Philosophy in Late Antiquity

Philosophy in Late Antiquity:

Boundaries of Being

Ву

Charles Vergeer

Cambridge Scholars Publishing



Philosophy in Late Antiquity: Boundaries of Being

By Charles Vergeer

This book first published 2019

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data A catalogue record for this book is available from the British Library

Copyright © 2019 by Charles Vergeer

All rights for this book reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the copyright owner.

ISBN (10): 1-5275-3284-4 ISBN (13): 978-1-5275-3284-7

Original title:

Wanden van de werkelijkheid. Filosofie van de late oudheid. DAMON, Budel 2011.

Translated by: Elizabeth Harding and Rens Zomerdijk

TABLE OF CONTENTS

ntroduction
Chapter One
Chapter Two
Chapter Three
Chapter Four71 Augustine and Time
Chapter Five
Chapter Six
Chapter Seven
Chapter Eight
Chapter Nine
Chapter Ten
Chapter Eleven

Chapter Twelve Bede the Venerable	230
Chapter Thirteen At the End	245
Sources	252
Bibliography	254
Index of Classical Terms	265
Index of Classical Texts	267
Index of Persons	275

INTRODUCTION

a. Awakening and wilting

'Whence things have their origin, thence also their destruction happens according to necessity; for they pay penalty and retribution to each other for their injustice according to the assessment of time.'

This is Western philosophy's earliest surviving text. It is a statement made by Anaximander of Miletus dating possibly to about 570 BC. We would not have known it were it not that around AD 540 Simplicius of Sicily cited these words. That was well over a millennium since they had been spoken or written down. Simplicius quotes Anaximander's statement in a commentary on the *Physica* of Aristotle. As a result of this we tend to read and interpret this text within the context of Simplicius: it has to do with the origin and perishing of things – $tois\ ousi$ – the natural things. But if we do this, the second part about moral issues, guilt and atonement – justice and punishment – $dike kai \ tisis$ – seems a bit odd.

So do we actually know what the text is about and which necessity is at stake? We have to restrain our tendency to understand 'kata to chreōn' as 'according to the laws of nature'. We should even perhaps delete half the text. The obscure and somewhat poetic statement of the second part was probably explained by Simplicius in understandable terms before he cited it. The text is full of Aristotelian terminology, genesis, phthora, 'origin' and 'perishing', the things and the necessity.

So, how should we read the statement? As an authentic text with two almost parallel claims? The first sentence as the actual core and the second as an explanation or extension? Or vice versa: the first sentence as the explanation of the original text? Are we reading a statement about nature and its fixed regulation of interaction and return, which is subsequently transposed to the field of human relations? Is the first sentence the core or an addition, an explanation or even a hindrance to ever reaching the meaning of the second, the original, sentence? If we were to read the second part of the statement without any interference by a later added

¹ G.S. Kirk and J.E. Raven: The presocratic Philosophers, Cambridge 1966. D.K. 12 B 1.

2 Introduction

explanation and interpretation, what would we understand of it? It is about 'according to the course of time'. Taxis is not yet 'order', the meaning that the word would not have until Late Antiquity. Taxis is the fixed position that something or someone has, for example the position in a row or the fixed order according to which something happens. Chronos would not mean 'time' for centuries. In the fourth book of the Physica of Aristotle he deals with topos, the 'spