicet ad medicinam. Et similiter quod quid est et definitio, non dicitur nec aequivoce nec univoce, de substantia et accidente, sed per respectum ad unum. Dicitur enim de accidente in respectu ad substantiam, ut dictum est.»

¹²⁴ Aristotle does not use the word 'analogy' to refer to this structure but uses the notion of 'homonymy pros hen' (towards one). On this see Shields (1999). On Aquinas's theory of analogy, the literature is immense. One can look at Montaignes (2004),; McNerny (1971); Ashworth (1991), Dewan (2006). A brilliant defense of Cardinal Cajetan's interpretation of Aquinas's doctrine of analogy can be found in Hochschild (2010). A historical investigation on the reception of Aquinas's doctrine of analogy in the Thomistic and Scotistic tradition is D'Ettore (2018).

presented in the previous section. It remains true that properly and primarily only substances have an essence. In a secondary and qualified way, though, accidents also have an essence.

This solution is coherently applied by Aquinas to the features of the definition and essence of accidents and accidental compounds. Accidents like ‘white’ and accidental compounds such as ‘white surface’, having only a secondary type of essence, have only a secondary type of definition (*secundum quid*). The secondary character of these definitions will consist in the fact that they will be definitions *by addition*.

As Aquinas writes:

(T19) Hence "in one sense," i.e., primarily and without qualification, only substance will have a definition, and only substance will have an essence. "And in another sense," i.e., secondarily and with some qualification, the other categories will also have a definition. For substance, which has a quiddity in the absolute sense, does not depend on something else so far as its quiddity is concerned. An accident depends on its subject, however, although a subject does not belong to the essence of its accident (in much the same way as a creature depends on the creator, yet the creator does not belong to the essence of the creature), so that an extrinsic essence must be placed in its definition. In fact, accidents have being only by reason of the fact that they inhere in a subject, and therefore their quiddity depends on their subject. Hence a subject must be given in the definition of an accident at one time directly and at another, indirectly.¹²⁵

Aquinas draws an analogy with the relation of dependence between God and a created reality: as the creature depends existentially on the Creator so accidents depend existentially on a substance in which they inhere. Moreover, just like the Creator does not belong to the essence of the creature, so the substance does not belong to the essence of the accident. The structure of the secondary types of definition of accidents, namely a

¹²⁵ *Exp. Met.*, VII, 1.4, n. 1352: «Quare *sic quidem*, idest simpliciter per prius, nullius erit definitio nisi substantiae, nec etiam quod quid erat esse. *Sic autem*, idest secundum quid et posterius, erit etiam aliorum. Substantia enim quae habet quidditatem absolutam, non dependet in sua quidditate ex alio. Accidens autem dependet a subiecto, licet subiectum non sit de essentia accidentis; sicut creatura dependet a creatore et tamen creator non est de essentia creaturae, ita quod oporteat exteriorem essentiam in eius definitione poni. Accidentia vero non habent esse nisi per hoc quod insunt subiecto: et ideo eorum quidditas est dependens a subiecto: et propter hoc oportet quod subiectum in accidentis definitione ponatur, quandoque quidem in recto, quandoque vero in obliquo.»

definition by addition, makes evident the existential and essential dependence that accidents have on substance. The property ‘white’ could be said to have a secondary essence since it will be definable always and only in reference to the proper essence of the substance in which it inheres. A definition by addition, therefore, reveals a predicatively complex structure: in a definition by addition an essence X can be spelled out only through a reference to another essence Y on which it depends. In the case of the essence of an accidental unity such as ‘white surface’ there will be a direct reference to an external essence, ‘surface’. In the case of an abstract accident such as ‘whiteness’ the reference to the external essence of ‘surface’, which is its proper subject of inherence, is only indirect. The reference is spelled out in an oblique/genitive case: the whiteness is always the whiteness *of* a surface. The necessity of making reference to another nature external to the thing defined, is exactly what characterizes denominative predications. As a matter of fact, denominative predications are classified by Aquinas as accidental predications.

Aquinas’s interpretation of Aristotle’s solution is, therefore, coherently structured: only substances have primary essence and definition, which can be predicated *per se₁* of a subject. Accidents and accidental compounds have only a secondary type of essence and definition, a definition by addition that will always involve a predicative complex structure, since the definition will always make reference to a subject that is external to the essence of the accident defined.¹²⁶

6. Conclusion

We can briefly resume the discussion of this chapter. I have analysed Aquinas’s approach to the problem of essence in *Met. Z 4*. The problem of essence was focused on two questions: i) what is an essence? ii) what things have essence?

Aquinas’s answer to the first question is centred on the logical approach that identifies an essence in terms of *per se₁* predications. In integrating Aquinas’s approach with some texts from his Commentary on *Posterior Analytics*, I was able to identify six necessary conditions for something X to be the essence of Y. All these criteria were drawn from logical-definitional principles and have been sum up under what I have called the *Predicative Simplicity Criterion* (PSC).

¹²⁶ A definition of an accidental property, therefore, will involve a case of *per se₂* predication.

I have considered the objections of Charlotte Witt regarding the logical approach to essence of Z4 and I have tried to answer them from Aquinas's point of view. In order to fully answer Witt's concerns about a certain circularity between the logical and the ontological level, I have integrated Aquinas's *Commentary on Z 4* with a passage from *S.C.G.* II, 58. I have shown the passage from *S.C.G.* displays a proper application of Aquinas's logical method sketched out in Chapter 1: starting from the logical reality of *per se* predications, Aquinas argues for the unity of essence as an ontological principle. I have called this argument the *Predicative Simplicity Argument* (PSA). In this way, I was able to give a full account of Aquinas's approach to essence as based on *per se* predications.

The answer to the second question (what things have essence?) has been analysed in terms of a twofold solution: an exclusive reading and an inclusive reading.

According to Aquinas's exclusive reading, only substances can be said to have an essence. I have shown how Aquinas develops this point in logical terms as well, by using with the *Predicative Simplicity Criterion* (PSC) complemented with what I have called the *Subjecthood Criterion* (SC).

I have then presented the inclusive reading, in which Aquinas develops the idea that, even if it remains true that in a proper sense only substances can be said to have an essence, accidents and accidental compounds can be said to have an essence in a secondary sense. This solution is based on Aquinas's use of the analogy of attribution that establishes a relation of existential and essential dependence between the proper essence of substance and the secondary essence of accidents. Finally, the secondary essence of accidents and accidental compounds is logically translated in the fact that they possess only a secondary type of definition, i.e., a definition by addition.

Chapter 3

Hylomorphic Analysis

1. Introduction

In Chapter 1 I have introduced Aquinas's interpretation of Aristotle's logical method in Z 4. We have seen that, in Aquinas's perspective, this is a proper metaphysical method that uses logical tools as starting points of the enquiry about the problem of essence.

In Chapter 2 I have presented a concrete application of this method to the issue of real definitions. These are characterized in terms of the logical notion of *per se* predications (*per se I*). I have shown that the connection between real definitions and *per se* predications is grounded in an ontology of essences conceived of as simple unities that function as ontological principles of things.

In this Chapter, I will deal with Aquinas's *Commentary on Met. Z* 10 and 11. There, Aristotle treats the problem of the parts of the definition of a sensible substance. In presenting Aquinas's interpretation, I will particularly focus on the following problem: how is it possible that the essence of sensible substances is a simple unified reality, and, at the same time, is composed of a plurality of parts, namely matter and form?

The introduction of the notions of matter and form will also lead us to examine in depth certain pivotal aspects of Aquinas's hylomorphic ontology in its relationship with the problem of his logical approach to essence.

In Sections 2 and 3 I introduce the problem of the parts of the definition starting from a brief overview of Aristotle's Z 10 and 11. In Sections 4 and 5 I will present the contemporary debate about Z 10-11 among Aristotelian interpreters, highlighting two different approaches: the so called 'purist' account and the 'impurist' account. Situating Aquinas in this debate will give us a heuristically useful point of view for a correct grasp of his hylomorphic analysis of substance and essence. In Section 6 I will elucidate Aquinas's interpretation of Z 10-11 and its original theoretical elaboration, integrating his *Commentary on Z* 10-11 with the insights coming from his early work *De Ente et Essentia* (c. 1252-1256): the two texts display a fundamental theoretical continuity. Having established the theoretical framework of Aquinas's interpretation, in Sections 7, 8 and 9 I will critically compare it both with the purist and impurist position, showing

how the originality of Aquinas's hylomorphic analysis differentiates him in some key respects from both the purist and the impurist interpreter. Finally, our analysis in this chapter will give us an answer to the problem of the relationship between the unity of essence and its hylomorphic composition, an answer that will be fully completed by the investigation of Chapter 4.¹²⁷

2. Essence, Definition and Their Parts

Following Aristotle at the beginning of Z 10, Aquinas introduces the idea of a plurality of parts related to the essence of a thing. He writes:

(T1) He accordingly says, first, that every "definition is the intelligible expression (*ratio*) of a thing," i.e., a certain combination of words arranged by reason (*per rationem*). For one word cannot constitute a definition, because a definition must convey a distinct knowledge of the real principles which come together to constitute a thing's essence; otherwise, a definition would not adequately expose a thing's essence (...) Now every intelligible expression has parts, because it is a composite utterance and not a simple word. Therefore, it seems that, just as the intelligible expression of a thing is related to the thing, so also are the parts of the intelligible expression related to the parts of the thing.¹²⁸

A real definition, Aquinas remarks, in order to properly express the essence of a thing, is structured as a combination of different words. This is due to the fact that a single word is not able to express the different principles that together constitute a thing's essence. A real definition, therefore, must be structured in different parts in order to reflect the essence as structured in different parts. There is a correlation, in Aquinas's perspective, between the parts of the definition and the parts or principles of the essence. What are these parts? The parts of a real definition, which Aquinas refers to in the passage above as «a certain combination of words arranged by reason», are *logical* parts: genus and

¹²⁷ A large part of this Chapter 3 has been accepted for publication in a summer issue of ACPQ.

¹²⁸ *Exp. Met.*, VII, l.9, n. 1460: «Dicit ergo primo, *quod omnis definitio est quaedam ratio*, idest quaedam compositio nominum per rationem ordinata. Unum enim nomen non potest esse definitio, quia definitio oportet quod distincte notificet principia rerum quae concurrunt ad essentiam rei constituendam; alias autem definitio non sufficienter manifestaret essentiam rei (...) Omnis autem ratio partes habet, quia est quaedam oratio composita, et non simplex nomen. Et ideo videtur quod sicut se habet ratio rei ad rem, ita se habent partes rationis ad partes rei.»

specific difference. For example, the logical parts of the definition of ‘human being’ are ‘animal’ (genus) and ‘rational’ (specific difference). The *ontological* parts, or principles, of the essence are matter and form. The problem of the parts of the definition and essence, therefore, introduces the problem of the hylomorphic analysis. Sensible essences, that is, the essences of sensible-material things, cannot be properly understood, in Aquinas’s perspective, without making reference to the principles of matter and form. In Aquinas’s account, the ontological parts and the logical parts are somehow related.

Since Aquinas’s theoretical account and his exegesis of Aristotle’s texts are tightly intertwined, I will start my investigation with a brief overview of Aristotle’s treatment of the parts of the definition in Z 10-11. I will highlight different interpretations of Aristotle’s view given by some contemporary scholars, as they will offer a fruitful heuristic starting point for the elucidation of the distinctive aspects of Aquinas’s own view.

3. Aristotle on Primary Definitions

Aristotle’s *Metaphysics* Z 10-11 introduce the problem of the parts of a definition and essence through the question of the object of the definition of a sensible substance. More precisely, following Michael Frede’s account,¹²⁹ one could read these two chapters as being concerned with two distinct but strictly related issues:

1. What is primarily definable?
2. What is contained in the definition of a sensible substance?

In order to answer the first question, one must formulate a criterion of definability. For Aristotle, definability hinges on the *Predicative Simplicity Criterion*. The primary object of a real definition should not be signified in a predicative complex structure of the type of something (X) said of something else (Y). The criterion is precisely the same as that used by Aquinas in his *Commentary* on Z 4. In this case too, the theoretical point behind this criterion has to do with the interrelation of logic and ontology. If an account of X’s being predicated of Y is required in order to give an account of X, this means that X has

¹²⁹ Frede (1990). The discussion is considered in Galluzzo (2013) p.102.

a relation of ontological dependency upon some other fundamental entity Y. Therefore, from the *Predicative Simplicity Criterion* it follows that only primary objects of definition can be primary objects ontologically.¹³⁰

As analyzed in the previous chapter, on the basis of this criterion we can dismiss accidents and accidental compounds as candidates for being primary objects of definition.¹³¹ Both accidents and accidental compounds possess predicatively complex structures since they are always analyzable in terms of ‘something being said of something else’. In order to account for the ‘what it is’ of an accidental compound like white-man, it is necessary to make reference to the subject ‘man’. An accident like ‘white’ will turn out to be always inherent in and dependent on a more fundamental entity, such as a surface.¹³² So accidents and accidental compounds cannot be the primary objects of definition.

In Aristotle’s perspective, from the *Predicative Simplicity Criterion* it also follows that a composite sensible substance cannot be the primary object of definition. Despite being objects with independent existence, Aristotle thinks that hylomorphic compounds also exhibit a predicative complex structure: in a sensible substance, form is predicated of a certain portion of matter.¹³³ So a sensible substance, being a composite, also fails to meet the *Predicative Simplicity Criterion* and thus cannot be taken as the primary object of definition.

Once hylomorphic compounds have been ruled out, the only two remaining candidates are matter and form. Since matter in itself is unknowable and undefinable,¹³⁴ the primary object of a definition can only be the form. The definition of a form is the

¹³⁰ Already in his discussion of the different candidates for the status of substance in Z3, Aristotle considers this relation between logic and ontology, where, when considering the subjecthood criterion, he links the character of being the ultimate subject of predication with the ontological independent existence of a substance.

¹³¹ Cf. pp. 44-54.

¹³² In the final part of Z5, Aristotle reaches the conclusion that accidents and accidental compounds can be said to have an essence and definition only in a derivative and secondary sense; these definitions are called definitions ‘by addition’ since they must include in the *definiens* something external to the *definiendum*. I have discussed Aquinas’s interpretation in Chapter 1.

¹³³ For this doctrine see Z 3, 1029 a32-35; Z 17,1041 b4–9; H2, 1043 a5–6; the doctrine of the form-matter predication is a very complicated one and has been extensively discussed. See Loux (1991); Lewis (1991). For other bibliographical references to the debate see Galluzzo, Mariani (2006) and Galluzzo (2013).

¹³⁴ Cf. Z 10,1036 a8.

only one that does not need to make reference to something external to it and therefore does not present a predicatively complex structure. This analysis answers the first question. This answer to this first question has been widely shared among interpreters.

The second question has been much more controversial among medieval and contemporary interpreters. Given that the primary object of definition is a form, what should be taken into account in the definition of a sensible object? More explicitly, should the definition of a sensible substance include *only* its form, or also its matter? In the following two sections, I present two different answers to this question: the ‘Purist’ account and the ‘Impurist’ account. According to the ‘Purist’ account, definitions of substances include only the form, which is in itself ‘pure’, i.e., does not contain any reference to the matter. According to the ‘Impurist’ account, definitions of substances involve also matter, since form is in itself matter-involving.

4. The Purist Account

In Z 10 (1034 b32-1035 b3) Aristotle seems to provide an answer to both our questions. Here Aristotle raises a general question concerning the parts of a definition: is it always the case that every part of a thing is present in the definition of that thing? His answer is negative: although in some cases the parts of a thing are present in its definition, this is not always true. For example, the parts of a circle (i.e. semi-circles) are not contained in the definition of a circle, whereas the parts of a syllable (i.e. the letters of which it is composed) are contained in its definition. This is because the parts of a circle are *material* parts of a circle, whereas the parts of a syllable are *formal* parts of a syllable. These examples reiterate a general point in Aristotle: the parts that enter a definition of a composite thing are its formal parts.

Aristotle continues to illustrate his view with the example of a statue, which can be considered under two different respects: as a form or as a composite of matter and form. However, the first consideration is the most fundamental since a form is the primary kind of substance. Moreover, although matter is a part of a composite substance, its form, which is the primary kind of substance and the primary object of definition, does not contain matter. Therefore, since defining a composite substance is defining its form, there is no reference to the material parts of a composite substance in its definition.¹³⁵

¹³⁵ Cf. Z 10, 1035 a1;1035 a22.

These passages from Z 10 are central to the ‘purist’ interpretation of Aristotle, and the purist position offers coherent and compact answers to our two questions. On the first question, the purist interpreter Michael Frede relies on these passages to argue that what is primarily and eminently definable is form alone.¹³⁶ On the second question, Frede argues that, when we define a sensible substance, we define its form. Since form is the only properly definable object, it is implied that the definitional account of a material substance must not consider its material aspects, but only its formal aspects: defining a composite means defining a form. The definition and essence of a sensible substance are considered in fact of a ‘secondary’ type—not in the sense that a sensible substance has a secondary definition and essence of its own, distinct from the primary definition of its form, but rather in the sense the definition of a composite is nothing else but the definition of its form. The analysis also suggests Aristotle’s solution to the problem of the unity and simplicity of the essence: fundamentally, as will be definitely established by Aristotle in Z 17, the essence is a unified and simple reality because it *coincides* with the form, so it does not contain in itself a plurality of parts or principles.

Frede’s interpretation has been labelled as purist because its central thrust is that form alone is the object of the definition and the essence of material substances. This is related to an ontology of *pure forms*: even though form and matter exist together in the sensible substances of the natural world, form considered *in itself* makes no reference to matter of any sort.

5. The Impurist account

The purist account is not the only answer to the question about what is contained in the definition of sensible substances in *Met. Z*. Some interpreters have developed an opposing view, which can be labelled impurist.¹³⁷ The impurist account denies that sensible substances are to be defined in terms of a ‘pure’ form, i.e., a form without any reference to matter.

In Z 11 (1036b21–32), Aristotle criticizes Socrates the Younger, who used an analogy between the definition of an animal and that of a circle to explain the problem of the parts of a definition of a sensible substance. This analogy suggests that an animal,

¹³⁶ Frede (1990).

¹³⁷ For a detailed exposition of this position see Peramatzis (2015).

just like a circle, can be defined without reference to its material parts. The analogy is considered misleading by Aristotle since it suggests a confusion about the distinction between geometrical objects and physical objects. With this remark Aristotle seems to criticize the tendency to reduce the definition of a composite object to its form alone, making it identical to a geometrical definition and undermining the relevance of matter.

This passage echoes a remarkable number of other texts in Aristotle's *corpus* that contain an analogous position concerning definitional accounts (esp. *Met.* E1): geometrical definitions must be distinguished from physical definitions on the basis of the presence of sensible matter in the latter.¹³⁸ Impurist readers can claim strong textual evidence for their position. But how do we reconcile these passages with Z 10 (1034 b32-1035 b3), which is so naturally interpreted along a purist point of view?

The solution proposed by David Charles, one of the main exponents of the impurist position, reads Aristotle's statement about the absence of matter (Z 10, 1037a24-34) as referring to matter taken in itself.¹³⁹ However, if we consider flesh not as matter in itself but as a *principle of form* involved in the definition, it is clear that matter, in this qualified sense, is part of the definition of a sensible substance because it is a principle of form.

From Charles's perspective, matter taken in itself refers to spatially divisible objects or portions of matter, for example portions of flesh that are parts of a human being. By contrast, matter taken as a principle of form accounts for the specific bodily or material *way* of being of a human. Therefore, according to Charles's impurist account, the «definition of man will contain expressions which refer to, for example, a human's bodily capacities or activities. This is because the form itself is, in its own nature, an essentially bodily (or enmattered) form.»¹⁴⁰

The impurist position implies that certain forms, i.e., natural forms, must contain a reference to a specific type of matter. Forms maintain their role as the proper objects of the definition of sensible substances. Furthermore, it is not the case that there is a primary definition of the form and a secondary definition of the compound; rather, the compound itself must be defined in terms of an impure form, enmattered in its essence, which is also the essence and the substance of the compound.

¹³⁸ Cf. *Met.* E1,1025b28–1026a6; *Met.* H2,1043a7–28 and 3,1043b23–24; *Phys.* B 2, 193b22–194a12; *De An.* A 1, 403a29–403b19.

¹³⁹ Charles (2021), p .60.

¹⁴⁰ *Ibid.*, p.46.

The two contrasting answers to the problem of the definition of a sensible substance are associated to significantly different conceptions of hylomorphism. The purist position maintains that a form has *no* intrinsic reference to matter, even if it always exists together with matter in the compound. The impurist position holds that a natural form cannot be fully defined without terms that explicitly refer to it as enmattered and it actually contains matter in its own essence.

Although both interpretations can appeal to specific pieces of textual evidence, both face theoretical difficulties.¹⁴¹

The purist view can be deemed as excessively Platonic in its approach, and, for this reason, unfaithful to Aristotle's intention. It also makes it difficult to distinguish geometrical and mathematical definitions from those of sensible substances.

On the other hand, the impurist view of natural forms as matter-involving is likewise open to serious criticism. First of all, given that an impure definition of a form would always imply some reference to materiality, it is not clear how this kind of definition could respect the predicative simplicity criterion of primary definitions and, therefore, account for the unity of the essence/form. The definition of a form that contains a reference to matter seems to present a predicative complex structure of the type 'X said of a Y'. Furthermore, the impurist account seems to lead to the conclusion that natural forms are themselves hylomorphic compounds, with the possible consequence of an infinite regress.¹⁴² Even if the impurist interpreter might find ways to counter these objections, the impurist account presents a significant risk of making hylomorphic analysis fundamentally confusing. If a natural form ends up being 'intrinsically' material, how are we to make sense of the distinction of the two principles of matter and form, and their different respective ontological and explanatory roles in a composite substance, at all?

¹⁴¹ With this sketch I obviously do not pretend to exhaust the complexity of positions and different interpretations on many details of Z 10 and 11. I focused the attention on the general purist-impurist distinction for its significant heuristic role in interpreting Aquinas's own position. For a detailed reconstruction of the different exegetical and theoretical positions concerning book Z, see Galluzzo, Mariani (2006). On the purist-impurist debate, see Meister (2020).

¹⁴² Peramatzis (2011) p.96 characterizes enmattered forms as hylomorphic compounds that have formal and material parts.

6. Aquinas on *Metaphysics* Z 3, 10 and 11

Keeping in mind these brief sketches of the purist and impurist interpretations of Z 10-11, we can now turn to Aquinas's own interpretation of the question of the definition and essence of sensible substances. Aquinas reiterates his theoretical position on sensible essences as stated in chapter 2 of his early work *De Ente et Essentia*. But in the *Commentary on the Metaphysics*, this position emerges from a careful reading of Aristotle's text: we see Aquinas both as an expositor and as an interpreter of Aristotle's view.¹⁴³ Textual and theoretical considerations are deeply linked.

Aquinas's general interpretative account of Z 10-11 cannot be fully comprehended without reference to three fundamental theoretical insights that function as a guide for the whole interpretation:

- a. The ontological and definitional primacy of the composite with respect to its form.
- b. The distinction between *form* and *essence* in material substances.
- c. The distinction between *common* and *individual* matter.

These three theoretical principles are strictly connected.

a. With regard to the first point, unlike what we have seen in some contemporary interpretations of *Met. Z* 10-11, we can say that Aquinas is not concerned with the question of what is primarily definable. He only focuses on the issue of the definition of sensible substances. Aquinas is engaged in a fundamentally different reading of book Z.

As we have seen in Chapter 2, already starting from his *Commentary* on Z 3, Aquinas embraces an extreme compatibilist view about the doctrine of substance articulated by Aristotle in the *Metaphysics* and in the *Categories*: what must be considered eminently as a substance is the concrete physical composite and not its form alone. In the *Categories*, Aristotle articulates the *Subjecthood Criterion*: a primary substance has to be identified with an ultimate subject of predication.¹⁴⁴ In interpreting *Met. Z* 3, Aquinas

¹⁴³ Cf. in particular Wippel (2007), pp.240-272.

¹⁴⁴ *Cat.* 5, 2a11-19; 3a8-10.

does not see Aristotle operating under any substantial modification of the *Subjecthood Criterion* in the *Categories*. On the contrary, the *Subjecthood Criterion* and the *Predicative Simplicity Criterion* are integrated by Aquinas in his *Commentary* on Z 4.¹⁴⁵

Many interpreters argue that Aristotle progressively drops the *Subjecthood Criterion* in Z 3 because it turns out to be insufficient after he has introduced hylomorphic analysis.¹⁴⁶ But Aquinas disagrees. In our reading, the *Subjecthood Criterion* allows us to identify the fundamental constituents of reality, namely, primary objects that possess a complete and independent existence, i.e. composites of matter and form, such as cats, trees and human beings. From Aquinas's perspective the *Subjecthood Criterion* of an independent and complete existence is prior to the explanatory criterion that Aristotle seems to introduce starting from Z 3.¹⁴⁷

Aquinas does not simply overlook the explanatory criterion or ignore Aristotle's ascription of substantiality also to matter and form; for Aquinas, matter and form are said to be substance, but only in an *analogous* way. In particular, while it is true that a form too can be called substance, this is only in the derivative sense of playing the main causal and explanatory role for the existence and nature of a substance, which is in itself a composite of matter and form.

One can see this in Aquinas's interpretation of a relevant passage of Z3 (1029a7-b12) that has often been labelled as the 'stripping away argument': once all the qualities and quantities of a substance are stripped away from it, only matter remains. Contemporary interpreters of Aristotle take this passage to prove Aristotle's own dissatisfaction with the subjecthood criterion's ability to establish what is primarily a substance since it would lead to the conclusion that the primary substance is matter.¹⁴⁸ Aquinas's sophisticated and original reading of the 'stripping away argument' leads to a different conclusion: the composite is more substance than matter and, implicitly, than form.¹⁴⁹

¹⁴⁵ See Chapter 2, pp. 42-43.

¹⁴⁶ See for example Frede-Patzig (1988), II, pp. 42-45.

¹⁴⁷ The explanatory criterion is focused on what the main causal and explanatory factor of substantiality is. The answer is that the main factor is form.

¹⁴⁸ Frede (1988); Loux (1991).

¹⁴⁹ *Exp.Met.*, VII, 1.2, n.1281-1294. My interpretation is based on the one of Galluzzo (2013), pp. 251-257.

We can sum up the argument as interpreted by Aquinas in three steps:

1. Firstly, Aristotle rejects the idea that the primary substance is matter. According to Aristotle, this view was common among the Presocratics and arose from a false conception of matter that failed to recognize the reality and the role of the substantial form as co-principle. The Presocratics conceived of matter as the subject that underlines all the qualities and quantities and that remains once all the qualities and quantities are stripped away. But Aristotle maintains a different position: it is still a matter-form composite that remains after the stripping away process, and not simply matter.
2. The second and central part of the argument introduces a rectified conception of matter and its proper distinction from the substantial form. This is *prime* matter, or matter considered as the pure potentiality to receive all the substantial properties conferred by the substantial form. Here, Aquinas thinks, Aristotle formulates a ‘logical proof’¹⁵⁰ for the reality of prime matter. Whilst in the *Physics* Aristotle presents a proof based on the consideration of change, here Aristotle reaches the same conclusion through an argument beginning from the analysis of predication. In other words, in this passage of *Z* 3, Aquinas identifies a metaphysical argument for the reality of prime matter which is developed through the *modus logicus* that we have presented in Chapter 1. In this case too, Aquinas sees the argument as making use of the *Predicative Simplicity Criterion* and, as in the case of the argument for the derivation of the *Categories*, as concerned with the analysis of denominative predications. There is a distinction, Aquinas notices here, between simple predications (‘univocal’) and complex predications (‘denominative’). In simple predications, for example, ‘man is an animal’, the subject and the predicate share the same essence. In complex ones, for example ‘man is white’, there is a distinction in essence between the subject and the predicate since the subject signifies a substance whereas the predicate signifies an accidental property. As for *Z* 4, here the *Predicative Simplicity Criterion* fundamentally allows to distinguish essential predications proper to substances from accidental predications, which are proper to

¹⁵⁰ The expression is also used in Wippel (2000), p. 212.

accidents and accidental compounds. But how does this criterion help us to approach the notion of prime matter? Aquinas focuses his attention on the fact that a substance, for example a man, can be analyzed as a certain piece of a material thing, as he says «this material thing is a man» (*hoc materiatum est homo*). From the point of view of predication, this is a case in which the substantial predicates of man are predicated in a complex, denominative way of the material thing, the material substratum of which the substantial predicates are said. The predication is denominative since it is clear that the substantial predicates of man are not contained in the essence of a material thing *qua* material (*hoc materiatum*). Thus, there must be a distinction in nature between the substantial form, which is responsible for the substantial predicates, and the material substratum, i.e., prime matter. A material object can acquire different substantial predicates, and prime matter, as a co-principle of a sensible substance, just is the pure potentiality of matter to acquire different substantial forms.

3. After having introduced the reality of prime matter through this ‘logical proof’, Aristotle then shows how prime matter cannot be ascribed the status of subjecthood and of substance that is proper to the composite. Being pure potency in itself, prime matter is a subject and substance only potentially, *qua* actualizable by the substantial form in the composite. Aquinas here points out the two fundamental criteria for substancehood: (i) something is a substance when it is ‘separable’ (*separabile*) and (ii) a ‘this something’ (*hoc aliquid*). The first criterion captures the criterion of independent and separate existence. A primary substance is what does not inhere in something else for its existence; prime matter does not satisfy this criterion since it does not possess any actuality of its own. The second criterion of ‘this something’ involves the necessity for something to have a complete nature that makes it a member of a determined natural kind.¹⁵¹ Prime matter does not possess any positive nature or essence by itself; these are conferred to the composite by its substantial form. Therefore, when Aquinas talks about the essence of prime matter as distinguished from the substantial form in the ‘stripping away’ argument, we have to bear in mind that he is not speaking of a ‘positive’ essence like the essence of a tree or a cat, but he is speaking only analogically to indicate that prime matter in its ‘what

¹⁵¹ These two criteria already clearly emerged in our analysis of Aquinas’s *Commentary* on Z 4, cf. pp.50-52.

it is' is distinguishable from substantial forms. But the 'what it is' or the 'essence' of prime matter is not a positive entity in any sense, being pure potency to acquire a nature.

It follows that in Aquinas's interpretation of Z 3, the proof of the reality of prime matter through the *modus logicus* is meant to confirm the substantial primacy of the composite: once the nature of matter is clarified, it is clear that its status as substance is only analogical and derivative with respect to the composite. The substantial primacy of the composite is deeply interrelated with its definitional primacy. In Aquinas's perspective, the type of matter-form predication pointed out by contemporary commentators of Z 3 is not a real objection to the definitional primacy of the composite substance. The case of 'denominative' predication 'this material thing is a man' allows us to distinguish prime matter from the substantial predicates of 'man' but does not lead to the conclusion that matter is accidentally predicated of the composite substance. There is a fundamental difference between this type of denominative predication and the one that involves accidents and accidental compounds. The former is a denominative predication because form is predicated of something that is external to the essence of the form, but that *does not have a different essence* from the essence of the form. However, the latter is a denominative predication because accidents are predicated of something that is not only external to their essence, but that also has a different *positive essence* in itself. Therefore, the fact that a composite substance can be analyzed through a denominative predication in which a form is predicated of matter does not compromise the predicative simplicity of the essential predications of a composite substance. The union of a substantial form with prime matter in a composite guarantees the predicatively simple structure of the essential definitions of composite substances.

We have justified the first point (a.): the substantial and definitional primacy of the composite. Aquinas takes it for granted, as established in the *Categories*, that the primary substance is the concrete material composite, and the object of a primary definition is the concrete material composite, as this respects the *Predicative Simplicity Criterion*. We can see how in Aquinas's perspective the logical approach to the essence of substance that we have spelled out in Chapter 2 is integrated with the introduction of matter and form. Prime matter itself can be approached in a logical way with an argument based on predication.

Aquinas's logical argument for the reality of prime matter can help us to start to formulate an answer to the problem with which we started: how can the essence of a sensible substance be a unified principle, but at the same time, be a composite of parts/principles, which are matter and form? The answer is that one of the two principles, prime matter, does not have a positive reality in itself and, therefore, allows a special type of composition in which the unitarian and simple role of the form is maintained.

b. We can now turn to Aquinas's second interpretative option: the distinction between form and essence in material substances. This is the main theoretical insight underlying his whole interpretation. Aquinas expresses it already at the beginning of his commentary on Z 10.

We can start by looking at the following passage:

(T2) Some say that the whole essence (*essentia*) of a species is the form; for example, the whole essence of man is his soul. And for this reason they say that in reality the form of the whole (*forma totius*), which is signified by the word 'humanity', is the same as the form of the part (*forma partis*), which is signified by the word 'soul', but that they differ only conceptually; for the form of the part is so designated inasmuch as it perfects the matter and makes it to be actual, but the form of the whole is so designated inasmuch as the whole which is constituted by it is placed in its species (*species*). And for this reason, they think that no material parts are given in the definition which designates the species, but only the formal principles of the species. This appears to be the opinion of Averroes and of some of his followers.¹⁵²

Aquinas here presents a position concerning the definition of sensible substances, and names Averroes as one of its exponents. Averroes thought that the whole essence of a man is to be identified with his form, namely, his soul, and maintained that there is only a conceptual distinction between the so-called form of the part (*forma partis*), i.e., the

¹⁵²*Exp. Met.*, VII, l. 9, n. 1467: «Quidam enim dicunt quod tota essentia speciei est ipsa forma, sicut quod tota essentia hominis est anima. Et propter hoc dicunt quod eadem secundum rem est forma totius, quae significatur nomine 'humanitatis', et forma partis, quae significatur nomine 'animae', sed differunt solum secundum rationem: nam forma partis dicitur secundum quod perficit materiam et facit eam esse in actu; forma autem totius secundum quod totum compositum per eam in specie collocatur. Et ex hoc volunt quod nullae partes materiae ponantur in definitione indicante speciem, sed solum principia formalia speciei. Et haec opinio videtur Averrois et quorundam sequentium eum. Sed videtur esse contra intentionem Aristotelis».

substantial form, and the form of the whole, (*forma totius*) i.e., the essence. It is important to notice that Aquinas here assumes that there is a distinction between form and essence in sensible substances, even if only conceptual in Averroes's case. This is a distinction that we haven't previously encountered and that is absent from Aristotle's text.¹⁵³

According to this distinction, the form is the principle that actualizes prime matter and brings it to its substantial reality, whereas the essence is the principle responsible for the fact that a substance belongs to a certain species. In Aquinas's view, the fact that Averroes distinguished these two principles only conceptually is a fundamental mistake, which led him to identify the object of the definition of a material substance with its formal parts only.

Aquinas goes on to present another option:

(T3) And from this arises the other opinion, which Avicenna entertains. According to this opinion the form of the whole, which is the quiddity (*quidditas*) of the species, differs from the form of the part as a whole differs from a part; for the quiddity of a species is composed of matter and form, although not of this individual matter and this individual form; for it is an individual, such as Socrates or Callias, that is composed of these. This is the view which Aristotle introduces in this chapter in order to reject Plato's opinion about the Ideas, for Plato said that the forms of natural things have being of themselves without sensible matter, as though sensible matter were in no way a part of their species. Therefore, having shown that sensible matter is a part of the species of natural things, he now shows that there cannot be species of natural things without sensible matter; for example, the species 'man' cannot exist without flesh and bones; and the same is true in other cases.¹⁵⁴

In opposition to Averroes and his followers, Thomas embraces the opinion ascribed to Avicenna. According to this interpretation, the distinction between essence and form is

¹⁵³ Aristotle, too, however distinguishes these two roles of a form so that the conceptual distinction introduced by Averroes can also be ascribed to Aristotle.

¹⁵⁴ *Exp. Met.*, VII, l. 9, n. 1469: «Est alia opinio, quam sequitur Avicenna. Et secundum hanc forma totius, quae est ipsa quidditas speciei, differt a forma partis sicut totum a parte: nam quidditas speciei est composita ex materia et forma, non tamen ex hac forma et ex hac materia individua. Ex his enim componitur individuum, ut Socrates et Callia. Et haec est sententia Aristotelis in hoc capitulo, quam introducit ad excludendum opinionem Platonis de ideis. Dicebat enim species rerum naturalium esse per se existentes sine materia sensibili, quasi materia sensibilis non esset aliquo modo pars speciei. Ostendo ergo, quod materia sensibilis sit pars speciei in rebus naturalibus, ostenditur quod impossibile est esse species rerum naturalium sine materia sensibili, sicut hominem sine carnibus et ossibus, et sic de aliis.».

a real one, with these two principles playing two different ontological and explanatory roles in a compound. An essence differs from a substantial form as a whole differs from a part; the essence of a species is a composite of matter and form. According to Aquinas, this second opinion is the correct interpretation of Aristotle's view; contrary to Plato's opinion, Aristotle wants to maintain that sensible matter is part of the species of a natural thing.¹⁵⁵ Since a real definition signifies an essence, it follows that the proper object of the definition of a sensible substance is not its form, but its essence, that is, form and matter together.

This very same theoretical insight is applied in Aquinas's textual analysis and interpretation of *Z* 10 and 11.¹⁵⁶

Firstly, Aquinas's embrace of Avicenna's distinction between the so-called form of the part (substantial form) and the form of the whole (essence, a composite of matter and form) has some implications in the interpretative options available to Aquinas concerning the problem of the definition of sensible substances. Given that the claim that sensible essences contain matter implies that the corresponding definitions must also contain a reference to matter, it is clear that Aquinas will give special importance to certain passages of Aristotle's texts. As some impurist interpreters have done, Aquinas points out the importance of the passage of *Met.* E1, in which Aristotle draws a distinction between the mathematical and the physical model of definitions.¹⁵⁷

As in the case of the relationship between the doctrine of substance of the *Categories* and that developed in *Met. Z*, in this case too Aquinas interprets one text in light of the other and in a coherent continuity: just as the *Categories* have already clarified what is to be assigned the primary role of substance, so in the same way E1 has already made clear certain rules concerning definitions. In E1, in distinguishing mathematical definitions from physical definitions, Aristotle clearly states that the latter must contain a reference to matter.¹⁵⁸ It is clear, for Aquinas, that this principle applies to the case of

¹⁵⁵ The matter present in definitions of this kind is qualified as 'sensible' in opposition to the 'intelligible matter' of mathematical definitions: 'sensible' matter is also distinguished from prime matter, as it is the matter already actualized by the form. 'Species' must also be distinguished from 'essence': the essence is an ontological principle, whilst the species is a logical entity, in the realm of second intentions. The essence is the principle that determines that an individual belongs to a determined species.

¹⁵⁶ I here follow the excellent reconstruction and discussion of Galluzzo (2001); (2013). A previous important article on Aquinas's interpretation of *Z* 10 11 was the one of Maurer (1951).

¹⁵⁷ Cf. *E1*, 1025b28-1026a6

¹⁵⁸ The distinction between physical and mathematical definitions is coherently related with the broader theory of the threefold structure of theoretical sciences (Physics, Mathematics and Geometry, Theology)

the definitions of sensible substances. Since these definitions belong to the ‘physical model’ as opposed to the mathematical one, they must contain matter.

Once he has established this premise, Aquinas further develops this line of reasoning. He points out the aforementioned difference between defining substances and defining accidents. In the former case, definitions have a predicatively simple structure so that all the elements contained in a definition must be contained in the essence as well. On the contrary, the case of the definitions of accidents and accidental compounds imply a predicatively complex structure, where some external elements, with a different essence, are extrinsically added to the essence of the object defined: we have seen that this is what Aquinas calls definition ‘by addition’ or *secundum quid*. A definition of a substance, differently from a definition of an accident, therefore, must express the very same parts of the essence defined. Since definitions of substances must contain matter in order to be properly distinguished from mathematical and geometrical definitions, it follows that matter must be present both in the definition and in the essence of a sensible substance.¹⁵⁹

The third theoretical insight (c.) that is fundamental for Aquinas’s interpretation concerns the distinction between two different ways of considering matter. Having remarked that sensible matter is part of the essence of a species, Aquinas further characterizes sensible matter:

(T4) And to ensure an understanding of what the species is and what the matter is, it is necessary to point out that belongs to a species what is proper to every being *qua* having a determinate species. [...] when we say that man is a species, common matter then pertains essentially to the species, but not individual matter.¹⁶⁰

According to Aquinas, giving a definition of a sensible substance always means to grasp its common/specific nature. And the knowledge of an essence is always expressed by a universal predication. This implies that we cannot have a definition of a particular

present in *E 1*’s account and embraced by Aquinas. To every science there corresponds a particular/specific definitional practice, connected with different levels of abstraction. On this, see Galluzzo (2001), p 449-456.

¹⁵⁹ The very same position is stated by Aquinas in *De Ente et Essentia*, c.2, p.82 ed. Porro.

¹⁶⁰ *Exp. Met.*, VII, l. 9, n. 1473: «Et ut sciatur quid est species, et quid est materia, dicendum est illud ad speciem pertinere, quod convenit unicuique in quantum speciem habet (...) sicut hominem dicimus esse speciem, sic materia communis per se pertinet ad speciem, non autem materia individualis.»

substance *qua* particular. It follows that the matter included in the definition and essence of a substance is *common* matter, i.e., matter considered in abstraction from individuality, or the matter that is common to the universal species, as opposed to *individual* matter.

The distinction between common and individual matter in relation to the definition of a sensible substance was already spelled out by Aquinas in the *De Ente et Essentia*. In that text, individual matter was also identified as *designated* matter (*materia signata*) as opposed to the *undesignated* matter (*materia non signata*) i.e., common matter.¹⁶¹ The language of designation makes reference to the idea that individual matter is associated with the specific dimensions of a particular sensible substance that occupy a certain space, whereas in common matter this remains unspecified. Individual matter, therefore, is distinguished by common matter by an additional determination. In a human being, common matter is identified with the general type of flesh and bones common to every member of the species. Individual matter is identified, instead, with the *singular* flesh and bones of an individual such as Socrates.

As we briefly pointed out in Chapter 2, it is precisely the introduction of the notion of individual matter that qualifies the thesis, spelled out in Aquinas's *Commentary* on Z 6, of the identity between a thing and its essence.¹⁶² This identity holds from a logical point of view. Once the logical approach is integrated with the hylomorphic analysis, though, an individual substance is distinct from its essence, since it comprehends also individual matter, which is beyond the consideration of the definition.

This is clearly pointed out by Aquinas in a passage of the *Commentary* on Z 11:

(T5) Hence if any natural thing has matter which is part of its species, and this pertains to its essence, it must also have individual matter, which does not pertain to its essence. Therefore, if any natural thing has matter, it is not its own essence but is something having an essence; for example, Socrates is not humanity but something having humanity.¹⁶³

¹⁶¹ *De Ente et Essentia*, c.2, p.84, ed. Porro.

¹⁶² Cf. p.26

¹⁶³ *Exp. Met.*, VII, l. 11, n. 1535: «Unde oportet quod quaelibet res naturae si habeat materiam quae et pars speciei, quae est pertinens ad quod quid est, quod etiam habeat materiam individuaem, quae non pertinet ad quod quid est. Unde nulla res naturae si materiam habeat, est ipsum quod quid est, sed est habens illud. Sicut Socrates non est humanitas, sed est humanitatem habens.»

Any sensible substance, Aquinas explains, is composed of matter and form. Matter and form both pertain to the essence of a thing, since, as we have seen, the sensible essence is a composite of form and common matter. Nevertheless, because of being composed of matter and form, a sensible substance necessarily possesses *individual* matter. Individual matter does not pertain to the essence of the thing. Therefore, every sensible substance, possessing individual matter, it is not identical with its own essence. Essence is something that a sensible substance *has* rather than something that a sensible substance *is*. Aquinas considers the example of the essence ‘humanity’. Humanity is something that the individual Socrates has, but not something that he is. Here Aquinas is signifying the essence abstractly, using the term ‘humanity’.¹⁶⁴

Nevertheless, Aquinas, recognizes that an essence could be signified also with a concrete term such as ‘human’. Aquinas articulates the idea of a twofold way of signifying the essence, concrete and abstract, in *De Ente et Essentia* c.2.¹⁶⁵ The difference between these two ways is precisely grounded in the different relations of an essence with individual matter. When the essence is signified abstractly, it is signified with precision (*cum precisione*), which means that the essence is considered apart from and at exclusion of individual matter. Being signified with precision, the essence is signified as a *part*, such as ‘humanity’. A part cannot be predicated of the whole, hence it cannot be said that ‘Socrates is humanity’ but only that ‘Socrates has humanity’.¹⁶⁶ Conversely, when the essence is signified in a concrete way, it is signified without precision (*sine precisione*). When signified in this way, the essence is not signified in isolation from individual matter, but simply as indeterminate with respect to it. Signified in this way the essence can be predicated of the individual, hence I can say that ‘Socrates is a human’.¹⁶⁷

The distinction between common and individual matter is therefore fundamental to a proper grasp of Aquinas’s account of the definition of a sensible substance and for its doctrine of the twofold signification of the essence as well.

¹⁶⁴ Cf. *S.T.* I, q.3, a3.

¹⁶⁵ *De Ente et Essentia*, c.2, p. 94. ed. Porro.

¹⁶⁶ More precisely, the essence taken abstractly is the *formal* part of the individual substance. In this sense, an individual substance can be spelled out mereologically as individual substance=essence taken in abstraction (humanity)+ individual matter. This mereological model is presented by Hochschild (2013).

¹⁶⁷ The difference between the two modes of signification of the essence can also be articulated in semantic terms: the essence signified with precision (‘humanity’) lacks personal supposition, whereas the essence without precision (‘human’) does have personal supposition. On this see Osborne (2017) pp. 481- 483. On Aquinas’s general semantic theory one can see Klima (1996).

Moreover, the distinction between common and individual matter allows Aquinas to formulate his peculiar interpretation of the specific passages of Aristotle's text that seem to imply that in definitional accounts of sensible substances only the form must be considered.

The passages of Z 10 (1034 b32- 1035 b3) central to Frede's purist interpretation, in which Aristotle seems to contrast form and matter, with only the first being part of the definition, are read differently by Aquinas. For Aquinas, the contrast is not between form and matter, but between species (the composite of matter and form) and individual matter. As Gabriele Galluzzo has pointed out, Aquinas can adopt this exegetical strategy based on the ambiguity of the Greek, *eidos*, or *species* in the Latin translation, which can be interpreted both as form or as species.¹⁶⁸

Thus, according to Aquinas, when Aristotle states that matter is not present in the definition of sensible substances, he does not refer to matter unqualifiedly, but he refers to *individual* matter, which is not part of the essence and the definition of a thing. By contrast, common matter, the determined type of matter common to a certain species, is part of the definition.

We have briefly mentioned David Charles's attempt to interpret the same Aristotelian passage by distinguishing bits or portions of matter from the type of matter that plays the role as a principle of form and so is an intrinsic part of a natural form.¹⁶⁹ Aquinas's solution bears similarity to Charles's view, since it is based on a distinction between two different ways of considering matter. In Aquinas's case, however, the distinction is that between *individual* matter and *common* matter, which presupposes the distinction between particular and universal. In any case, as in Charles's account, it is fundamental to understand that for Aquinas the matter included in a definition must have 'formal' characters.

Going back to Aristotle's examples of circles and syllables,¹⁷⁰ we can now understand Aquinas's interpretation of them: the definition of a circle does not contain semicircles as parts, since semicircles are individual material parts, and consequently, not parts of the circle *qua* species. On the contrary, in the case of a syllable, the letters of

¹⁶⁸ Cf. Galluzzo (2001), pp. 443-444.

¹⁶⁹ Cf. p. 68.

¹⁷⁰ Pp. 65-66.

which it is composed are its *formal* parts and so parts of the syllable qua *species*, and therefore they must be included in its definition.¹⁷¹

The notion of common matter (as opposed to individual matter) as part of the species and the definition of a sensible substance also plays a pivotal role in Aquinas's interpretation of the aforementioned passage of Z 11 concerning Socrates the Younger (1036b21–32). This philosopher made the mistake of not properly distinguishing geometrical and mathematical definitions from physical ones, because he did not grasp the difference between the intelligible matter of the first (which means that in the case of the circle there is not a specific type of sensible matter that is a necessary part of its essence, but only common intelligible matter) and the common-sensible matter of the second, where a certain common type of sensible matter (flesh and bones in the case of human being) must always be part of the species. In other words, in not realizing this distinction, Socrates the Younger missed the point that, while a circle can be realized in different types of sensible matters, a human being can be realized only in a certain type of sensible matter, namely, human flesh and bones.

Through his interpretation of Z 10-11, we can now see Aquinas's own metaphysical insights on the problem of the definition and essence of sensible substances and its deep link with the hylomorphic analysis. At the same time, the theoretical positions embraced by Aquinas are both based on and applied to his exegetical interpretation of Aristotle, allowing him to formulate a coherent and systematic interpretation of the argument of Z 10-11 in spite of its apparent contradictions.

7. Aquinas's Hylomorphic Analysis and the Purist- Impurist debate

The analysis of Aquinas's commentary on *Met. Z* 3, 10 and 11 has allowed the reconstruction of his general position on the definition of sensible substances. At the core of the problem of the definition and essence of a sensible substance, there is the theoretical distinction that Aquinas draws between the substantial form ('form of the part') and the essence ('form of the whole'). What are the implications of this distinction for the hylomorphic analysis of a substance?

¹⁷¹ *Exp. Met.*, VII, l. 9, n. 1474.

We can focus on the case of the substance and essence of a human being.¹⁷² In Aquinas's perspective the substantial form, i.e., the human soul, actualizes and organizes prime matter, bringing it to be a substantial composite. At the same time, in the material substance that results from it, the human soul is inextricably related to a certain type of matter; the human soul, together with a determined type of matter, represents the essence of a human being. It follows that the definition of a human being contains not only its substantial form, the human soul, but also its sensible matter, which Aquinas often refers to as the "flesh and bones." The relevant flesh and bones are the general ones, those which are parts of the species 'human being', and not the individual flesh and bones of a singular man. The general flesh and bones of man are those which by virtue of the action of a certain form, i.e., the human soul, are organized in a determinate way that is common to all the members of the human species.

We can schematically sum up the twofold level of hylomorphic composition as follows:

- a. Substantial form (human soul) + prime matter = the actual *substance* man.
- b. Substantial form (human soul) + common matter (common type of flesh and bones) = the essence of the *species* man.¹⁷³

Aquinas's doctrine of the definition of sensible substances implies, therefore, this twofold level of hylomorphic composition.

These two levels of composition have different ontological and explanatory roles. The first level accounts for the actuality and unity of a sensible substance. Prime matter and substantial form together are the principles of a substance.

The second level accounts for the principle that makes a constituted substance being part of a natural kind. This is the essence, which can be described as the composition of common matter (flesh and bones) and substantial form (human soul).

¹⁷² This choice is justified by the fact that this is the main example that Aquinas makes.

¹⁷³ A similar scheme is developed in the excellent article of Hochschild (2013), where he focuses the attention on the 'real' distinction between form and essence, especially as presented in Aquinas's *De Ente et Essentia*. The different kinds of composition articulated by Hochschild are based on the previous work of Klima (2002).

The language of levels, therefore, is intended to express the idea of an ontological relationship of priority of the first kind of composition over the second. The first level is the composition that results in a substance. The second level, instead, once the substance has *already been* constituted by the first level of composition, accounts for why that substance belongs to a natural kind.

We are now in a position to return to the debate between the purist and the impurist interpreters of Aristotle. How does Aquinas's own position fit into this debate?

Due to his original position on primary definitions and the multi-level hylomorphic analysis, Aquinas's account is fundamentally at odds with both the purist and the impurist interpretations of Aristotle. Nevertheless, Aquinas's positions have affinities with both some impurist insights and some purist ones. In the next section, I start with what I take to be the genuine impurist aspect in Aquinas's interpretation and theoretical elaboration: the essence.

8. Aquinas vs Averroes and Frede on the Impurity of Essence

We have seen throughout the analysis of his exegesis of Aristotle's *Met. Z* 10-11 how Aquinas presents a view of the definition and essence of sensible substances that stresses their *enmattered* character. We have also seen that the matter present in the essence and in the definition has a specific character; it is not the individual matter of a substance but *common* matter, the specific kind of matter that presents the 'formal' characters that result from its composition with the substantial form. In the case of a human being, the common matter is represented by the specific type of flesh and bones that are distinctively part of human nature. Both these characters make Aquinas's account significantly close to the Charles-style impurist account.

In analyzing Aquinas's impurist and enmattered account of the essence, we have seen that Aquinas argues for it *by way of definition*.¹⁷⁴

¹⁷⁴ *Exp. Met.*, VII, l.9, n.1468. Cf. pp. 68 and 69.

The argument that we have analyzed from his *Commentary* on Z 10 can be summed up as follows:

- 1 The definition of a substance differs from the definition of an accident because it does not include anything external to the essence defined.
- 2 The definition of a sensible substance contains matter, otherwise it would not differ from a mathematical definition.
- 3 If the essence of a sensible substance did not contain matter, then its definition would contain matter as an external element.
- 4 This is a contradiction, since this would make the definition of a substance that of an accident. (From premise 1)
- 5 Therefore, by *reductio* (of premise 4), the definition of a sensible substance entails there being matter in the essence. (From premise 2).
- 6 Therefore, the essence of a sensible substance contains matter.

Aquinas's argument for the materiality of essence, being structured *by way of definition*, is another application of the *modus logicus* of his approach to essence. Analogously to what he has done with the logical argument for the reality of prime matter in Z 3, Aquinas here integrates the predicative and logical approach with the hylomorphic principles. Premise 1 takes into account the rules concerning the definition of substance and accidents obtained through the *Predicative Simplicity Criterion*. Premise 2 is based on the distinction between different kinds of definition. Also in this case, therefore, Aquinas uses as starting points of the argument logical and definitional principles, to draw a proper metaphysical conclusion concerning the enmattered status of a sensible essence.

One may object that the argument begs the question. For if one asks why it is the case that a mathematical definition does not contain matter, the reply seems to be that this is because the essence of a mathematical object does not contain matter. The inference from the materiality of the definition to the materiality of the essence would then be circular because the assumption of the materiality of a definition is already based on considerations concerning the essence of certain objects.

To avoid this circularity, it can be argued that the assumption of the absence of matter in a mathematical definition is not motivated by an assumption about the essence of a mathematical object, but by an assumption about the way in which the essence of a mathematical object is understood. In some important texts, Aquinas associates the division of the sciences of EI with different modes of abstraction.¹⁷⁵ Different sciences are associated to different kinds of abstraction from matter. In the science of physics, the universal is abstracted from the particular. In the science of mathematics, the purely formal is abstract from the material. A different kind of abstraction will be necessarily associated to a different kind of definitional practice. The absence of sensible matter in a mathematical definition, therefore, is a feature that belongs to a mathematical definition not immediately by virtue of the essence of a mathematical object, but by virtue of the kind of abstraction that is involved in mathematics. The absence of sensible matter from the definition of a mathematical object is appropriate to reflect the type of abstraction that is involved in the understanding of a mathematical object. Conversely, therefore, a physical definition has to contain matter to properly reflect the type of abstraction associated with physical science.

In this way, premise 2 of Aquinas argument for the enmattered character of a sensible essence would not be based on a circular reasoning between the definition and the essence of a mathematical object but would be grounded in the kind of abstraction involved in mathematics.

Leaving aside the problem of its validity, it is important here to notice the theoretical framework of Aquinas's argument. Getting a deeper account of his theoretical framework is fundamental for a proper understanding of Aquinas's impurist take on essences and *why* he thinks one should hold this position.

We have seen that in his *Commentary on Met. Z 10*, Aquinas articulates his impurist account of the essence associating it with Avicenna and in opposition to the alternative position of Averroes. According to Averroes and his followers, there is a real identity between the form of the part (the substantial form) and the form of the whole (the essence), so that to express the essence of a sensible substance in a definition means to define the form of the substance. For example, in the case of a human being, the definition and the essence would contain only its soul, the formal part, without any inclusion of

¹⁷⁵ Cfr. *Sup. Boet. De Trin.*, q. 5, a. 3; *In. Phys.*, II, l. 3, n. 161.

matter in the definition. Of course, in Averroes's perspective, it is clear that the essence of a human being, as a sensible substance, will always be necessarily realized 'materially' in certain flesh and bones, but these are not to be considered as essential parts of its nature.¹⁷⁶

There is a striking similarity between Averroes's account and the purist model articulated by Michael Frede: in both cases the essence of a substance must be defined in terms of a pure form, with no reference or inclusion of matter in it. Averroes's and Frede's purist model of the problem of the definition of sensible substances is fundamentally a 'functionalist' model: to define the essence of a thing means to define the kind of form that confers all the functions and characters distinctive of that material substance. Averroes privileges the fact that everything that a human being is in terms of its essential features is conferred to it by its substantial form. For this reason, from a logical point of view, matter is inessential since matter, in itself, is undefinable. Matter is relevant only *qua* possessing those formal characters conferred to it by the substantial form in the compound. For this reason, the definition makes reference only to the form.

On the basis of the first two premises of Aquinas's argument *by way of definition*, I want to argue that two fundamental objections could be raised against the Averroes-Frede model of purism, and consequently, in favor of an impurist account.¹⁷⁷

The first is:

1. *The Extrinsic-Matter Objection*: if the essence of a sensible substance were to be defined only in terms of its formal parts, then there would be no essential connection with the type of matter with which its form is associated in the compound. For example, in the case of a human being, the specific type of flesh and bones that are part of its species would end up being only 'extrinsically' related to its essence. As a matter of fact, there would be no way to justify that is precisely a certain type of matter that is essential to the nature of human beings; in theory, another type of sensible matter could be associated. The matter would remain, therefore, extrinsic.

¹⁷⁶ On Averroes's account, see Di Giovanni (2003), p.27-63. Interestingly Di Giovanni argues against Aquinas's interpretation of Averroes's position, that would be, after all, much closer to an impurist account of definition and essence. Nevertheless, here I consider Averroes's position as interpreted by Aquinas..

¹⁷⁷ A similar presentation of Aquinas's anti-Averroistic objections can be found in Amerini (2003), p.104.

In Aquinas's perspective, this objection is clearly powerful: making matter extrinsic to the essence and the form of a substance would have some awkward consequences. In the case of a human being, for example, if we were not able to associate its specific human flesh and bones with its essential constitution and operation, that would make the human body somehow extrinsic to the essential identity of a human being, something problematic both for Aquinas's general commitments in anthropology and for the theology of the resurrection.¹⁷⁸

As a matter of fact, some purist interpreters have considered an objection similar to the *Extrinsic-Matter* objection and have tried to answer it. Their strategy, based on ideas already found in Frede and Patzig's book on *Met. Z*, appeals to the idea that, even if a sensible substance must be defined only in terms of a pure form, with no reference to matter, it is still the case that its specific type of matter is 'hypothetically necessitated' by the form, so that from the fact that a certain form is so and so, a certain kind of material constitution must necessarily flow from it, as implied by the form.¹⁷⁹

I think that the trouble with this reply, in Aquinas's view, is that something that seems *necessary* to the explanation of the 'what it is' of a thing, namely a material component, would end up being nonetheless not part of its essence and, therefore, additional and external.

To better understand this point, we can introduce what I take to be the second objection to the purist view that can be deduced from Aquinas's account:

2. *The Unity Objection*: If the primary definition of a sensible substance contained only its form, then an account of a substance that considers also the material parts would inevitably be a secondary type of definition, a definition by addition or *secundum quid*. That would lead to the conclusion that matter is only accidentally related to the form of a sensible substance.

If, as suggested by Frede as an answer to the *Extrinsic-Matter* objection, specific material parts of a compound were *necessarily* implied by a determined form, it would follow that

¹⁷⁸ On Aquinas's anthropological account of body-soul unity, one can see Emery (2000) and Cory (2021). On the importance of the hylomorphic analysis for Aquinas's ontology of the resurrection, see White (2015), c.10.

¹⁷⁹ Cf. Frede- Patzig (1988), II, p. 212-213.

these material parts that are *necessary* would be at the same time *accidental* to the essence-form of the compound. Therefore, matter will be hypothetically necessitated by the form and accidentally related to the form at the same time.

We can see that Aquinas's *Extrinsic Matter Objection* and *Unity Objection* also give rise to a dilemma: the purist interpreter, in order to answer one objection, will inevitably be exposed to the other. If the purist interpreter wants to 'save' his position from the *Extrinsic Matter Objection* he will have to postulate the idea of a specific type of matter being necessitated by the form. But in doing this, he will have as a result that a necessary type of matter will be at the same accidentally related to the essence-form, as the *Unity Objection* points out. To avoid this, he would have to abandon the idea of a type of matter necessitated by the form, but in this way, he will be exposed to the *Extrinsic Matter Objection* again.

To avoid this dilemma, the purist interpreter might object that, after all, the idea of a type of matter that is necessitated by the essence/form without being part of it is an acceptable idea. As a matter of fact, we have seen that, in Aquinas's account, there are certain properties, the *propria*, that are outside the essence of something, but are nonetheless necessarily caused by the essence. Can the necessity of matter be associated with the necessity of a *proprium*?

It seems to me that the ontological relationship between the essence of something and a *proprium* is radically different from the relationship between form and matter. The essence is ontologically prior to a *proprium*: this priority-relation determines the fact that the essence is more fundamental than a *proprium*. The priority of the essence with respect to a *proprium* can be understood from the fact that, while I can explain the essence without making reference to a *proprium* associated with it, I cannot explain a *proprium* without making reference to the essence. This does not seem to be applicable to the case of the matter and form of sensible substance. For example, while it is true that it is impossible to understand what human matter is without making reference to the form of a human being, it seems impossible to understand the human essence/form without considering its presence in matter. Therefore, the idea of identifying matter with a *proprium*, to account for both its necessity and accidentality, does not seem to work.

It is clear at this point how much Aquinas's account of the enmattered character of definitions and essences is motivated by some fundamental theoretical insights implied in his theory of primary definition, as well as in his hylomorphic analysis and anthropological and theological commitments. Aquinas is a resolute proponent of an

impurist view of the essence and the definition of sensible substances. Like Averroes, Aquinas too does not neglect the importance of the functional and unitive role of the substantial form: as we have mentioned, the substantial form is the main item that is responsible for the substantiality and essence of a composite substance, and its unity is what accounts for the role of the essence as the ontological unifier of a composite. Nevertheless, Aquinas's model is also concerned with the composite reality of the essence: a human being is what it is because it is composed of a certain kind of matter, common matter, and this must be accounted for in the definition. Of course, all the positive features of common matter have an ultimate dependence on the substantial form. At the same time, an account of the sensible essence that does not consider its material part would not possess explanatory power: certain features conferred by the essence to a material substance do not depend exclusively on the substantial form, but also on a material structure that can only result from the previous union of the substantial form with prime matter. This was made clear by what we have identified as the first level of composition in Aquinas's hylomorphic analysis: a. substantial form+prime matter= the actual substance man.

At this point, it might be asked what *exactly* the matter that is present in the essence is. Since matter at the level of description of essence has been already actualized and made *formal* by the substantial form, it is not clear how to identify, at the level of the essence, what is the proper role of matter and its status with respect to the form. Some authors simply identify essential matter, the matter that is in the essence and definition, with prime matter.¹⁸⁰ This seems to be mistaken since it ignores the importance of the distinction between the two different levels of composition that we have drawn: prime matter is a co-principle of a material substance in the first level of composition, whereas essential matter is the matter of an already constituted substance.¹⁸¹ Moreover, we have seen that Aquinas identifies essential matter with common matter, the kind of matter that is specific of a certain natural kind.¹⁸² This was described in our second level of composition: b. substantial form+common matter= the essence of the species man. In

¹⁸⁰ Cf. Maurer (1951) p. 169-172; Wippel (2000) p. 331; Brower (2014), p. 112.

¹⁸¹ Cf. pag.84

¹⁸² Cf. pag.79.

referring to the essential matter of a human being, Aquinas also talks about flesh and bones or heart and brain, which cannot possibly be associated with prime matter.¹⁸³

To find a positive solution for the exact ontological status of essential matter goes beyond the scope of this work. What can be briefly pointed out here is that in some passages Aquinas seems to identify essential matter with an integral part of the essence, a part that corresponds to only some levels of perfection of the whole essence, at the exclusion of others, which are signified by the form.¹⁸⁴

9. Aquinas on the (Qualified) Purity of Forms

The last section has showed that Aquinas has an impure account of the essence that bears significant similarities with the impurist account of contemporary Aristotelian interpreters. Nevertheless, there are fundamental differences. For contemporary impurists are committed not simply to an enmattered view of definitions, but to an ontology of impure forms, i.e., forms that are, in their essence, enmattered. Therefore, we will now look at Aquinas's position on the problem of the ontological status of sensible forms, trying to locate his position with respect to the contemporary debate.

On a first approach, read through the lens of the purist-impurist debate, Aquinas's position on the ontological status of sensible forms seems to suggest that his account of a sensible form is as impurist as much as his account of the essence is.

For example, in his *Sup. Boet. De Tr.*, q. 5, a. 3, Aquinas observes:

(T6) Now a form can be abstracted from some matter if the essential nature (*ratio essentiae*) of the form does not depend on that matter; but the intellect cannot abstract form from the kind of matter upon which the form depends according to its essential nature.¹⁸⁵

¹⁸³ *Exp. Met.*, VII, l. 11, n. 1531.

¹⁸⁴ Cf. *De Ente et Essentia*, c.2, p.88 ed. Porro; *Exp. Met.* VII, l. 12, n.1546. In the next chapter I will be looking at these passages in relation to the discussion of Aquinas's analogy between genus and matter. An extended investigation of the problem of essential matter will be part of a future project in which I intend to develop some themes treated in this thesis.

¹⁸⁵ *Sup. Boet. De Tr.*, q. 5, a. 3 «Forma autem illa potest a materia aliqua abstrahi, cuius ratio essentiae non dependet a tali materia. Ab illa autem materia non potest forma abstrahi per intellectum, a qua secundum suae essentiae rationem dependet.».

Aquinas here refers to the distinction between geometrical/mathematical forms and sensible forms: while the former do not have an essential nature that depends upon a particular kind of matter, the latter depend in their essential nature on a certain kind of matter. This can be gathered from the fact that, while geometrical/mathematical forms can be abstracted in *thought* from a particular kind of matter, this is not true in the case of sensible forms.

In this passage sensible forms seem to be fundamentally connected with matter, with their essential nature being intrinsically related to matter. According to this passage, Aquinas's account is after all quite close to the impurist position of David Charles: in both accounts, sensible forms are, in their essential nature, matter-involving.¹⁸⁶

However, it is crucial to clarify what is meant by the 'essential nature' (*ratio essentiae*) of forms in Aquinas's view.

We must recall his stance on the substantial and definitional primacy of the composite over the form. The definitional primacy, as we have seen, belongs to the composite: only primary substances (composites) truly have *essences*.¹⁸⁷

As we have seen, the substantial form (the form of the part) of a composite is really distinct from the essence of the composite (the form of the whole), but it does not have a *proper* essence, but it is only a part of the essence of the composite.

Nevertheless, it is still possible to ask the question about the 'what it is' or the intrinsic nature of a sensible form. Aquinas explicitly does that in his *Commentary on Met. Z 10*. Taking for granted the primacy of the definitions of composite substances, Aquinas considers the problem of defining the essence of a sensible form.

He writes:

(T7) Still it must be noted that in the definitions of some things the intelligible expressions of such parts are included, i.e., in the definitions of composite things, of which they are the parts. But in the definitions of other things this is not necessary, i.e., in the definitions of forms, unless such forms are taken along with matter. For even though matter is not part of a form, it must be given in the definition of a form, since the intellect cannot conceive a form without conceiving matter; for example, 'organic body' is included in the definition of 'soul'. For just as accidents have complete being only insofar as they belong to a subject, in a similar fashion, forms have

¹⁸⁶ Cf. Charles (2021), p.61

¹⁸⁷ *Exp. Met.*, VII, l. 3, n. 322-23.

complete being only insofar as they belong to their proper matters. And for this reason, just as accidents are defined by adding their subjects, so too a form is defined by adding its proper matter. Hence when matter is included in the definition of a form, there is definition by addition, but not when it is included in the definition of a composite.¹⁸⁸

Here Aquinas articulates what to give a definitional account of a sensible form means: the definition of a form is a secondary and derivative kind of definition (*secundum quid*). The relevant analogy is with the definition of accidents and accidental compounds. As we have already seen, contrary to the primary definitions of composite substances, definitions of accidents do not possess a predicatively simple structure but a complex one. This means, that, in order to express the essence of the object defined, they need to make reference to something external to the thing and on which the thing defined depends. This is why these kinds of definition are only ‘by addition’. Just as in the case of accidents and accidental compounds we need to make reference to the substance on which they essentially and existentially depend, so in the same way in the definitions of sensible forms we need to make reference to something *external* to their essence, i.e., matter, on which sensible forms essentially and existentially depend qua parts of the composite substance.

There is a distinction, in Aquinas’s view, between the *essential dependence* of sensible forms on matter, given their status as only parts of the proper essence of the composite, and their *intrinsic nature* or *essence*.

Sensible forms have an essential (and existential) dependence on matter, but they do not *contain* matter in their own essence. This marks a key distinction between Aquinas’s view and that of the impure-form interpreters. The central impurist claim is that forms are material in their very essence. In contrast, Aquinas maintains a sharper distinction

¹⁸⁸ *Exp. Met.*, VII, l.9, n.1477: «Sciendum tamen, quod ratio talium partium in quorundam definitionibus ponitur; scilicet in definitionibus compositorum, quorum sunt partes. In quorundam vero definitionibus non oportet poni, scilicet in definitione formarum; nisi sint tales formae, quae sint simul sumptae cum materia. Licet enim materia non sit pars formae, tamen materia sine qua non potest concipi intellectu forma, oportet quod ponatur in definitione formae; sicut corpus organicum ponitur in definitione animae. Sicut enim accidentia non habent esse perfectum nisi secundum quod sunt in subiecto, ita nec formae nisi secundum quod sunt in propriis materiis. Et propter hoc, sicuti accidentia definiuntur ex additione subiectorum, ita et forma ex additione propriae materiae. Cum igitur in definitione formae ponitur materia, est definitio ex additione; non autem cum ponitur in definitione compositi.»

between matter and form: forms, in their essence, remain non-material, even if they are essentially related to matter as part of the composite.

It is not by chance that, at the basis of this different approach of Aquinas from that of the impurist interpreters, there are two fundamental theoretical insights: the definitional primacy of the composite and the real distinction between the substantial form (form of the part) and the form of the whole (essence).¹⁸⁹

Impurists interpreters such as David Charles accept the idea that the compound must be defined in terms of its form and that, consequently, the essence of the compound coincides with its form.¹⁹⁰ It follows that, if the (primary) definition of a sensible form turns out to be enmattered, the essence of the form must be enmattered too. By contrast, Aquinas argues that the enmattered character of the derivative definition of a form arises from its being part of the composite's essence, not from its own essence.

This allows us, I believe, to interpret Aquinas's argument in *Sup. Boeth. De Trinitate* (T6) in this way: the claim that the form depends on matter according to its essential nature does not mean that the substantial form, in its essence, contains matter, but that given its incompleteness with respect to the essence of the composite, it has an essential dependence on the matter of the composite.

In my interpretation, Aquinas's account of the definition and essence of natural forms is what I want to call a *qualified purism*.¹⁹¹ As the purist interpreters, Aquinas does think that sensible forms are, in their essence, non-material. At the same time, by virtue of being part of the essence of the composite, a form is also essentially related to matter, and this is reflected by its definition.

¹⁸⁹ Interestingly, in his recent articulation of the impure form account, Charles himself considers the position of a thinker in the Scholastic tradition, Francisco Suarez, which is close to Aquinas's one in this respect, precisely because it is based on the distinction between form and essence. To this, Charles objects that Aristotle clearly identifies form with essence (*Met. Z* 17, 1041a29–31, b5–7). See Charles (2021), p.90.

¹⁹⁰ Charles (2021), p.46.

¹⁹¹ Here some remarks are needed. In ascribing to Aquinas a purist view of forms, I don't want to suggest that he has a purist theory of the definition of forms, as modern purists (and Averroes) do. As we have seen, Aquinas thinks that in defining forms we have to make reference to matter. Aquinas is a purist only insofar as we are rereferring to the *essence* of the sensible form, a fact that cannot be reflected in its definition, given the asymmetry between definitions and essences in definitions by addition. Furthermore, with this label I don't intend to suggest that Aquinas himself would use the language of 'purity' in talking about sensible forms. Generally, in Aquinas's terminology, the qualification of 'purity' is reserved to angelic forms. See for example *S.T. I*, q.91, a.2. I thank Stephen Brock for pointing out to me the relevance of this passage for the precision of my terminology here.

Far from being simply a matter of different linguistic formulations, I think that Aquinas's qualified purism commits him to a hylomorphic analysis that is fundamentally different from the impurist one. More specifically, Aquinas's model is deeply intertwined with his account of the *priority* of form over matter in a composite substance.

In *Summa Theologiae* I, q. 75, a. 5, Aquinas discusses whether the human soul is a composite of matter and form. Here, he raises the question of the impurity of forms in the specific case of the form of a human being, its soul.

In his answer to this question Aquinas writes:

(T8) It belongs to the notion of a soul to be the form of a body. Now, either it is a form by virtue of itself, in its entirety, or by virtue of some part of itself. If by virtue of itself in its entirety, then it is impossible that any part of it should be matter, if by matter we understand something purely potential: for a form, as such, is an act; and that which is purely potentiality cannot be part of an act, since potentiality is repugnant to actuality as being opposite thereto.¹⁹²

Aquinas is discussing here the notion of a soul in general; it belongs to the notion of soul to be the form of a body. A form can be substantial or accidental; in the case of a substantial form, it is impossible that *any* part of it should be matter. Here we have a decidedly anti-impurist claim; a substantial form, in itself, does not contain any material parts. It is at this point that Aquinas connects this purist claim with his vision of the *priority* of form over matter. Matter cannot be part of a substantial form because matter is, in itself, purely potential, whereas form is *essentially act*. Something purely potential cannot be part of what is essentially act, since potentiality is what is opposite to actuality: the reason of the purity of a form is also the reason of its priority. A substantial form is prior to matter because of the priority of actuality over potentiality: substantial form and prime matter are, in fact, fully actualizing and purely potential respectively.

As we have seen, when Aquinas distinguishes the form of the part and the form of the whole, he underlines that the form of the part, namely, the substantial form, is what actualizes matter and brings it to the level of the substantiality of the compound, whilst

¹⁹² S.T. I, q. 75, a. 5: «Est enim de ratione animae, quod sit forma alicuius corporis. Aut igitur est forma secundum se totam; aut secundum aliquam partem sui. Si secundum se totam, impossibile est quod pars eius sit materia, si dicatur materia aliquod ens in potentia tantum, quia forma, in quantum forma, est actus; id autem quod est in potentia tantum, non potest esse pars actus, cum potentia repugnet actui, utpote contra actum divisa».

the form of the whole, the essence, is the principle that locates a substance in a determinate species. The form of the part is said to actualize matter, not only because it is a principle of *determination* of matter but because it gives *actual* existence to it.

As Aquinas states at the beginning of *De Principiis Naturae*, «form is what gives actual being to matter» (*forma dat esse materiae*).¹⁹³ Clearly, the matter to which Aquinas refers here is prime matter (pure potentiality in itself), which is brought to actuality and substantial existence by the form. Every substantial form is, therefore, essentially act and every form is a principle of being (*esse*); the link between the form of something and its existence is intrinsic. For example, as long as the form of the dog Fido is present, it is absolutely impossible for Fido not to be alive, that is, to remain in being.

Form and being in actuality are inextricably related: whilst prime matter can acquire actual being only through form, matter in itself does not have any connection with actuality. There is therefore an interdependence between the substantial form as principle of being, as essentially act, and prime matter as a principle of pure potentiality: this is what grounds the unity and actuality of a composite substance.

As a matter of fact, in contemporary Aristotelian interpreters, the impurist view of sensible forms is associated to an account of the priority of form over matter significantly different from that of Aquinas.¹⁹⁴ David Charles, for example, characterizes substantial forms in terms of «essentially material capacities or structures».¹⁹⁵

In Aquinas's perspective, describing natural forms in terms of material structures or capacities would mean to reduce substantial forms to accidental forms. Without the strong natural priority of forms over matter, grounded in the priority of actuality over potentiality, it is impossible, according to Aquinas, to distinguish substantial forms from

¹⁹³ *De Principiis Naturae*, c. 1, Leon. Ed., 43-39; 20-44.

¹⁹⁴ David Charles has his own sophisticated account of priority. Unfortunately, I don't have the space here for a more detailed analysis of his position. It must be noticed that a fundamental difference from Aquinas lies in the fact that Charles does not work with a notion of prime matter, which is not clearly present in Aristotle. A detailed study of the question of priority in Aristotle from an impurist perspective can be found in Peramatzis (2011) pp.39-50.

¹⁹⁵ Charles (2023), p 9. Some contemporary hylomorphic proposals give the same characterization of forms as 'structures'. See for example Koslicki (2008); Jaworski (2016). A criticism from a Thomistic perspective, close to my articulation, can be found in Klima (2021). An interesting discussion over contemporary hylomorphism can be found in Austin (2020).

accidental forms: the former are in fact distinguishable from the latter by virtue of their being unqualified sources of actuality and unity of a substance.¹⁹⁶

Finally, I want to briefly remark that what I've called Aquinas's 'qualified purism' and his related account of the priority of substantial form over matter have a key role in one of his central anthropological and theological commitments: the immateriality and incorruptibility of the human soul.¹⁹⁷

As Bernard Bazàn has pointed out, Aquinas's account of the ontological priority of form over matter, «permits Thomas to state that any form (except that of the four elements) transcends the operational qualities of matter (*transcendit; se extendit ultra materiam*)».¹⁹⁸

For Aquinas, there are 'degrees' of non-materiality among sensible forms, which means that there are different levels of independence from matter among sensible forms. At the lowest level there are the sensible forms of the elements, which are mostly immersed into the matter in which they exist, and their operations will consequently have the highest degree of dependence on matter. Progressively, at the higher levels of living substances, there is an increase in the operational independence from matter. Aquinas speaks in this respect of different degrees of nobility among sensible forms.¹⁹⁹

In the case of the human being, the most perfect sensible substance, this level of independence will reach its maximum, with the human intellect being completely independent in its intrinsic operations from the body of which it is the form.

The possibility of accounting for the independence of the human intellect in the hylomorphic analysis is well expressed in a passage from *De Ente et Essentia*:

(T9) Whenever two things are related to each other such that one is the cause of the other, the one that is the cause can have existence without the other, but not conversely. Now, we find that matter and form are related in such a way that form gives existence to matter, and therefore it is

¹⁹⁶ Cf. *S.T.* I, q. 76 a.3. The different positions on the priority of form over matter in Aquinas and in the impurist interpretation also have some interesting consequences in their respective account of formal causality, and its relationship with efficient, material and final causality. On this issue see Amerini (2013). On Aquinas's account of the four causes see Frost (2022), pp. 11-46.

¹⁹⁷ For a recent textual and theoretical discussion of Aquinas's arguments for the immateriality of the human intellect one can see Wood (2020).

¹⁹⁸ Bazan (1997), p.115.

¹⁹⁹ Cf. *S.C.G.* II, c. 68, n.7.

impossible that matter exist without a form; but it is not impossible that a form exist without matter, for a form, insofar as it is a form, is not dependent on matter.²⁰⁰

Aquinas's argument can be sum up in the following way:

1. When something is the cause of the existence of something else, the thing that is the cause can exist without the thing that is its effect, but not conversely.
2. A substantial form is the formal cause of the existence of matter, since it confers actual being to prime matter (pure potentiality).
3. Therefore, the substantial form can exist without the actual sensible matter, but not conversely.

If we understand formal causality—the causal role of the form as what gives existence to prime matter—we can understand why, *in principle*, a form could possibly exist outside matter, as is the case of rational human souls after the separation with the body.²⁰¹

At the same time, the human soul, as part of the composite essence of the human being, even though it can have existential independence from the body, will still maintain some essential dependence on it, as expressed by the enduring natural tendency towards the body in the intermediate state between the death of the human being and its resurrection.²⁰²

Overall, as Robert Pasnau points out, there is nothing specifically incoherent in Aquinas's conception of the relationship between the human body and its rational soul:

²⁰⁰ *De Ente et Essentia*, c.4, p. 110, ed. Porro: «Et quomodo hoc sit planum est videre. Quaecumque enim ita se habent ad invicem quod unum est causa esse alterius, illud quod habet rationem causae potest habere esse sine altero, sed non convertitur. Talis autem invenitur habitudo materiae et formae, quia forma dat esse materiae. Et ideo impossibile est esse materiam sine aliqua forma. Tamen non est impossibile esse aliquam formam sine materia. Forma enim non habet in eo quod est forma dependentiam ad materiam.»

²⁰¹ Of course, the *De Ente et Essentia* passage that I have quoted is not (and does not want to be) an argument for the immateriality of the human intellect. The argument establishes that, *in principle*, the notion of a form existing outside matter is not inherently incoherent and impossible. In this sense it establishes the *possibility* for an argument in favor the incorruptibility of the human intellect.

²⁰² For this reason, the existential and operational independence of the human soul from the body is always qualified. The human soul is in a state of mutilation when separated from the body, which suggests that the resurrection is essential for the complete salvation of a human person. Of course, Aquinas does not pretend to give a philosophical demonstration of resurrection, which is supernatural and gratuitous. However, this miraculous event has reasons of fittingness with the nature of human beings. On the problem of the mutilated status of the human soul in the intermediate state see Brock (2005), pp.248-255.

the anthropological case, even if it is a special case, is the highest application of Aquinas's general principles on form-matter relationships.²⁰³

10. Conclusion

Aquinas's account of *Met. Z* 10-11 emerges as motivated by both exegetical and theoretical concerns. While in his reading of these chapters Aquinas is careful to provide an interpretation that remains faithful to Aristotle's text, he also integrates it into his own coherent framework concerning definition, essence, and the hylomorphic composition of substance.

I have identified three fundamental theoretical insights that underpin the originality of Aquinas's exegetical and theoretical position: (a) the substantial and definitional primacy of the composite, and (b) the distinction between the form of the part (substantial form) and the form of the whole (essence), (c) the distinction between common and individual matter.

This articulation has allowed us to formulate an initial answer to the problem of the relationship between the unity of the essence and its hylomorphic composite nature: the unity of the essence is guaranteed by the role of the substantial form as the only source of actuality in its interdependence with the role of prime matter as pure potentiality. At the same time, matter plays a pivotal causal and explanatory role in the constitution of the essence. As a matter of fact, certain features that follow from an essence depend on the role of essential matter: this means that these features can be realized only as a result of the unity between substantial form and prime matter, from which essential matter results. Both these results (i. the reality of prime matter that guarantees the ontological unity and relative simplicity of the essence; ii. the enmattered character of the sensible

²⁰³Pasnau (2001), p.72. Curiously, in his introduction to the new book on the history of hylomorphism, David Charles briefly considers Aquinas's ontology of the human intellect and regards it as an example of a purist account. Charles ascribes to Aquinas the idea that the human intellect should be defined only in 'pure' terms, without making reference to bodily activities. As we have seen, this does not correspond to Aquinas's view on the definition of the human soul, which always needs a reference to the body. Nevertheless, I think it is quite clear that Aquinas's view on the human intellect makes his ontology of forms incompatible with the impurist account of Charles. See Charles (2023), p.31-32.

forms) were obtained by Aquinas through metaphysical demonstrations in *modus logicus*.²⁰⁴

This theoretical foundation allows Aquinas to develop an interpretation that differs from both the purist and impurist accounts, though it shares similarities with each. Regarding the essence of the composite, Aquinas is certainly an impurist. However, concerning the ontological status of sensible forms, Aquinas can be seen as a ‘qualified’ purist: the (secondary) definition of a form retains an enmattered character, indicating the essential relationship of the form to matter. Yet, the (secondary) essence of the form remains ‘pure’ in itself. As I have demonstrated, this qualified purism is closely tied to Aquinas’s view of the natural priority of substantial forms over matter, a crucial aspect of his hylomorphic analysis.

²⁰⁴ Interestingly, David Oderberg, seems to take, contrary to Aquinas, an Averroistic and purist approach with regard to the essence of the human being; see Oderberg (2007), pp.248-260. I believe this is determined by the fact that his *Unity Argument* in favor of the reality of essence leads him to stress the character of *simplicity* of the essence as *form*, without giving importance to the association of form with matter in sensible essences. A similar point about Oderberg’s account has been made by Dumsday (2019). As we have seen in Aquinas’s perspective, instead, the peculiar status of prime matter guarantees the unity of the essence. Moreover, given that prime matter does not possess a ‘positive’ nature, the simplicity of the essence is also guaranteed, in the sense of non-composition of different nature.

Chapter 4

The Unity of Definition

1. Introduction

In this chapter, I present and assess Aquinas's solution to the problem of the unity of definition. In doing this, I will start, once again, from Aristotle's *Metaphysics Z*. For, as we have seen, Aquinas's investigation on definition and essence is fundamentally an interpretation of Aristotle's account. While Aristotle specifically deals with the problem of the ontological parts of a definition and essence in *Z* 10-11, he addresses the question of the unity of a definition in the immediately following chapter *Z* 12.

We can briefly sum up the main theoretical lines that we have developed so far in our investigation of Aquinas's logical approach to essence.

In Chapter 1, we have presented Aquinas's logical method, mainly drawing from his *Commentary* on the *Metaphysics*, arguing that this method can be applied to proper metaphysical demonstrations.

In Chapter 2, his logical method was analyzed in Aquinas's *Commentary* on *Z* 4, where through the logical analysis of the relationship between *per se* predications and real definitions, we have established the unitarian structure of an essence and its ontological role as a principle of being and unity of a thing.

In Chapter 3 we have introduced the problem of the ontological parts of a sensible essence: matter and form. The crucial question we have addressed is that of the unity of the essence as a hylomorphic compound. How is it possible to maintain the unity of the essence and at the same time its compositional, hylomorphic reality? Through the analysis of Aquinas's interpretation of Aristotle's *Met. Z* 3, 10 and 11 we have proposed an answer to this question: the peculiar status of prime matter and its immediate unity with the substantial form guarantees the unitarian structure of the essence, which depends ultimately on the substantial form. In the analysis of the problem of the ontological parts

of the essence, i.e., matter and form, we have seen that Aquinas introduces a relationship between them and the logical parts of the definition.

This chapter 4 will look at Aquinas's solution to the problem of the unity of the logical parts of the definition. After introducing the problem as raised in Aristotle's text (Section 2) and after some brief remarks on the structure and the aim of Z 12 in Aquinas's interpretation (Section 3) I will reconstruct Aquinas's interpretation in his *Commentary* on Z 12 (Section 4 and 5). As in the case of Z 10-11, in this case too Aquinas's interpretation is not only relevant from a merely exegetical point of view, but also from a theoretical one: it shows Aquinas's original account of the problem, and it offers his theoretical stance on it. Aquinas's account in his *Commentary* on Z 12 will be integrated with his proposal in other texts, that is, *De Ente et Essentia*, and his *Commentary on the Posterior Analytics*. After that, I will look at the ontological ground of the unity of definition, through an analysis of the issue of the unicity of the substantial form in its connection with an ontology of prime matter (Section 6). Aquinas's account of the unity of the definition and essence will be also assessed in comparison with some contemporary perspectives in philosophy of mind and ethics (Section 7). Finally, I will address the problem of the status of the specific difference, showing an internal tension in Aquinas's own account, and suggesting a solution (Section 8).²⁰⁵

²⁰⁵ The structure and argumentation of this chapter is deeply indebted to the one of Galluzzo (2002); (2025), which interpretation I follow.

2. The unity-problem in Aristotle's *Metaphysics Z 12*

At the beginning of Z 12 [1037 b10-14], Aristotle formulates the problem of the unity of the definition:

(T1) Let us now, however, first speak to the extent that we have not already discussed it in the *Analytics*, about definition. For the puzzle that was stated there advances the work of our arguments about substance. I mean this puzzle: why on earth is something one when the account of it is what we call a definition? For example, let the account of the human be biped animal. Why, then, is this one and not instead many, animal and biped?

A real definition is characterized by these two logical parts, genus and specific difference. At the same time, it is the account of an essence that is a unity. As we have articulated in Chapters 1 and 2, in Aristotle's and Aquinas's perspective, the use of the so-called *Predicative Simplicity Criterion* concerning real definitions brings to light the strongly unitarian structure of the essence spelled out by a definition. Given that the definition is the complete account of an essence, this unitarian structure must be reflected in it.

Therefore, the *logical* problem of the unity of a definition arises from the assumption that there is an isomorphism between the definition and the essence, so that, if the essence is a unity, the definition must be a unity as well. If, therefore, the definition must be a unity, it needs to be shown how this is compatible with its having distinct logical parts, *genus+differentia*. In (T1) Aristotle assumes for the sake of argument that the definition of human is 'biped animal', and asks: how is it possible that the genus ('animal') and the specific difference ('biped') are not simply the collection of two different items ('animal' and 'biped') but that together they are able to form a unity?

As Aristotle's remark in (T1) shows, the problem of the unity of the definition was already mentioned in the *Organon*, but is properly treated by Aristotle only in Z 12.²⁰⁶

There is an important theoretical reason for this remark: Z 12 belongs to the investigation of the general question of the central books of the *Metaphysics*, i.e., 'what is substance?', that is, to an ontological context. The logical problem of the definition is

²⁰⁶On Z 12 one can look at Rorty (1973); Grene (1974); Gill (1989); Frede- Patzig (1990); Loux (1991); Bostock (1994); Wedin (2000); Galluzzo, Mariani (2006); Peramatzis (2011) (2023).

always treated in relation to the ontological problem of the essence, given the isomorphism between definition and essence. Therefore, it can be properly addressed only in the context of an ontological inquiry.

Z 12 is devoted to answer the problem raised in (T1). This chapter can be divided, after the introduction, in three main sections. (1) In the first section (1037b13-27) Aristotle presents and rejects some initial accounts of the unity of a definition. (2) The second section (1037b27-1038a9) is the central part of the chapter and contains Aristotle's solution to the unity-problem. The solution is based on two crucial claims.

The first is that every definition can be reduced to the structure of *genus*+one single *differentia* through an appropriate process of division. The second claim is that, once this kind of structure is reached, the *genus* is *eliminable*, that is, it can be removed from the definition, since the last *differentia* is able to subsume under it the whole *genus*. (3) A final section (1038a9-35) takes up again the problem of the division of a definition. In order for Aristotle's proposed solution to the unity-problem to work, it is fundamental to carry out a correct process of division. Only in this way, the last *differentia* will be able to pick up not only all the superior differences, but to subsume the entire *genus*, so that the definition will be reduced to the last, single *differentia*, and so it will be one, just as the essence of the object defined is one.

For our purposes we can focus our attention on a single aspect of Aristotle's solution, namely, the idea of the *eliminability* of the genus. This idea is formulated by Aristotle in the following passage:

(T2) If, then, the genus is unconditionally nothing beyond the species as species of a genus, or if it is, it is as matter (for the voiced sound is genus and matter, and the differentiae produce the phonetic elements from this), then it is evident that the definition is the account composed of the differentiae.²⁰⁷

The claim of the eliminability of the genus is expressed in the conclusion of the passage: that the genus is eliminable means that the definition can be reduced only to the

²⁰⁷ Z 12 1038 a4-9

differentiae.²⁰⁸ This conclusion is reached starting from two alternative conditions about the status of a genus: the genus is eliminable either because (i) it is nothing beyond the species or (ii) it only exists as matter.

These two conditions have been extensively discussed in the literature on Z 12. Often, the debate has assumed that (i) and (ii) were two distinct and incompatible options. Aristotle, therefore, must have picked up one of the two conditions in the articulation of his solution. At a closer look, though, these two conditions are not completely opposite one to another but, on the contrary, present a strong similarity. In the first option (i), the genus does not have any existence beyond the species, therefore the definition can be reduced only to the unity of the last *differentia*. In the second case (ii), the genus exists only as matter. The second option has been read by interpreters in different ways: what does Aristotle mean when he says that the genus ‘exists as matter’? Does it mean that the genus is literally the same thing as the matter of the hylomorphic substance (and the specific difference is the form?) Or is it the case that between genus and matter there is only an analogical relation?²⁰⁹

The idea that the genus exists only as matter has to do with the potential character of matter with respect to form. As matter is in potentiality with respect to form, in the same way the genus is in potentiality with respect to the specific difference. The relation between genus and matter, on one hand, and form and specific difference, on the other, serves to make the point that the genus is related to the specific as a determinable is related to a determined. This is why, Aristotle’s two conditions for the eliminability of the genus, although different, are tightly close in their strategies. In the former case the genus does not exist at all beyond the species, whereas in the latter the genus exists only as matter, but matter does not really exist apart from form. It is, in itself, a determinable reality.

²⁰⁸ Once the definition has been reduced to the *differentiae*, additional reduction of the *differentiae* to the last one can be obtained through a correct process of division. If the definition can be reduced to *one* *differentia*, its unity will be preserved. Cf. *Met. Z.12*, 1038a9–25.

²⁰⁹ Rorty (1973) has given a strongly univocal interpretation of the relation between genus and matter: genus is not, in his view, simply analogous to matter in its indeterminacy, but it is literally the same thing as matter. A criticism of this reading was given by Grene (1974). On this debate see Galluzzo, Mariani (2006), pp. 160-165.

The centrality of the relationship between the problem of the logical unity of the definition and the hylomorphic analysis clearly emerges also in a passage of *Met. H 6*.²¹⁰ Aristotle proposes a solution to the problem of the unity of the definition similar to that in (T1): the genus plays the role of matter, and it exists in potentiality; the specific difference plays the role of form, and it exists in actuality. Therefore, genus and specific difference are somehow one and the same thing, only that one is in potentiality and the other is in actuality.

Bearing in mind this starting point, we can now look at Aquinas's interpretation of *Met. Z 12*. In doing so, we will locate it in the context of his general approach to the problem of definition and essence that we have articulated so far.

3. Aquinas on Z 12: a brief overview

In his *Commentary* Aquinas follows closely the structure of Z 12 and its intended aim.²¹¹ He maintains that this chapter is dedicated to completing the investigation of the problem of the unity of the parts of the essence with the treatment of the problem of the unity of a *genus-differentia* definition.

Locating Aquinas's *Commentary* on Z 12 in the context of our investigation allows us to see how Aristotle's introduction of the hylomorphic analysis as a source for the solution to the problem of the unity of the definition in Z 12 and H 6 was already anticipated by Aquinas's approach in Z 10 and 11.²¹² We will now see in more details Aquinas's account of the exact nature of the relationship between genus and specific difference, on one hand, and matter and form, on the other.

Moreover, Aquinas's approach to logical realities as grounded in the ontological ones is also confirmed and developed here: Aquinas wants to ground the unity of a definition in the unity of essence.²¹³

Aquinas follows and develops in his own way Aristotle's line of thought on this issue: the unity of the definition reflects the unity of a substance, therefore only a proper grasp of how the substance and its essence are one will allow us to understand how the

²¹⁰ Cf. H.6, 1045a23–5.

²¹¹ *Exp. Met.*, VII, l. 12.

²¹² Cf. p.64

²¹³ Cf. pp.35-41

definition can be one. A different conception of substance, one in which the substance is composed of different and independent parts, will lead to a theory of definition as something composed of different and independent parts. For example: a Cartesian conception of the substance ‘human being’, that is, a conception according to which a human being is composed of two irreducible and distinct substances interacting with each other, will lead to an account of the definition of the species ‘human being’ very different from the one that Aquinas is trying to spell out.

As we shall see, it is not surprising that there is a strict connection of Aquinas’s position on the unity-problem of the definition with his ontology of prime matter and his doctrine of the unity of the substantial form. This latter is the view that each substance has exactly one substantial form and not more than one. For, according to Aquinas, the unity of the substantial form is the fundamental factor that explains the unity of a substance.²¹⁴

If the inquiry into the unity of the ontological parts of the essence has led us to consider the problem of the unity of the logical parts of the definition, at the same time an inquiry into the logical aspect can shed new light back on the ontological problem.

After these preliminary remarks, we can now focus on Aquinas’s *Commentary on Z 12* to reconstruct in detail his argumentation.

4. Criticism of the AAM

Following the structure of Aristotle’s text, Aquinas divides his exegesis into three main sections. In the first section, he presents and criticizes some accounts of the *genus-differentia* relationship. In the second section, he formulates his positive solution to the problem of the unity of the definition; here Aquinas develops his own interpretation of Aristotle’s argument for the eliminability of the genus and the comparison between matter and genus. In the third section, the Dominican theologian addresses the problem of the status of the specific difference, and he points out the necessity of a correct process of division.

²¹⁴ On Aquinas’s view about the unicity of the substantial form, especially in human beings, there is a vast literature. An excellent presentation can be found in Wippel (2011).

Before turning to the solution to the problem of the unity of genus and specific difference, Aquinas follows Aristotle's text (1037 b13-18) and considers an alternative model for such unity. This model is based on the case of accidental predications. According to this model, the relationship between genus and specific difference is analogous to the relationship between a subject like 'man' and an attribute like 'white'. We can schematically express this model in this way: *man: white = genus: specific difference*.

In Aristotle's text (1037 b18-24) the criticism of this model is followed by the criticism of what Aristotle calls the model of 'participation'. Aristotelian interpreters point out that it is not clear what the precise reference of the language of participation here is and whether this criticism is a specification of the general criticism of the same model, or it is an independent argument.²¹⁵

As to the second question, Aquinas sides with the first reply and maintains that the reference to the language of participation is only a specification of the overall argument against this alternative model. He writes:

(T3) He accordingly says, first, that these two things, man and white, are many when one of them is not present in the other; for if white does not belong to man, then man and white are one in no way. But they are one when one of them is present in the other, and when the subject, man, "is the recipient of the other," i.e., when it receives the modification, white; and then something accidentally one is produced from these two things, namely, a white man. Now from these remarks it is understood that one thing is not produced from two things when one does not exist in the other. But "in this case," namely, when one speaks of two-footed animal, "one," i.e., animal, does not participate "in the other," namely, in two-footed, as white man participates in whiteness. And this is so because animal is a genus and two-footed is a difference. But a genus does not seem to participate in differences, for it would follow that the same thing would participate in contraries at the same time; for differences are the contraries "by which a genus is distinguished," i.e., by which a genus is divided; and for the same reason that it participates in one it will participate in the other. But if it is impossible for the same thing to participate in contraries, it will be impossible for one thing to be produced from a genus and a difference.²¹⁶

²¹⁵ On this, I've benefited once again from Galluzzo (2002), p.148.

²¹⁶ *Exp. Met.*, VII, l. 12, n.1537. «Dicit ergo primo, quod in hoc quod est homo et album, ista duo sunt multa, quando alterum eorum non inest alteri. Si enim album non insit homini, tunc homo et album nullo modo sunt unum. Unum vero sunt, quando alterum eorum inest alteri, et subiectum, quod est homo *patitur*

Aquinas closely follows Aristotle in his explanation of this model and illustrates it with the example of ‘white man’; ‘man’ and ‘white’ are not intrinsically one but can become one when the subject man becomes the recipient of the quality ‘whiteness’. When the quality is received in the subject, the outcome is the accidental unity ‘white man’.

This is where Aquinas introduces the language of ‘participation’: this concept has to do with the idea of a subject taking part in a property. When a property like ‘whiteness’ inheres in a subject, like ‘man’, the subject is said to participate in that property. In the compound ‘white- man’, man is said to participate in the accidental property ‘whiteness’ and in this way, man and whiteness forms the accidental unity 'white man'.

This notion of participation becomes problematic when it is applied to the relationship between genus and specific difference: if we consider two-footed animal an accidental unity like white man, we should say that just as man participates in whiteness so animal participates in two-footed. Here is where, according to Aquinas, the model of participation shows to be decidedly unfitting for the genus-specific difference relation. If ‘man’ participates in an accidental property like ‘whiteness’, it won’t be the case that, for the same reason, will participate in an opposite property such as ‘blackness’. Conversely if a genus such as ‘animal’ participates in one difference such as ‘two-footed’ then by the same reason it will also participate, at the same time, to contrary specific differences.

Every division of a genus, Aquinas notices, implies a process through which one will pick up specific differences that are contraries. For this reason, the idea of participation is not compatible with the way in which the process of division of a genus works.

alterum, idest suscipit hanc passionem, quae est album. Tunc autem ex his duobus fit unum per accidens quod est albus homo. Ex his accipitur, quod ex duobus, quorum unum non inest alteri, non fit unum. Sed *hic*, scilicet cum dicitur animal bipes, *alterum eorum*, scilicet animal, non participat *altero*, scilicet bipede, sicut homo albus participat albo. Et hoc ideo, quia animal est genus, bipes vero differentia. Genus vero non videtur participare differentiis. Sequeretur enim quod idem participaret simul contrariis. Differentiae enim sunt contrariae *quibus genus differt*, idest per quas genus dividitur; et pari ratione per quam participaret unam, participaret aliam. Si autem est impossibile quod idem participet contraria, impossibile erit, quod ex genere et differentia fiat unum.»

We can see Aquinas's original interpretation of Aristotle's text: the reference to the problem of the division of a genus through specific differences is not explicitly present in Aristotle and allows Aquinas to connect in a single model the portion of the text that makes reference to an accidental model with the passages on participation. The process of division of 'man' into white and black, say, is different from the division of a genus through specific differences. The specific difference is not a quality in which a subject participates as in the case of 'white man'.

Aquinas's argument formulated here can be read together with what we have seen in the *Commentary on Met. Z 4*, where Aquinas clarifies the nature of accidental unities like 'white man'. As we have seen, the problem of the distinction between the essence and definition of substances and those of accidents were centered, using the *Predicative Simplicity Criterion*, on considerations about the unity-problem. Accidental compounds like 'white man' lack a sufficient unitarian nature to be possessor of a proper essence. Only definitions of substances are primary and *per se*, since they reflect the *per se* unity of an essence. Definitions of accidental compounds and accidents are, conversely, secondary definitions since they express only a *per accidens* unity. The participation-model of (T4) implies the idea that a subject (such as 'man') is qualified by a property/quality (such as 'whiteness'). But this is exactly what Aquinas has identified in *Z 4* as an accidental unity in his *Commentary on Z4*, where 'white man' is taken as an example of an accidental compound. If we are in search of a suitable model for an essential definition, a solution analogous to the one of an accidental unity is clearly unsuitable.²¹⁷

Considering Aquinas's *Commentary on Z 4* gives us, therefore, an additional reason for why the first model considered in his *Commentary on Z 12* should be rejected as clearly inadequate: the unity of the subject 'man' with the quality 'white', which is implied in the model of participation, is not adequate to express the unity between the genus with its specific differences. The *genus+differentia* structure must be the expression of a *per se*, unified structure that reflects an essence that is *one* and *simple*. The 'white man' model represents instead a *per accidens* predicatively complex predication that express the result of an *addition* of two different *essences*: 'man' with his essence and the quality 'white' which is another essence, even if, being an accident,

²¹⁷ *Exp. Met.*, VII, l.4, n.1339.

it has an essence only in a qualified way. We can call this first model the *Accidental Additive Model* (AAM): the model is *accidental* since it is based on an accidental unity expressed by a predicative complex predication. And it is *additive*, since its subject+quality model consists in the extrinsic addition of two different essences. We can express the AAM schematically:

AAM → Subject+ quality (predicative complexity of two different essences).

If we focus on the case of the definition of a human being as ‘rational animal’, we can appreciate how the problem of a unitarian model of definition as opposed to the AAM is a particularly important one: the question is fundamentally whether it is possible to conceive the essence of a human being, in its aspects of animality (genus) *and* rationality (specific difference) as a unified reality and not as the complex addition of two different essences as in the case of accidental unities. It is interesting to notice how this is precisely the same problem that have been widely pointed out in contemporary debates in philosophy of mind and ethics. For example, in his 1999 book *Dependent Rational Animals* Alasdair MacIntyre has criticized an anthropological conception that comes from Descartes but is traceable also in thinkers such as Heidegger and McDowell, and for which the element of ‘rationality’ is conceived as a mere addition to the element of ‘animality’.²¹⁸

More recently, Matthew Boyle has developed MacIntyre’s criticism, individuating two different traditions of thought about human rationality: ‘additive’ accounts and ‘transformative’ accounts. To put it briefly, additive accounts tend to conceive rationality as only a power that is extrinsically added to a biological-animal basis that is already constituted, whereas transformative accounts conceive rationality as a power that

²¹⁸ MacIntyre (1999), c.5, p.76. He writes: “What I have tried to achieve in the discussion both of theses drawn from analytic philosophy and of Heidegger’s claims is not only to engage with the particular arguments, but also more generally to undermine the cultural influence of a picture of human nature according to which we are animals and in addition something else. We have, on this view, a first animal nature and *in addition* a second distinctively human nature. The force of the ‘and’ is to suggest that this second nature can, at least in the most important respects, only be accounted for in its own terms. Its relation to our given biological nature is thought of as external and contingent in a way and to a degree that permits a single sharp line to be drawn between human beings and members of all nonhuman species”. The precise target of MacIntyre’s criticism is a theory of human nature that seems to postulate a *second* nature or essence that is added to a *first* one, as in the case of the accidental unity model we are analyzing.

transform and change the way in which all the animal powers of a human being are exercised.²¹⁹

We can see how the model rejected by Aquinas corresponds to the same critical targets of MacIntyre and Boyle; a conception for which the human being seems to be the result of an addition of two different *natures* and for which rationality is a power that is extrinsically added to a biological independent basis. Conversely, as Boyle himself recognizes, Aquinas is decidedly a proponent of a transformative account, and one of the most sophisticated ones.²²⁰ This introduces us to Aquinas's positive solution to the unity-problem concerning genus and specific difference.

5. The genus/matter analogy and Aquinas's *Unitarian Transformative Model*

Aquinas's solution to the problem of the unity of definition is an interpretation of Aristotle's one and therefore is based as well on the idea of the eliminability of the genus.

We have seen that Aristotle's solution in (T2) consists in the claim that a definition can be reduced to the specific differences only, since this is able to subsume the whole genus. This is made possible by the fact that the genus does not have an independent reality from the specific differences, given that the genus is either (i) nothing apart from the species or (ii) like matter.

Aquinas's interpretation wants to account for both the alternatives. According to Aquinas, there is a sense for which (i) the genus is nothing beyond the species. But there is another sense when you signify the same term not as genus but (ii) like matter, in which you are signifying something that can be considered independently from the species.

²¹⁹ Boyle (2016), p. 528. "I will call views that take this shape additive theories of rationality, to mark a significant implication of such views: namely that an account of our minds might begin with an account of what it is to perceive and desire, in terms that do not presuppose the capacity to reflect on reasons, and then supplement this with an account of the 'monitoring' and 'regulating' of belief on the basis of perception and action on the basis of desire that only rational creatures can perform. In this sense, such theories regard the package of capacities that make us rational as some- thing that might be 'added on' to a mind that already forms an intelligible system apart from this addition."

²²⁰ Boyle (2016), p. 532.

To understand this point, let us look at what Aquinas writes:

(T4) A genus does not exist apart from the things which are its species, for no animal is found which is not a man or an ox or some other animal of this kind. Or if there is something which is a genus apart from its species, taken in the sense that it exists apart from its species, it is not a genus but matter, because it is possible for something to be both the genus and matter of certain things, as the vocal sound is both the genus of letters and their matter. That it is a genus is evident from the fact that differences added to the vocal sound make the species of articulate sounds; and that it is matter is evident because the differences "make the elements," i.e., the letters, "out of this," namely, out of the vocal sound, as something is made out of matter.²²¹

Aquinas here articulates the distinction between genus and matter. Properly speaking, a genus is nothing beyond the species, for example you don't find something as the genus 'animal' in reality apart from its specification in actual cats, dogs or men, so that a genus has already its specifying differences and is part of a species. So, according to Aquinas, when we talk about a genus, it is true that we talk about something that is, in itself, nothing beyond the species. Nevertheless, if we want to refer to a genus as something apart from its species, then we are referring to it as matter. For there are indeed certain things that we can refer to it as both genus and matter.

Aquinas draws from Aristotle's text the example of a vocal sound: a vocal sound can be both the genus and the matter of the letters. This example is not very helpful to understand the exact meaning of Aquinas's distinction between genus and matter. More helpful is the clarification of the content of this distinction that Aquinas himself adds in his exegesis of Aristotle's text.

²²¹ *Exp. Met.*, VII, l. 12, n.1545, « Genus enim non est praeter ea quae sunt species generis. Non enim invenitur animal, quod non sit nec homo, nec bos, nec aliquid aliud huiusmodi. Aut si inveniatur aliquid quod est genus praeter species, sic acceptum ut est praeter species, non accipitur ut genus, sed ut materia. Contingit enim aliquod et esse genus aliquorum, et materiam. Sicut vox est genus literarum, et est materia. Et quod sit genus, patet per hoc quod differentiae additae voci faciunt species vocum literatarum. Et quod etiam sit materia, patet; quia *ex hac*, scilicet ex voce *faciunt elementa*, idest literas, sicut aliquid fit ex materia»

First of all, he writes:

(T5) Moreover, it must be understood that while genus and matter can be the same in name, they nevertheless do not mean the same thing; for matter is an integral part of a thing, and thus cannot be predicated of a thing, for it cannot be said that man is flesh and bones. But a genus is predicated of its species, and therefore it must in some way signify the whole thing.²²²

Here Aquinas starts to clarify the nature of the distinction between genus and matter: although the same term can be used to signify something as matter or as a genus, the same term would have different meanings. This distinction in meaning, Aquinas suggests, emerges when we look at how this term is predicated differently. When a term signifies matter, then it cannot be predicated of an hylomorphic composite, since it signifies only an integral part of this composite, whilst when a term signifies a genus, it can be predicated of an hylomorphic composite since it does not signify only a part of it but somehow the whole of it. Aquinas here mentions an example of something that is signified as matter, namely flesh and bones. Flesh and bones are an integral part of a human being so cannot be predicated of a human being. Here the case of ‘flesh and bones’ signifying a genus is not explicated. But in the next section, Aquinas further clarifies:

(T6) For body can be taken both as the matter and as the genus of animal, because, if we understand in the notion of body a substance completed by its ultimate form, having in itself three dimensions, then body is a genus and its species are the complete substances determined by these ultimate forms, as that of gold, of silver, of olive, or of man. But if one considers in the notion of body only that it is a thing having three dimensions with an aptitude for an ultimate form, then body is matter.²²³

²²² *Exp. Met.*, VII, l. 12, n.1546, « Sciendum est autem quod, licet idem secundum nomen possit esse genus et materia, non tamen idem eodem modo acceptum. Materia enim est pars integralis rei, et ideo de re praedicari non potest. Non enim potest dici quod homo sit caro et os. Genus autem praedicatur de specie. Unde oportet quod significet aliquo modo totum».

²²³ *Exp. Met.*, VII, l.12, n.1547. « Corpus enim potest accipi, et ut materia animalis, et ut genus. Si enim in intellectu corporis intelligatur substantia completa ultima forma, habens in se tres dimensiones, sic corpus est genus, et species eius erunt substantiae perfectae per has ultimas formas determinatas, sicut per formam auri, vel argenti, aut olivae, aut hominis. Si vero in intellectu corporis non accipiatur nisi hoc, quod est habens tres dimensiones cum aptitudine ad formam ultimam, sic corpus est materia».

In (T6) the matter/genus distinction is illustrated with a different example, that of the term ‘body’, but the point made is the same: the term ‘body’ can signify both a genus and matter. When the term ‘body’ is taken to signify something three-dimensional that is completed by an ultimate form, then this term signifies a genus. The genus contains already the ultimate form, but only in an indeterminate way; when the ultimate form that determines this genus is specified, then the species of the genus is signified. Signified as a genus, ‘body’ can be predicated of a thing: we can say that a man or gold or an olive is a ‘body’.

Conversely, if the term ‘body’ is taken to signify something that has three dimensions only, and that does not contain implicitly any other form, but has only an aptitude towards an ultimate form, then ‘body’ signifies the matter. Taken as matter, ‘body’ cannot be predicated of a thing, since it signifies only an integral part of a thing, and not the whole: we cannot say in this case that ‘man is a body’ or ‘an olive is a body’ but only that ‘man has a body’ or ‘an olive has a body’.

These different significations of the term ‘body’, as matter or as genus, were articulated by Aquinas already in the *De Ente et Essentia*. It is useful here to integrate our analysis of the *Commentary* on Z 12 with some passages from *De Ente et Essentia*, c.2. Aquinas writes there:

(T7) The name ‘body’, therefore, can signify something which has a form from which there follows the designability of three dimensions with precision, namely, so that from that form no further perfection would follow, but if something is added, then it is beyond the signification of ‘body’ in this sense. And in this sense the body will be an integral and material part of an animal, for in this way the soul will be beyond the signification of the name ‘body’, and it will be superadded to the body itself, so that the animal will be constituted from these two, namely, from the soul and the body, as its parts.²²⁴

²²⁴ *De Ente et Essentia*, c.2, p.88 ed. Porro «Potest ergo hoc nomen corpus significare rem quandam, quae habet talem formam, ex qua sequitur in ipsa designabilitas trium dimensionum cum praecisione, ut scilicet ex illa forma nulla ulterior perfectio sequatur; sed si quid aliud superadditur, sit praeter significationem corporis sic dicti. Et hoc modo corpus erit integralis et materialis pars animalis, quia sic anima erit praeter id quod significatum est nomine corporis et erit superveniens ipsi corpori, ita quod ex ipsis duobus, scilicet anima et corpore, sicut ex partibus constituetur animal»..

The term ‘body’ can signify something that has three dimensions ‘with precision’, i.e., in such a way that does not signify other perfections such as being alive or rational. The expression ‘with precision’ (*cum precisione*) is a technical term used by Aquinas to characterize this mode of signification of the term ‘body’. If we take the term ‘body’ as signifying a sensible and spatially extended thing only, the thing signified will be matter. ‘Body’ signified with precision as matter is an integral part of the essence of a human being, together with the soul, signified with precision, as the other integral part of the essence.

Conversely, when ‘body’ signifies as genus, it will be signified *sine precisione*; the meaning of ‘body’ as genus is something that contains in an indeterminate way all the various forms that specify it. As Aquinas explains:

(T8) The word “body” can also be taken in another way, namely, to signify a thing which has a form such that three dimensions can be designated in it, no matter what sort of form it is, whether some further perfection can come from it or not. And taken in this way, body will be a genus of animal, because there is nothing in animal which is not implicitly contained in body. Soul is not a form other than the form through which three dimensions could be designated in that thing; thus, when we said that body is that which has a form such that because of it three dimensions can be designated in the body, form meant any form, whether animality or stoniness, or any other form. And so, the form of animal is implicitly contained in the form of body, when body is its genus.²²⁵

Here the signification without precision is explained in more detail. The term ‘body’ is taken as genus when it signifies a thing endowed with the first level of perfection acquired by prime matter through a substantial form, which is the perfection that corresponds to being a three-dimensional thing. Differently from the term taken as

²²⁵ *De Ente et Essentia*, c. 2, p.88, ed. Porro «Potest etiam hoc nomen corpus hoc modo accipi, ut significet rem quandam, quae habet talem formam, ex qua tres dimensiones possunt in ea designari, quaecumque forma sit illa, sive ex ea possit provenire aliqua ulterior perfectio sive non. Et hoc modo corpus erit genus animalis, quia in animali nihil est accipere quod non implicite in corpore continetur. Non enim anima est alia forma ab illa, per quam in re illa poterant designari tres dimensiones; et ideo, cum dicebatur quod corpus est quod habet talem formam, ex qua possunt designari tres dimensiones in eo, intelligebatur: quaecumque forma esset, sive animalitas sive lapideitas sive quaecumque alia. Et sic forma animalis implicite in forma corporis continetur, prout corpus est genus eius».

‘matter’ though, in this case we are considering the thing signified by the term ‘body’ taken as genus not as indicating something in exclusion from the other levels of perfection (*cum precisione*), but as a reality that implicitly contains all the other levels of perfections of the form, whether this form will be the form of an animal or a stone (*sine precisione*). The term ‘body’ take in this way signifies as a genus, and this genus can implicitly contain the genus ‘animal’. In the same way, the genus ‘animal’ will implicitly contain all the other levels of perfection. As Aquinas writes in the following lines of *De Ente*:

(T9) Animal is a genus according as it signifies a thing from whose form the senses and movement can come forth, no matter what sort of form it is, whether a sensible soul only or a soul which is both sensible and rational.²²⁶

Here the character of indeterminacy of the genus ‘animal’ is clearly showed: as ‘body’ taken as a genus indicates something three-dimensional regardless of the completing perfections of the that form , ‘animal’ taken as a genus signifies a thing that has a form that makes it capable of sensation and movement, which are the essential perfections of any animal, that implicitly contains all the other completing different levels of perfection of the specific form, without specifying it. It is clear, therefore, how the notion of ‘animal’ as genus has existence only as a determinable reality, since it signifies only an indeterminate level of reality, common to its different species, that is still lacking a final specification, only implicitly contained in it.

This difference between the signification with precision (*cum precisione*) and without precision (*sine precisione*) can be illustrated with an example. When the term ‘animal’ is taken with precision, then the proposition ‘this cat is an animal’ is true but the proposition ‘Socrates is an animal’ is false. The reason for this is that ‘animal’ taken with precision signifies a thing with a sensitive soul. If ‘animal’ is taken with precision in this way, then it will follow that a cat would be an animal, since it has a sensitive soul but Socrates wouldn’t be ‘animal’, since he does not have a sensitive soul, but a rational soul. Conversely, when the term ‘animal’ is taken without precision as genus, then both

²²⁶ *De Ente et Essentia*, c. 2, p. 90, ed. Porro, « Sed est genus secundum quod significat rem quandam, ex cuius forma potest provenire sensus et motus, quaecumque sit illa forma, sive sit anima sensibilis tantum sive sensibilis et rationalis simul».

propositions are true. The reason for this is that both a cat and Socrates have a form from which being an animal follows, although the forms are different, one is the sensitive soul (cat) and the other is the rational soul (Socrates).

The character of indeterminacy of the genus is what allows to predicate it as a whole of the essence defined, contrary to the matter. The relationship between specific difference and form is similar to that between genus and matter: just as a genus is not matter but signifies the whole essence, so a specific difference is not a form but signifies the whole essence. A human being can be said to be ‘rational’ but cannot be said to be a ‘rational soul’. A human being has a rational soul just as he has a body: these are essential integral parts of the essence and so, being signified with precision, can indicate only a part of the human being and not the whole. On the contrary, both genus and specific difference signify the whole and so can be predicated of the whole.

As Aquinas adds in *De Ente et Essentia*:

(T10) The genus, thus, signifies indeterminately everything that is in the species; it does not signify the matter alone. Similarly, the difference, too, signifies everything in the species, and not the form alone.²²⁷

This sophisticated account of the relationship between genus and matter is, therefore, central in Aquinas’s interpretation of the solution to the problem of the eliminability of the genus. We can now ask: what is the exact nature of this relationship? The answer is available from *De Ente et Essentia*:

(T11) From this it is clear why the genus, the difference (...) are related proportionately to the matter and to the form, although they are not identical with them. (...) The genus is not the matter, but taken from the matter as signifying the whole; nor is the difference the form, but taken from the form as signifying the whole.²²⁸

²²⁷ *De Ente et Essentia*, c. 2, p. 90, ed. Porro, «Sic ergo genus significat indeterminate totum id quod est in specie, non enim significat tantum materiam.»

²²⁸ *De Ente et Essentia*, c. 1, p. 92, ed. Porro, «Ex hoc patet ratio quare genus (..) et differentia se habent proportionaliter ad materiam et formam (...), quamvis non sint idem quod illa, quia neque genus est materia, sed a materia sumptum ut significans totum, neque differentia forma, sed a forma sumpta ut significans totum»

Genus, specific difference and species, which are logical intentions, are related proportionately to matter and form, which are ontological components. The matter is not the genus, but the genus is drawn from the matter of the thing. The specific difference is not the form, but it is drawn from the form of the thing. Aquinas describes this correlation between matter and genus and specific difference and form as *analogical*: the genus is not matter but plays a material role with respect to the specific difference. The specific difference is not the form but plays a formal role with respect to the genus.

We are now able to see how the logical structure of the definition in *genus* and *differentia* is grounded in the sensible essence with its ontological parts: matter and form. The analogical structure is based on the causal and explanatory role that matter and form play with respect to genus and specific difference. The *potentiality* of matter causes and explains the feature of *determinability* in the notion of genus; the actuality of the form causes and explains the feature of *determination* in the notion of specific difference.

Every essence, which is in itself *one*, therefore, is apprehended through two distinct intelligible dimensions, namely, *genus* and *differentia*, for example ‘animal’ and ‘rational’, which are related one to the other as the generic determinable dimension (genus), and the determining and specifying dimension (specific difference). These two different intelligible dimensions signified in a definition are not literally two different parts of the essence signified, since they both signify the whole.²²⁹ Nevertheless, this way of understanding the same single essence through two different concepts is grounded in the hylomorphic composition of the essence.

The matter that is analogous to the genus is essential/common matter. This is the matter taken with precision according to a determinate level of perfection (which includes in all sensible substances the level of perfection of corporeity). Although, essential matter is already actualized and determined by the substantial form, it is nevertheless in potency to be completed by the ultimate levels of perfection of the form. The potential character of essential matter, which is the ontological ground for the indeterminacy of the genus, is, in turn, ultimately grounded in the pure potentiality of prime matter in its role of co-

²²⁹ From this point of view, as Galluzzo notices (2025) p.134, it would be improper to talk about genus and specific difference as *parts*. Nevertheless, once clarified that these are not parts in the proper sense of the term, it is still possible to use this language of logical parts to indicate the two different *rationes* of the essence.

principle of a material substance. At the same time, the actual character of the substantial form as the source of the completing levels of perfections to which essential matter is in potency, which is the ontological ground of the determinative role of the specific difference, is in turn ultimately grounded in the substantial form in its role as the only source of actuality and determination of the material substance.

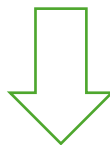
Ultimately, therefore, the logical unity of the definition is ontologically grounded in the *per se* unity of the substantial form and prime matter in a sensible substance. This is how Aquinas reads the connection between *Met. Z 12* and *Met. H 6*: the role of matter as potency and the correlated role of form as actuality is precisely the final solution that Aristotle proposes in H6 to the problem of the unity of the definition.

We can schematically express this relationship of grounding as follows:

- a. Substantial form+ prime matter= the substance (in its unity and actuality).



- b. Substantial form+ essential/common matter (distinguished according to different levels of perfection) = the essence of the substance.



- c. Genus+ differentia= the logical definition that signifies the essence of the substance.

The discussion of the analogy between genus and matter, therefore, allows Aquinas to articulate the first and fundamental part of his solution to the problem of the unity of the definition. He writes:

(T12) If the foregoing statements are true, then, it is evident that a definition is an intelligible expression having unity from its differences in such a way that the whole essence of the definition

is included in a certain way in the difference. For animal, which is a genus, cannot exist without species, because the forms of the species, the differences, are not different forms from the form of the genus but are the same forms of the genus in their determination; for example, it is evident that an animal is a thing having a sentient soul, that man is one having "such and such" a sentient soul, viz., with reason, and that a lion is one having "such and such" a soul, namely, with an abundance of daring. And it is the same in other cases. Hence, when a difference is added to a genus, it is not added as though it were an essence distinct from the genus, but as though it were contained implicitly in the genus, as the determinate is contained in the indeterminate, for example, white in the thing coloured.²³⁰

The character of indeterminacy of a genus that has emerged in his analysis allows Aquinas to understand how a definition can express the unity of an essence: the whole essence is somehow included in the last difference. For example, the addition of the specific difference 'rational' to the genus 'animal' is not an addition of another essence: the genus relates to the specific difference as the determinable relates to the determinate, and this is what makes it possible for the specific difference to subsume and include the whole genus.

Aquinas illustrates the relationship of a genus with its specific difference with the example of the relationship between a thing coloured and the attribute 'white'.²³¹ The specification 'white' is in fact somehow already contained in the thing colored: as 'color' plays the function of the indeterminate genus, 'white' plays the role of the specific difference. The genus 'colour' is nothing beyond the totality of its species, i.e., 'white color', 'black colour' etc.

The definition structured in genus and specific difference does not work as an accidental addition of two different essences, but as the expression of one single unified essence. Against the AAM, Aquinas proposes a unitarian and transformative model (UTM).

²³⁰ *Exp. Met.*, VII, l. 12, n.1549. « Si ergo praedicta sunt vera, palam est quod definitio est quaedam ratio ex differentiis unitatem habens; ita quod tota essentia definitionis, in differentia quodammodo comprehenditur. Ex hoc enim animal, quod est genus, non potest esse absque speciebus, quia formae specierum quae sunt differentiae, non sunt aliae formae a forma generis, sed sunt formae generis cum determinatione. Sicut patet quod animal est quod habet animam sensitivam. Homo autem est qui habet animam sensitivam *talem*, scilicet cum ratione. Leo vero qui *habet talem*, scilicet cum abundantia audaciae. Et sic de aliis. Unde cum differentia additur generi, non additur quasi aliqua diversa essentia a genere, sed quasi in genere implicite contenta, sicut determinatum continetur in indeterminato, ut album in colorato».

²³¹The example is not from the category of substance, but from the category of quality.

The model is *unitarian*, since in its articulation of the relationship between genus and specific difference as a relationship of determinable-determinating, it is able to reflect the unitarian nature of the single essence spelled out.

The model is also *transformative* since, in its character of indeterminacy, the whole genus is subsumed and transformed by the specific difference. In the case of a human being, the ‘animality’ of the genus already contains in an indeterminate way what is specified by the specific difference ‘rationality’; therefore, there is nothing in the human being such as pure animality that is not already transformed by rationality.

This is exactly what Matthew Boyle has in mind in its articulation of a transformative model. As he writes:

(T13) Transformative theorists, by contrast, locate the similarity between rational and nonrational mentality in a different sort of explanatory structure. They hold that rational mentality and nonrational mentality are different species of the genus of animal mentality. What the two ‘have in common’, on this view, is not a separable factor that is present in both, but a generic structure that is realized in different ways in the two cases. Rational and nonrational animals do not share in the sensory and conative powers of nonrational animals; they share in the sensory and conative powers of animals, where this is a generic category of power that admits of two more specific sorts of realization.²³²

Boyle’s characterization of a transformative account exactly captures Aquinas’s model: there is nothing in the genus ‘animal’ that indicates an essence common to different species, but the genus is always transformed and differentiated by the specific difference. The genus ‘animal’ signifies only a generic structure that has as many different specific realizations as there are specific differences.

We can sum up Aquinas’s UTM in this way:

UTM → Determinable+ determination (predicative simplicity of one single essence).²³³

²³² Boyle (2016), p.531

²³³ A contemporary account of an accidental vs essential model of a definition that is close to Aquinas’s articulation here can be also found in Ford (2011).

As emerged throughout our analysis, Aquinas's UTM of the definition is grounded in his ontology of substantial form and prime matter. We will now focus our attention on this ontological ground. This will allow us to gain a better understanding of Aquinas's transformative conception.

6. Ontological ground

We have seen that, in Aquinas's perspective, an investigation that starts from the logical point of view of the definition can help us to reach a proper understanding of the ontological level. In this case, the investigation concerning the unity of the genus-specific difference structure has led us to consider the question of the unity between substantial form and prime matter as actuality and potentiality. It is precisely this doctrine that is at the basis of the unity of a substance and its essence and, consequently, of its definition.

As to the question of the interdependence between the unity of the definition and the ontology of prime matter and substantial form, it can be pointed out that we have already analyzed in Chapter 2 an important argument related to this issue. What we have called the *Predicative Simplicity Argument* is related to a fundamental feature of Aquinas's ontology of substantial form, namely, its unity.²³⁴ The doctrine of the unity of the substantial form is the claim that every substance has only one substantial form. As we have seen, the argument can be found in a passage from *S.C.G.* II,58 and in *S.T.* I, q. 76, a.3. We can briefly resume here the core of Aquinas's argumentation.

Suppose that a substance is structured through a plurality of substantial forms, so that different essential attributes of this substance follow from distinct forms. For example, suppose that a human being has three substantial forms-soul, so that its being rational follows from the rational substantial form-soul, its being an animal follows from the sensitive substantial form-soul and its being alive follows from the vegetative substantial form-soul.

From the logical rules of *per se*₁ predications it follows that these different attributes won't be predicated one to each other in a *per se*₁ mode. *Per se*₁ predications are in fact

²³⁴ Cf. p. 35-41

predications where the attribute is isomorphic to the subject. But this cannot be case of the attributes that follow from different forms. For example, being a human and being an animal follows from different forms, then it would be impossible for the predication ‘a human is an animal’ to be a predication of the *per se*₁ mode; it would be an accidental predication. And the *per se* unity of an essential definition such as ‘rational animal’ will collapse, since these two attributes will be accidental to each other. Both these consequences are clearly false. Given the reality of *per se*₁ predications such as ‘man is animal’ and the *per se* unity of a definition such as ‘rational animal’, it follows that there must be only one substantial form in a substance.

From the reality of the unity of the definition, therefore, Aquinas argues, in *modus logicus*, for the unicity of the substantial form.

The same connection between the unity of the definition and the unicity of the substantial form is pointed out by Aquinas in his *Commentary* on Z 12:

(T14) Hence it is evident that a multiplicity of parts in a definition does not signify a multiplicity of essential parts of which the essence is constituted as if they were distinct things; but all signify one thing which is made determinate by an ultimate difference. It is also evident from this that there is one substantial form for every species. Thus there is one form of lion by which it is a substance, a body, a living body, an animal, and a lion; for if there were many forms corresponding to all the differences mentioned above, all could not be included under one difference, nor could one thing be composed of them.²³⁵

Here Aquinas explicitly grounds the unity of a real definition in the unity of the substantial form: given that a real definition signifies one thing made determinate by the last *differentia*, this means that there must be one single substantial form in a substance, e.g., a lion. The role of the last difference as subsuming all the previous differences is possible only in virtue of the unity of the substantial form, on which all these differences

²³⁵ *Exp. Met.*, VII, l.12, n.1564, « Unde patet quod multae partes definitionis non significant multas partes essentiae ex quibus essentia constituatur sicut ex diversis; sed omnes significant unum quod determinatur ultima differentia. Patet etiam ex hoc, quod cuiuslibet speciei est una tantum forma substantialis; sicut leonis una est forma per quam est substantia, et corpus, et animatum corpus, et animal, et leo. Si enim essent plures formae secundum omnia praedicta, non possent omnes una differentia comprehendi, nec ex eis unum constitueretur.»

depend. Conversely, if the differences were dependent on diverse forms, there would be no *per se* unity between them, and the last difference could not have the role of subsuming all the previous differences. The unity of the definition, therefore, is grounded in the unity of the substantial form.

Given the importance of the unity of the substantial form as ontological ground of the unity of the definition, I want to call attention to some texts in which Aquinas articulates this doctrine. Therefore, I will consider some passages from *S.T. I*, q. 76, a. 3 and 4: together they elaborate the problem of the unity of the substantial form and its application to the case of a human being.

In article 3, Aquinas addresses the problem of whether in a human being there are other souls that essentially differ from the human soul: are there three souls that account for the three different kinds of vital operations of a human being, namely, the vegetative, sensitive, and rational operations? The answer of Aquinas to this question is that in a human being there is only one substantial form, the intellectual soul, which is responsible for all the levels of activities and essential properties of a human being.

Article 4 addresses a similar problem: the question whether in a human being, besides the intellectual soul, there is another form, the form of corporeity. In this case too, Aquinas reaffirms the unity of the substantial form: the intellectual soul is responsible for all levels of perfection of a human being, including the perfection of corporeity.

We can start our analysis from a passage from a. 3. Aquinas writes:

(T15) In the first place, an animal would not be absolutely one, in which there were several souls. For nothing is absolutely one except by one form, by which a thing has being, because a thing has from the same source both being and unity; and therefore things which are denominated by various forms are not absolutely one, as, for instance, a white man. If, therefore, man were living by one form, i.e., the vegetative soul, and animal by another form, i.e., the sensitive soul, and man by another form, i.e., the intellectual soul, it would follow that man is not absolutely one.²³⁶

²³⁶ *S.T. I* q. 76, a.3. « Primo quidem, quia animal non esset simpliciter unum, cuius essent animae plures. Nihil enim est simpliciter unum nisi per formam unam, per quam habet res esse, ab eodem enim habet res quod sit ens et quod sit una; et ideo ea quae denominantur a diversis formis, non sunt unum simpliciter, sicut homo albus. Si igitur homo ab alia forma haberet quod sit vivum, scilicet ab anima vegetabili; et ab alia forma quod sit animal, scilicet ab anima sensibili; et ab alia quod sit homo, scilicet ab anima rationali; sequeretur quod homo non esset unum simpliciter»

If we posited different souls, a living substance, more specifically in this case a human being, would not be absolutely one. We can see here how Aquinas immediately connects the requirement of the unity of the substantial form with that of the unity of a substance. A substance has a *per se*/essential unity only when it is composed of one substantial form. How does Aquinas justify his claim that the unity of the substantial form is necessary for the absolute unity of a substance? The answer relies on the link that Aquinas points out between unity and being: what is the source of unity is the same as the source of being: since the being of a thing comes from its substantial form, its unity comes from the substantial form, which therefore must be one. Conversely, something resulting from a plurality of forms would necessarily be an accidental composite. Aquinas here uses the same example discussed in his commentary on Z 12; ‘white man’. This compound exhibits a unity that is only accidental and not *per se*.

This crucial point also clearly emerges in what Aquinas has to say about the general ontological relationship between matter and form at the beginning of *De Principiis Naturae*: a form gives being (*dat esse*) to matter. More specifically, a substantial form gives substantial being to matter, whereas an accidental form gives only accidental being.²³⁷ For example: the form of the dog Winston is what gives being to Winston as a dog, with all its operations. When the form ceases to exist, Winston ceases to exist. Conversely, Winston can possess the accidental form of being hungry, but this form will cease to exist once Winston has eaten. Winston then will no longer possess this form, but it will continue to exist as a living dog. There might be a plurality of acts of beings in Winston, but is only *one*, the substantial act of being given by the substantial form, that is responsible for its existence as a dog. But, as we have seen, unity and being are deeply related: the source of being and the source of unity are the same. As the cause of being *simpliciter* can only come from a substantial form, the cause of being essentially *one* can only come from *one* substantial form. What gives being unqualifiedly is also what gives essential unity to a substance.

Aquinas’s point can, therefore, be expressed in this way: a thing can receive its substantial being and substantial unity only from one and the same actualizing principle. But this means that the substantial form must be the *only* principle of actuality in a

²³⁷ *De Principiis Naturae*, c. 1, Leon. ed., 43-39; 20-44.

substance. This suggests a connection of Aquinas's view on the unity of the substantial form with his account of the other principle in hylomorphic compound, i.e., *prime matter*. As we have already pointed out, *prime matter* is a principle that is, in itself, pure potentiality; it has no actuality of its own. Its only actuality is the actuality which it receives from a substantial form. This is why a form is said to give being (*esse*) to prime matter and more specifically a substantial form is said to give being *unqualifiedly*. The substantial form gives being unqualifiedly to prime matter, which means it brings it to actuality from pure potentiality, whilst an accidental form gives being only in a qualified way, because it adds a *certain* actuality to something that has already been actualized as a substance. In the same way, the presence of prime matter guarantees that a material substance is absolutely *one*: when prime matter is joined to a substantial form, matter becomes completely actual, so that no potentiality is left from the union of matter and form.

A substance has an essential/*per se* unity in virtue of its two metaphysical constituents, matter and form, being purely potential and fully actualizing respectively. It follows that if a composite of prime matter and substantial form, like a human being, acquires an accidental form, like white, then a human being and white cannot constitute an essential unity, but only an accidental one. Unlike prime matter, the substance 'man' on which the additional form 'white' supervenes is something already fully actual.

We can now see how in Aquinas there a deep interrelation between the notion of the unicity of the substantial form and the role of prime matter is: a correct account of the *unity* of the substance requires that these two metaphysical principles are both necessary and interdependent in their respective roles.

S.T. I 76, I a.4 this point is further developed:

(T16) In order to make this evident i.e., that there is only one substantial form in a human being, we must consider that the substantial form differs from the accidental form in this, that the accidental form does not make a thing to be "simply", but to be "such," as heat does not make a thing to be simply, but only to be hot. Therefore, by the coming of the accidental form a thing is not said to be made or generated simply, but to be made such, or to be in some particular condition; and in like manner, when an accidental form is removed, a thing is said to be corrupted, not simply, but relatively. Now the substantial form gives being simply; therefore, by its coming a thing is said to be generated simply; and by its removal to be corrupted simply. For this reason,

the old natural philosophers, who held that prime matter was some actual being—for instance, fire or air, or something of that sort—maintained that nothing is generated simply, or corrupted simply; and stated that “every becoming is nothing but an alteration,” as we read, *Phys.* I, 4. Therefore, if besides the intellectual soul there pre-existed in matter another substantial form by which the subject of the soul were made an actual being, it would follow that the soul does not give being simply, and consequently that it is not the substantial form, and so at the advent of the soul there would not be simple generation; nor at its removal simple corruption, all of which is clearly false.²³⁸

If we posited more than one substantial form in a human being, the distinction between substantial and accidental changes and forms would collapse. The role of a form as substantial, as a matter of fact, depends upon its being the source of the absolute and complete actuality of a substance. If we posited in a human being a form of corporeity that precedes the intellectual soul, it would follow that the intellectual soul would not be the substantial form of a human being, since it would not give an unqualified actuality to the substance. The substance ‘human being’ would have been made already actual, as a body, by the form of corporeity. And since the soul would be an accidental form, the coming into being and the passing away of the soul would be accidental changes, and not substantial changes.

In the passage above, Aquinas mentions the view of ‘the old natural philosophers’. With this expression, Aquinas refers to the presocratic thinkers, who embraced some forms of materialism. In defending a position according to which the principles of reality were reducible to some *bodies* (air, fire or earth), they precisely made this mistake:

²³⁸ *S.T.* I q. 76, a.4. « Ad cuius evidentiam, considerandum est quod forma substantialis in hoc a forma accidentali differt quia forma accidentalis non dat esse simpliciter, sed esse tale, sicut calor facit suum subiectum non simpliciter esse, sed esse calidum. Et ideo cum advenit forma accidentalis, non dicitur aliquid fieri vel generari simpliciter, sed fieri tale aut aliquo modo se habens, et similiter cum recedit forma accidentalis, non dicitur aliquid corrumpi simpliciter, sed secundum quid. Forma autem substantialis dat esse simpliciter, et ideo per eius adventum dicitur aliquid simpliciter generari, et per eius recessum simpliciter corrumpi. Et propter hoc antiqui naturales, qui posuerunt materiam primam esse aliquod ens actu, puta ignem aut aerem aut aliquid huiusmodi, dixerunt quod nihil generatur aut corrumpitur simpliciter, sed omne fieri statuerunt alterari, ut dicitur in I Physic. Si igitur ita esset, quod praeter animam intellectivam praeexisteret quaecumque alia forma substantialis in materia, per quam subiectum animae esset ens actu; sequeretur quod anima non daret esse simpliciter; et per consequens quod non esset forma substantialis; et quod per adventum animae non esset generatio simpliciter, neque per eius abscessum corruptio simpliciter, sed solum secundum quid. Quae sunt manifeste falsa. »

reducing every substantial form to an accidental one.²³⁹ To be more specific, Aquinas here talks about change: these natural philosophers denied substantial change (in particular generation and corruption) and reduced it to a mere accidental one (alteration).

It is interesting to note, though, that Aquinas ascribes the erroneous position of the old natural philosophers to a precise metaphysical mistake: a false conception of the nature of matter. For all the presocratic philosophers, matter was not a principle in itself purely potential but possessed an actuality of its own. And because this kind of matter was already actual in itself, it was somehow modified only by accidental forms in the processes of natural changes.

A confirmation of the close connection that Aquinas posits between the unity of a substantial form and the ontological status of prime matter comes from the fact that medieval proponents of the plurality of forms often had a different view about the ontological status of prime matter. The most important example is John Duns Scotus, who confers an actuality to prime matter independent from any substantial form, and also posits a plurality of substantial forms (the form of corporeity and the soul) in a living substance. The independent actuality of prime matter opens the door to the possibility of a plurality of substantial forms in living beings, since in all substances, even in those with only one substantial form, there is always a plurality of actualities, the actuality of the substantial form and the other, independent actuality of matter.²⁴⁰

In Aquinas's account, therefore, the *priority* in being of the substantial form over prime matter is a necessary condition for the *unity* of the two. In Chapter 3, we have already pointed out the dependence between the *priority*, the *purity* and the *unity* of a substantial form. The more a form will be *prior*, the less will be dependent on matter. The more will be prior, the stronger will be its unity with matter. This is stated by Aquinas in a passage of *S.C.G.* II, 68, where he observes that the human soul, being the highest in nobility/purity and priority among the forms of material things, will also be the one more strongly united with its matter.²⁴¹ This might seem paradoxical: from the fact that a form

²³⁹ A very interesting discussion of Aquinas's criticism of the Presocratics can be found in Pasnau (2001), pp 30-34.

²⁴⁰ On Scotus's hylomorphism see Ward (2014); Trifogli (2022).

²⁴¹ Cf. *S.C.G.* II, 68, n. 6. The connection between purity/nobility, priority and unity was already anticipated in Chapter 3. Once again, on this theoretical aspect precisely lies the significant theoretical difference between Aquinas and the contemporary identification of forms with structures. A form that is simply a structure of matter is, in Aquinas, merely an accidental form.

is less immersed in matter, it should follow that the same form is also less united with matter. But in Aquinas's perspective, a form that is less immersed in matter is also a form that, by virtue of its stronger priority with respect to matter, will be able to determine more the formal character of the matter. In this sense, the matter will be more united to the form. For example: the form of a plant, will be stronger in priority and less immersed in its matter with respect to the form of a rock. Being higher in priority, the form of a plant will be able to confer a higher plurality of formal perfections to its matter. The form of a rock, conversely, will be lower in priority and will confer a much lower number of formal perfections to its matter. It is precisely in this sense, that a plant will exhibit a stronger unity between its matter and its form than the unity of a rock: the matter of a plant will be much more *formal* than the matter of a rock.

Finally, in a.4 Aquinas seems to associate the negation of the unity of the substantial form with an inevitable form of dualism concerning the metaphysical analysis of substances, most importantly a human being. Aquinas thinks that the rejection of the unity of the substantial form in a human being will lead to a platonic form of dualism body-soul: positing a form of corporeity independent from the form responsible for the perfections of life and rationality implies a dualism. The human being will be a result of an addition of two forms: the form of corporeity (body) and the form of life and reason (soul). We can see how Aquinas sees a close connection between the AAM and a dualist ontology concerning human beings. It is interesting to notice that is precisely the same association made by Alasdair MacIntyre and Matthew Boyle: an additive conception of human rationality is generally associated with the substance dualism of the Cartesian tradition.

Aquinas formulates his unitarian view about a human being in a.4 as follows:

(T17) We must say the intellectual soul alone is the substantial form of man so as to give him existence, and no other form does so. And just as it contains within its capacities all that the sentient soul and the nutritive soul contain, so it contains all the more elementary forms and of itself effects what they effect in other cases. The same thing has to be said of the sense in brutes and the nutritive in plants, and of all higher forms in relation to lower.²⁴²

²⁴² *S.T. I*, q. 76, a.4, « Unde dicendum est quod nulla alia forma substantialis est in homine, nisi sola anima intellectiva; et quod ipsa, sicut virtute continet animam sensitivam et nutritivam, ita virtute continet omnes inferiores formas, et facit ipsa sola quicquid imperfectiores formae in aliis faciunt. Et similiter est dicendum

Aquinas assumes that some substantial forms are more perfect than others, for example the human intellectual soul is more perfect than the form of a plant. These different levels of perfections, though, do not result from an addition of substantial forms. There is no need to posit a plurality of substantial forms to account for different perfections (e.g., three dimensionality, life, rationality). This is because of the virtual containment of the perfections of lower forms in a higher form. Thus, since the intellectual soul of a human being is more perfect than the sensitive soul of a dog and the soul of a plant, it contains all the powers and perfections of sensitive and vegetative soul.

We can sum up the association of different ontological grounds with different accounts of the unity of the definition with a new scheme:

AAM → Crypto-Platonist (or Proto-Cartesian) substance dualism: weak or absent notions of prime matter+ plurality of forms.

UTM → Genuine Hylomorphism: prime matter (pure potentiality) + one substantial form (full actuality).

We can see now how Aquinas's solution to the problem of the unity of the definition completes the investigation that we started in Chapter 2 and Chapter 3. In Chapter 2, we have seen that the unity of the definition is causally grounded in the ontological principle of unity that is the essence. At the same, in Chapter 3 we have seen that a sensible essence possesses a fundamental *hylomorphic* structure, based on the metaphysical role of the substantial form and of prime matter, that makes it composed, but, at the same time, *one* and *simple* since it does not present a composition of two different positive natures. The peculiar unity and simplicity of the hylomorphic essence, in turn, is reflected in the structure of a *genus+ differentia* definition. This definition is both a unity and a

de anima sensitiva in brutis, et de nutritiva in plantis, et universaliter de omnibus formis perfectioribus respectu imperfectiorum.»

composition of two different intelligible dimensions in an analogical manner to the hylomorphic essence.

7. How ‘transformative’ is Aquinas’s account?

The analysis of Aquinas’s model for the unity of the definition has showed how, to put it in Boyle’s terms, Aquinas has a decidedly transformative account of human rationality. This transformative conception is fundamentally hylomorphic. It is made possible by the peculiar role of the substantial form in a composite. The substantial form of the human being, being responsible for every level of perfection, is what accounts both for the animality and the rationality of a human being, which means that everything that is rational in humanity is also animal and all the animal aspects are already transformed by rationality.²⁴³

This transformative account is certainly visible, in Aquinas’s account, with respect to the key issues that Matthew Boyle considers in his paper: the faculties of perception and desire. In Aquinas’s perspective, sensible perception, a power that is generically shared by all the animal species, is specifically and transformatively structured in human beings: Aquinas talks about the human power of perceptually cognizing individuals as the *cogitative* power, whilst in non-rational animal the same power is called the *estimative* power. The coordination of rational activities with perceptual activities causes a genuine *transformation* of the latter in humans.²⁴⁴

The same can be said for the question of desire. For example, in Aquinas’s treatment of the virtue of temperance, rationality possesses a transformative role with respect to the desire for bodily pleasure. As a virtue pertaining to the perfection of our sense appetite, temperance shows how rationality, in Aquinas’s perspective, is capable to coordinate and

²⁴³ Aquinas’s transformative account does not only imply that rationality ‘transforms’ animality; it is also the power of the intellect that is transformed by animality. Rationality, in fact, indicates an intellectual reality that is essentially already connected to an embodied animal reality. On this, see Brock (2005), p. 248, and Brock (2015), p. 179.

²⁴⁴ *S.T.* I, q.78 a.4; *S.C.G.* II, c.60. On how the cogitative power in human beings present this genuine transformative character, see De Haan (2014); (2019) and Cory (2022).

transform our lower bodily desires.²⁴⁵ Therefore, this articulation of the habit of temperance implies, as a metaphysical framework, a unitarian and transformative account of human essence and of human rationality.

I want to argue, though, that Aquinas's transformative account, being grounded in a hylomorphic ontology, is even more radical than what Matthew Boyle has in mind when he speaks of the 'transformative' account of human rationality.²⁴⁶ For in Aquinas's account the power of rationality does not simply transform what Boyle calls mental activities (perception and desire) but transforms in a specific way all the activities of a substance, even lowest one such as the vegetative.

This point is well expressed in a passage drawn from *S.T.*, I, q. 91, a.3:

(T18) Now the proximate end of the human body is the rational souls and its operations; since matter is for the sake of the form, and instruments are for the action of the agent. I say, therefore, that God fashioned the human body in that disposition, which was best, as most suited to such a form and to such operations.²⁴⁷

Matter is *for the sake* of the intellectual soul, the only substantial form of human beings. It follows that the human body is structured and shaped in the best possible way to support the rational life of human beings. From its lower levels, the human body is transformatively constituted. Of course, this does not mean that rational activity directly coordinates the vegetative activities of the human being such as digestion. Nevertheless, we can say that also a vegetative process is somehow structured to serve a form of life that is eminently rational. Aquinas's hylomorphic account of human rationality is, therefore, transformative 'all the way through'.²⁴⁸

²⁴⁵ *S.T.*, II-IIae, q.141. For a presentation of Aquinas's account of virtue, see Osborne (2022). On Aquinas's articulation of the virtue of temperance as based on this 'transformative' role of rationality, as opposed to mere self-control, see Frey (2021).

²⁴⁶ This is also suggested by Vogler (2019), p. 675.

²⁴⁷ *S.T.*, I, q. 91, a.3, «Finis autem proximus humani corporis est anima rationalis et operationes ipsius, materia enim est propter formam, et instrumenta propter actiones agentis. Dico ergo quod Deus instituit corpus humanum in optima dispositione secundum convenientiam ad talem formam et ad tales operationes».

²⁴⁸ Cory (2021), p.593.

8. The status of the *differentia*

In this final section, I want to present the last relevant aspect of Aquinas's *Commentary on Z 12*: the problem of the status of the specific difference.

As we have seen, following Aristotle's solution, Aquinas thinks that the unity of the definition is achieved by its being reducible to the last *differentia*, that is, its being able to subsume the whole genus. In order for the specific difference to play this role, Aquinas follows Aristotle's point (1038a9-3) about the necessity of a correct process of division: only when the process is correctly carried out, that is, only when the genus is progressively divided through the proper *per se differentiae*, the last *differentia* will truly subsume the whole genus.²⁴⁹

This conception of the specific difference that emerges in Aquinas's *Commentary on Z 12* raises a question: what does it mean, exactly, for the definition to be reducible to the last specific difference? Does it mean that a real definition is, after all, reducible to only one of its logical parts, i.e., the difference? For example, is it the case that the real definition of 'human' will be reducible to just 'rational'? This seems an odd consequence, since we have seen how Aquinas insists that a real definition must be composed of two different intelligible dimensions. Moreover, in his *Commentary on the Physics* Aquinas makes clear that a definition cannot be expressed by a single word, otherwise it would be simply a synonym.²⁵⁰ The problem becomes even more complicated, when one considers that, in his *Commentary on Z 12*, Aquinas makes clear that the last specific difference, by virtue of subsuming the whole genus, is also identical with the species defined.

Therefore, the doctrine of the specific difference in Aquinas's *Commentary on Z 12* raises the problem of the compatibility of this doctrine with the idea of a definition logically structured through two different intentions.

Aquinas is not unaware of the possible problems that the doctrine of the specific difference in *Z 12* raises. In his 2002 article on the problem of the unity of the definition in Aquinas Gabriele Galluzzo has identified how in his account of the status of the specific difference in the *Commentary on Z 12* Aquinas seems to embrace a contradictory

²⁴⁹ *Exp. Met.*, VII, l.12, n.1555.

²⁵⁰ *In. Phys.* I, l.1, nn. 7-9.

theoretical option with respect to the one elaborated in other works, e.g., *De Ente et Essentia*.²⁵¹

Galluzzo has shown that this tension is due to the fact that two different positions are already present in Aristotle's works. The doctrine of the specific difference developed by Aristotle in *Metaph. Z 12* differs from the one of the *Organon*, particularly in *Topics*.²⁵² If, in the case of Aristotle, the contradiction can be solved by supposing a chronological evolution of Aristotle's position on this subject, in Aquinas's case the two positions coexist. Far from being unaware of the contradiction, Aquinas individuates and theoretically motivates this tension, proposing a solution.

I will take into account some of the passages where Aquinas proposes a version of the doctrine of the specific difference that is different from that of his *Commentary on Metaph. Z 12* as well as his solution to the problem of how it is possible to reconcile (i) the role of the specific difference as subsumer of the whole genus and identical with the species, and (ii) the necessity for a definition to be still structured in *genus+differentia*?

The first text that I want to consider is from *De Ente et Essentia* c.2. In analyzing Aquinas's account of the genus/matter analogy, we have seen the strong continuity and complementarity of this early work with the account present in his *Commentary on Z 12*. Nevertheless, in the *De Ente et Essentia*, there is a key difference with the respect to the UTM that we have reconstructed from Aquinas's *Commentary on Z 12*.

Aquinas writes:

(T19) For this reason, Avicenna says that the genus is not included in the difference as part of its essence, but only as something that is outside the essence, as a subject with its properties. Therefore, the genus, properly speaking, is not predicated of the difference as the Philosopher states in *Met. III* and *Top. IV*, except perhaps in the way in which the subject can be predicated of properties.²⁵³

²⁵¹ Galluzzo (2002) pp.181-191.; (2025), pp. 138-44

²⁵² *Top.* 1.5, 102a31–6, 4.2, 122b16–17, 6.5, 142b22–9, 6.6, 144a15–22.

²⁵³ *De Ente et Essentia* c.2, p. 90-92 ed. Porro, «Unde dicit Avicenna quod genus non intelligitur in differentia sicut pars essentiae eius, sed solum sicut ens extra essentiam, sicut etiam subiectum est de intellectu passionum. Et ideo etiam genus non praedicatur de differentia per se loquendo, ut dicit philosophus in III metaphysicae et in IV topicorum, nisi forte sicut subiectum praedicatur de passione.».

The key difference derives from Aquinas's claim here that the essence of the genus is *outside* the essence of the specific difference. This claim implies that a definition of *one* essence will end up being structured as an addition of two different essences (genus+ differentia) that are related on to each other as a subject and its properties, that is, as forming an accidental unity. We have seen that this is precisely the model (AAM) that Aquinas rejects in his commentary on *Met. Z* 12.

As Galluzzo notices, even if Aquinas will eventually abandon the subject+property model of *De Ente et Essentia*, he will propose again in several later works the idea that the specific difference is outside the essence of the genus.²⁵⁴

If we look at his commentary on *Met. B*, 3, 998b22-29, the passage referred to in (T19), we can see how Aquinas uses the same idea of the specific difference being outside the essence of the genus. In this passage Aristotle gives an argument to demonstrate that 'being' cannot be the genus of anything.²⁵⁵ In Aquinas's interpretation, the argument is the following: if something like the genus 'being' existed, it would have to be contracted into the different categories of being through some specific differences. But this is impossible: since the essence of every difference is outside the essence of the genus, it would follow that every *differentia* of the genus 'being' would be something essentially different from 'being', namely, 'non-being'. But every difference is essentially being, therefore 'being' cannot be a genus. We can see here how the assumption that the specific difference lays outside the essence of the genus is at work in Aquinas's interpretation of Aristotle's argument.

Moreover, Aquinas has an additional argument in favor of the idea that the specific difference lays outside the essence of the genus. In his commentary on *Met. A5*, in rejecting Parmenides's doctrine of being, Aquinas wants to argue against the idea that being is a genus. He writes:

(T20) For differences do not participate in a genus, as is stated in the *Topics*, Book IV, 2 otherwise a genus would have the substance of a difference. And definitions would be redundant if when a genus is given the difference were added, granted that the genus were the substance of the difference, just as it would be redundant if the species were added. Moreover a difference would

²⁵⁴ Galluzzo (2002), p. 183.

²⁵⁵ *Exp. Met.*, III, l. 8, n.433.

not differ in any way from a species. But those things which are outside the substance of being must be non-being, and thus cannot diversify being.²⁵⁶

Aquinas's point here is that the difference does not participate in the genus and what he means is again that the genus is not contained in the essence of the specific difference. But here Aquinas gives a further reason for this: if the essence of the genus were contained in the essence of the specific difference, there would be a useless repetition (*nugatio*) in the definition. Not only the twofold logical structure of the definition would constitute a *nugatio*, but also the species would be a useless repetition with respect to the *differentia*. In other words, if the specific difference were able to include the whole genus, it would be impossible to distinguish it from the species. That leads to a double redundancy: adding the specific difference to the genus is redundant if both have the same essence and naming the species is redundant if everything that the species is already contained in the last *differentia*.

The awareness of this tension between these two different ways to interpret the doctrine of the specific difference clearly emerges in Aquinas's Commentary on *Posterior Analytics* II, 13.

Aquinas writes:

(T21) But the requirement that each particle of the definition apply to more than the definition seems superfluous. For the Philosopher says in *Metaphysics* VII that when the ultimate differences are reached, those differences will be equal to the species; therefore, it is not required that the difference apply to more things than the species does. This can also be proved with an argument. For the Philosopher says in *Metaphysics* VIII that a formality which is based on differences seems to be of the species and of the act, i.e., of the form; because, as he says in the same place, the difference corresponds to the form. But each species has its own appropriate form which belongs to no other species. Therefore, it seems that the ultimate difference does not exceed the species. Furthermore, the Philosopher in *Metaphysics* VII says that there is no more

²⁵⁶ *Exp. Met.*, I, l. 9, n. 138, «Non enim participant differentiae genus, ut dicitur quarto topicorum. Aliter genus esset de substantia differentiae, et in definitionibus esset nugatio, si posito genere, adderetur differentia, si de eius substantia esset genus, sicut esset nugatio si species adderetur. In nullo etiam differentia a specie differret. Ea vero quae sunt praeter substantiam entis, oportet esse non ens, et ita non possunt diversificare ens. »

in a definition than genus and differences, and that it is possible for a definition to be formed of two things, one of which is a genus and the other a difference. But a difference cannot be found outside its appropriate genus; otherwise it would not divide the genus *per se* but *per accidens*. Therefore, it seems that the difference does not exceed the species.²⁵⁷

Here Aquinas is commenting on a passage from Aristotle's text (96a 24-32) that says that every part of the definition can be in itself more extended than the species, in such a way that genus and difference taken separately apply to more things than the definition of the species applies to, although their combination applies exactly to the same things as the definition of the species.

This point about the extension of genus and difference is closely related to the idea of the specific difference being outside the essence of the genus: that the parts of the definition are more extended than the species means that a *differentia* could be applied to more than one genus and cannot be identical with the species.

Aquinas remarks that the condition set by Aristotle about the parts of the definition being more extended than the species seems to be superfluous. In support of this point Aquinas appeals precisely to *Met. Z 12* where Aristotle claims that the ultimate differences are equal to the species. Aquinas confirms this point with a passage from *Met. H 6*: a definition structured in differences is a definition concerning the species and the act, which is the form/specific difference. But every species has its own unique substantial form, which means that, if the form corresponds to the difference, every species must have its own unique specific difference. Furthermore, quoting again *Met. Z 12*, Aquinas remarks that a specific difference cannot be found outside its proper genus, otherwise it would divide the genus accidentally and not essentially/*per se*. As his

²⁵⁷ *In. An. Post.*, II, l. 13, n. 94-99, «Sed videtur quod non requiratur ad definitionem quod quaelibet particula sit in plus quam definitum. Dicit enim philosophus in VII Metaphys. quod quando pervenitur ad ultimas differentias, erunt aequales differentiae speciebus; non ergo oportet quod differentia sit in plus quam species. Quod etiam ratione videtur. Dicit enim philosophus in VIII Metaphys., quod ratio quae est ex differentiis, videtur esse speciei et actus, idest formae, quia, sicut ibidem dicitur, differentia respondet formae; cuiuslibet autem speciei est propria forma, quae nulli alii convenit. Videtur igitur quod differentia ultima non excedat speciem. Dicit etiam philosophus in VII Metaphys. quod nihil est aliud in definitione quam genus et differentiae, et quod possibile est definitionem ex duobus constitui, quorum unum sit genus, aliud differentia. Differentia autem non invenitur extra proprium genus, alioquin non esset divisiva generis per se, sed per accidens. Videtur ergo quod differentia non excedat speciem. »

references to *Met.* Z 12 and H6 confirms, Aquinas here is proposing again an articulation of our UTM: as we have seen, the UTM is explicitly opposed to the model that claims the irreducibility of the genus to the specific difference and the exceedance of the difference with respect to the species.

Before looking at Aquinas's solution, we can sum up at this point, in a schematic way, the two opposite models. The first model, from the *Commentary* on Z 12 is what we called UTM. We can refer the model from *De Ente et Essentia* and the *Commentary* on B 3 as the *Exceedance Model* (EM).

1. *UTM* → The genus is nothing beyond the specific differences, but it is totally subsumed by the last specific difference, that in turn, subsumes all the previous differences. The last specific difference is identical with the species.

2. *EM* → The specific difference is outside the essence of the genus, so that the two remain irreducible elements of a definition. Both the genus and the specific difference can be more extended than the species. Only when joint together, genus and specific difference are coextensive with the species.

1. *UTM's* criticism of *EM* → If the essence of the specific difference were outside the essence of the genus, one would end up having an accidental unity of the same kind of the AAM previously criticized. Furthermore, as a single substantial form can be present only in one *species*, in the same way the specific difference cannot be found in more than one *species*.

2. *EM's* criticism of *UTM* → If the essence of the specific difference were able to subsume the essence of the genus, you would have a definition structured as a repetition (*nugatio*).

With these alternatives in mind, we can finally look at how Aquinas formulates his solution to the problem: how is it possible to reconcile the UTM with the EM?

Aquinas writes:

(T22) But it should be answered that if one were able to discover the difference which would make known the substantial form of the species, then, as the arguments prove, the ultimate difference would not apply to more things than the species does. But because the essential forms are not known to us *per se*, they must be disclosed through certain accidents which are signs of that form, as is stated in *Metaphysics* VIII. However, one should not take the proper accidents of that species, because they are the ones that will be demonstrated by the definition of the species; rather the form of the species must be made known by certain accidents that are more common. Hence according to this, the differences which are used are indeed called substantial, inasmuch as they are adduced in order to declare the essential form; but they are more common than the species, inasmuch as they are taken from signs which follow upon higher genera.²⁵⁸

Thus, according to Aquinas, both accounts of the specific difference and both positions are somehow true. If it were possible to obtain specific differences that were perfectly expressive of the substantial form of a species, then the last difference would have the same extension of the species. Nevertheless, and this is the key point, essential differences are not evident to us and it is necessary to make them known through some accidents. The doctrine for which our cognitive access to essences is possible only through our cognitive access to accidents is extensively present in Aquinas's work.²⁵⁹

In this case, Aquinas specifies, we are not talking about *per se* accidents in the sense of *propria*, since they will have to be demonstrated as proper only through the definition of the species. Taking *propria* as that through which the essence of the species is made known would lead to a problem of circularity: *propria* are demonstrated as belonging to a species in the conclusion of a scientific demonstration. At the same time, the definition works as a middle term of the scientific demonstrations, being the causal-explanatory

²⁵⁸ *In. An. Post.*, II, l. 13, n. 94-99, «Sed dicendum est quod si accipi posset differentia, quae notificaret ipsam formam substantialem speciei, nullo modo differentia ultima esset in plus quam species, ut rationes probant. Sed quia formae essentiales non sunt nobis *per se* notae, oportet quod manifestentur per aliqua accidentia, quae sunt signa illius formae, ut patet in VIII *Metaphys.* Non autem oportet accipere accidentia propria illius speciei, quia talia oportet per definitionem speciei demonstrari; sed oportet notificari formam speciei per aliqua accidentia communiora; et secundum hoc differentiae assumptae dicuntur quidem substantiales, in quantum inducuntur ad declarandum formam essentialem, sunt autem communiores specie, in quantum assumuntur ex aliquibus signis, quae consequuntur superiora genera.»

²⁵⁹ See for example *S.C.G.* III, c.56. On this problem see Amerini (2023); Block (2023).

ground of the existence of the *propria*. It follows that *propria* cannot be used to reach knowledge of an essential form; the accidents that make an essential form known are therefore of a different type.

These accidents, Aquinas writes, are ‘more common’: what is meant here is that the differences that are used in the process of division leading to the specific difference are accidental since they are drawn from certain effects or signs that follow from higher genera. At the same time, though, these differences, taken *together* with the genus, work as *essential*, since they contribute to make the real essence of the species manifest. Therefore, from the *accidental* character of these differences it follows that, the genus and the specific difference that we reach in our definitional practices are not the real ones from an ontological point of view. This is why the genus remains unavoidably distinct from the specific difference and the specific difference remains more extended than the species.

Nevertheless, these characters of the definition *aren't per se true*, but they are present as a result of our cognitive limitations as human knowers. In other words, the UTM, for which the genus is entirely subsumed by the last specific difference and the specific difference coincides in its extension with the species, remains the *true* model with respect to the reality of the essence defined, as we have also seen in our analysis of the unique role of the substantial form. At the same time, since our intellect is incapable of a direct and complete grasp of the essential differences, the UTM does not completely apply in our concrete definitional practices, in which the essence of the genus remains necessarily external to the essence of the difference and genus and specific difference remain more extended than the species.

We are in a good position now to understand how both models presented by Aquinas can be somehow true: the UTM remains the adequate one with respect to the object defined, and therefore *metaphysically*. Aquinas's EM is the one adequate with respect to concrete definitional practices, which maintains an unavoidable accidental character, and therefore is the true model *epistemically*.

These same remarks are briefly explicated in his *Commentary* on Z.12:

(T23) For sometimes necessity compels us to use accidental differences in place of essential differences inasmuch as accidental differences are the signs of certain essential differences unknown to us.²⁶⁰

It is interesting to highlight the relevance of Aquinas's solution also with regard to an objection discussed in contemporary metaphysics. The objection raises the concern of whether the traditional structure in *genus+differentia* is semantically adequate to express the reality of *one* essence.

This criticism has been recently formulated by EJ Lowe.²⁶¹ Lowe's point seems to be that real definitions *per genus et differentiam* present a complex logical structure that is irreducible to a semantic unit with an identifiable semantic value or reference. Thus, the semantic unit 'human' has a different logical function from the structure 'an animal that is rational'. It follows that a complex structure of the type 'an animal that is rational' cannot function as a real definition of a semantic unit like 'human'. Thinking otherwise, Lowe argues quoting Peter Geach, represents a 'logical mirage'.

Given what we have argued about the two different models that Aquinas presents I think that we can answer Geach's and Lowe's concerns. As a matter of fact, Aquinas's UTM as articulated in his commentary on Z 12 shows awareness of the fact that a real definition *per genus et differentiam*, in order to be properly reflective of the single essence of the *definiendum*, has to be necessarily *reduced* to the last specific difference that subsumes the whole genus. Using Lowe's language, we can say that Aquinas agrees, after all, that a real definition, to be so, needs to have the same semantic unit possessed by the object defined. For example, the difference 'rational' should be semantically perfectly overlapping with the species 'human'. Nevertheless, as we have seen, the cognitive limitation of the human knower makes it impossible to fully operate this inclusion of the whole genus in the specific difference, as to obtain this semantic unity.

²⁶⁰ *Exp. Met.*, VII, l. 12, n.1552, «Aliquando enim necessitas cogit, ut utamur, loco per se differentiarum, differentiis per accidens, in quantum sunt signa quaedam differentiarum essentialium nobis ignotarum. »

²⁶¹ Lowe (2010), p.651. Lowe's remarks on genus and specific difference are part of his review of David Oderberg' book (2007) in which the latter makes an extensive positive use of definitions *per genus et differentiam*.

But from this it does not follow, in Aquinas's perspective and differently from Lowe, that we should abandon definitions *per genus and differentiam*. As we have seen, in Aquinas's perspective, the logical intentions of *genus* and *species* are properly conceived as *per se* accidents of real being, accidents that follow from the ontological structure of essences.²⁶² This is why a description of a natural kind in terms of genus and specific difference is not only the best way to structure a real definition, but also the *only possible one*, given both the structure of real being and our way of understanding it. After all, even if the semantic value of a real definition will be often irreducible to a semantic unit, it can still allow a genuine epistemic progress towards the proper grasp of the essence of an object.

²⁶² Cf. pp. 1-15. As we have seen, the logical intentions of genus and species are grounded both in the real structure of essence and both in the way of understanding of our intellect. In this sense, these logical intentions both 'reflect' and 'refract' real being.

9. Conclusion

We can summarize the discussion of this chapter: I have taken into account Aquinas's solution to the problem of the unity of a real definition in its twofold logical structure (*genus+differentia*) and its close relationship with the ontological problem of the unity of the essence.

If in Chapter 1 we have showed how Aquinas's logical method (*modus logicus*) is based on the idea of a causal relation between logical intentions and the ontological reality of the essence. In Chapter 2 we have found a concrete application of this method in Aquinas's logical approach to the essence in terms of *per se* predication. Showing how the reality of *per se* predications is ontologically grounded in the reality of essence, has highlighted the role of essence as *unifier*. In Chapter 3 the logical and definitional approach has been integrated with the hylomorphic analysis of a sensible essence, showing how the peculiar role of the substantial form and prime matter can guarantee the peculiar unity and simplicity of an essence, and therefore its role as unifier.

The discussion of this chapter has showed how the logical problem of the unity of the definition can be solved by showing how its structure fundamentally reflects the unity of the hylomorphic essence. After a brief analysis of Aristotle's treatment of the problem in *Met. Z 12*, I have analysed Aquinas's *Commentary*. In doing this, I've been able to identify Aquinas's presentation and criticism of what I have labelled AAM (*Accidental Additive Model*) and his articulation of his positive view, which I have called UTM (*Unitarian Transformative Model*). Aquinas's elaboration has a striking similarity with the discussions in contemporary ethics and philosophy of mind on additive vs transformative accounts of human rationality. Finally, I showed how the doctrine of the unicity of the substantial form in its interdependence with prime matter is the ground of Aquinas's UTM. In this way, the deep interrelation between the logical level of definition and the ontological level of the essence, has been further brought to light.

In the last section, I have taken into account the problem of the status of the specific difference, showing that there is a tension between two different accounts present in Aquinas's writings. I followed Gabriele Galluzzo's interpretation for a solution to this problem. I've also suggested that Aquinas's solution could be used to answer an objection against real definitions structured in genus and specific difference, recently raised by EJ Lowe.

Conclusion

At the end of this work, I want to conclude by pointing out some results that have emerged during my systematic investigation that bear both an exegetical and a theoretical significance.

From an exegetical point of view, I want to highlight two main aspects:

1. In articulating Aquinas's treatment of essence in *Z* as based on his distinctive interpretation of the *modus logicus*, I was able to give a compact and strongly unified reading of Aquinas's interpretation of book *Z*. Some previous interpreters have seen Aquinas conceiving the treatment of *Z* as simply an incomplete and introductory book that reaches only provisional conclusions.²⁶³ In my interpretation the logical approach to essence allows Aquinas to draw important and substantive metaphysical conclusions on the nature of essence, substance, accidents and hylomorphic composition. This is visible for example in Aquinas's arguments based on the *modus logicus* concerning the reality of prime matter and the enmattered character of a sensible essence. Aquinas logical approach, far from being a dialectical and preparatory moment, is a proper metaphysical inquiry.

2. The second significant exegetical result is the comparison between Aquinas's interpretative options concerning *Met. Z* and some contemporary Aristotelian scholars. In this approach, I have followed and relied on the previous work made by Gabriele Galluzzo.²⁶⁴ In particular, in Chapter 3 I've engaged in a comparison between Aquinas's interpretation of *Z* 10 and 11 with the one of authors such as Michael Frede and David Charles.²⁶⁵ I situated Aquinas in the debate between the so-called 'purist' interpretation (Frede) and the 'impurist' one (Charles), showing analogies and differences in their respective interpretations of Aristotle's text. In doing so I was able to highlight the different theoretical implications implied by different textual interpretations. Bringing the different perspective of a medieval author such as Aquinas can hopefully enrich the contemporary debate on the interpretation of *Met. Z*.

²⁶³ Dewan (2006), p.143-161

²⁶⁴ Galluzzo (2007); (2013).

²⁶⁵ Frede (1990); Charles (2021)

From a theoretical point of view, I want to point out four aspects:

1. My work can show the potential fruitfulness of an approach to essence based on real definitions and predications. This is visible for example in my articulation of what I call in Chapter 2, the *Predicative Simplicity Argument* (PSA). The argument fundamentally shows how starting from the reality of *per se*₁ predications and real definitions, the necessity of a *simple* and *unified* ontological principle, the essence, that is, in turn, a *unifier* of attributes. As I point out in Chapter 2, a contemporary essentialist metaphysician, David Oderberg has argued for the reality of the essence as a *simple* and *unified* principle and the only possible *unifier* of the different properties of an object. There is a strong similarity, therefore, with my interpretation of Aquinas's PSA. Differently from Oderberg's approach, though, Aquinas's argumentation is based on the definitional and predicational point of view. Aquinas's argument, therefore, can suggest how contemporary metaphysicians, in arguing for the reality of essence, could possibly integrate the definitional and predicational approach. The question of the real definition has remained, as said, quite underdeveloped until now in contemporary essentialism.

2. The second theoretical aspect that I want to point out as emerging from my investigation, is the connection between Aquinas's essentialism and his hylomorphic theory. Aquinas's account of essence as a principle of being and unity of a thing is fundamentally associated with his account of substantial form. Moreover, as I show in Chapter 3, and further develop in Chapter 4, a sensible essence possesses a *peculiar unity* and *simplicity*, given by its hylomorphic constitution. The essential unity is guaranteed by the role of the substantial form as the only principle of actuality of a sensible substance and by the co-respective role of prime matter as a principle of pure potentiality. The *unity* of the essence, therefore, is made possible by the natural *priority* of substantial form over prime matter. At the same time, a sensible hylomorphic essence possesses a certain *simplicity*. Even if composed of prime matter and form, the peculiar status of the former as possessing no 'positive' nature in itself, guarantees the non-compositional reality of the essence in terms of natures. The interdependence between Aquinas's essentialism and his version of hylomorphism can be an interesting source of reflection for the contemporary debates in metaphysics. Nowadays, essentialist proposals in metaphysics are sometimes associated to some forms of hylomorphism. These forms of hylomorphism, in turn, are often very different from the one articulated by Aquinas. To what extent does a commitment to an essentialist metaphysical theory require an acceptance of some

form of hylomorphism? Is there some specific form of hylomorphism that is necessary to account for the requirements of a genuine essentialism?²⁶⁶

3. The third aspect that I want to point out, concerns the relevance of the discussion over Aquinas's account of the unity of the definition for contemporary debates in philosophy and mind and ethics. In an important recent article, Matthew Boyle has identified two main traditions in philosophy of mind and ethics concerning the status of human rationality: an additive conception and a transformative conception.²⁶⁷ An additive conception tends to conceive rationality as only a power that is extrinsically added to a biological-animal basis that is already constituted, whereas a transformative conception conceive rationality as a power that transform and change the way in which all the animal powers of a human being are exercised. In Chapter 4 I have argued that Aquinas is a decidedly transformative thinker. This can be seen through his analysis of his doctrine of the unity of the definition and its ontological ground in the unicity of the substantial form. Being grounded in his hylomorphic theory, I showed that Aquinas's account of human rationality is transformative 'all the way through' and in this sense, even more radical than the contemporary transformative accounts. Rationality, in Aquinas's perspective somehow transforms all the lower animal and vegetative powers of a human being.

4. The fourth and final aspect I want to point out, concerns the nature of the relationship between language, mind and world, that emerges as a theoretical framework of Aquinas's *modus logicus*. John Wippel has pointed out that Aquinas's method of the derivation of the categories through denominative predications, presupposes a strong non-Kantian theory of knowledge.²⁶⁸ This is true also for Aquinas's logical approach to essence in *Met. Z* as I presented it in my work. Logical realities are grounded in real beings and, therefore, can be taken as proper effects in *quia* metaphysical demonstration. Nevertheless, Aquinas's account

²⁶⁶ In contemporary philosophy, Oderberg (2007); (2011) has argued for an essentialism that fundamentally entails the type of hylomorphism embraced by Aquinas. Koslicki (2008) and Jaworski (2016) are instead contemporary examples of essentialist metaphysician that have embraced a form of hylomorphism very different from Aquinas's one. To what extent these proposals can be considered 'hylomorphic' has been discussed by Austin (2020).

²⁶⁷ Boyle (2016).

²⁶⁸ Cf. Wippel (2000), p.212. On the limitation of the cognitive access to essences in Aquinas, there are two excellent recent articles; Amerini (2023); Block (2023).

does not present a form of rationalistic metaphysics characterized by a total isomorphism between logical and metaphysical realities. Aquinas's logical method is fundamentally characterized by an approach that follows a *via negativa*: using logical tools as effects allows to argue on how things *cannot be* from a metaphysical point of view. This depends on the fact that the structure of logical intentions does not simply reflect the structure of the ontological essence, as grounded on it. In fact, given the intermediation of the role of the human intellect, logical intentions are also dissimilar in their structure from the ontological essence: they don't simply reflect real being, but so to speak, 'refract' it. This aspect clearly emerged also in the discussion of Chapter 4 concerning the status of the specific difference in a real definition: the knowledge of an essence as expressed by our definitional practices, will be often very limited.

During my systematic investigation on Aquinas's account of definition and essence I have also raised themes that have remained underdeveloped and will need further study:

1. In Chapters 2 and 4, Aquinas's logical approach to essence in his *Commentary on Met. Z* has been integrated with insights from his *Commentary on Posterior Analytics*. A deeper investigation on Aquinas's *Commentary on Posterior Analytics* will be potentially of fundamental importance for a broader reconstruction of his theory of definition and essence. Pivotal themes that would deserve further exploration include the following: a. Aquinas's interpretation of the doctrine of the division of the genus in *Posterior Analytics* II; b. Aquinas's account of the interdependence between definition and explanation and its interrelation with the question of the interdependence between essence, causality and modality; c. a deeper investigation of Aquinas's account of the epistemological method of discovery of real definitions and its integration with his general theory of cognition.²⁶⁹

2. In Chapter 3 the question of the so-called essential matter has emerged. The definition and essence of a sensible substance, according to Aquinas, always contains matter. More precisely common matter, the matter that is proper to species defined. For example: human being=def specific flesh and bones+rational soul. Given that this essential matter has been already actualized and made 'formal' by the role of the substantial form, in which sense can

²⁶⁹ Besides the already cited recent works of Amerini (2023) and Block (2023) not much has been done on this area of Aquinas's thought. With regards to Aristotle's *Posterior Analytics*, a recent important study focused on question of epistemology and theory of cognition was done by Bronstein (2016). An analogous investigation of these themes on Aquinas would be of fundamental importance.

this matter still be expressed in mereological terms, as something distinguishable from the form? In other words, what is the exact ontological status of the essential matter of sensible substances in Aquinas?

3. In Chapter 3 I have pointed out the distinction between the essence and the individual substance. An individual, material substance is not identical with the essence that possesses. Nevertheless, we have seen that Aquinas considers the essence as a *formal part* of the individual substance. But what is the exact ontological status of the essence in Aquinas's perspective? We have established the essence as the principle of unity and being of a substance. But which kind of being does the essence possess in *itself*? The question has been extensively addressed in the history of Thomistic scholarship but a general consensus on Aquinas's position is far from having been reached.²⁷⁰ How could the definitional and logical approach to essence contribute to the understanding of Aquinas's position concerning essence-realism and universals?

4. Throughout Chapters 2, 3 and 4, the problem of unity has been pivotal: how is it possible to account, in a sensible essence, for both unity and composition? Further investigation will be needed to deepen Aquinas's account of the unity between a sensible essence and its powers/properties.

Hopefully, this thesis has made a solid contribution to a systematic approach to Aquinas's doctrine of definition and essence, so that will be possible to further integrate these questions in a future project.

²⁷⁰ Cf. Owens (1957); Owens (1961); Pini (2004); Galluzzo (2004); Brower (2016); Brock (2016).

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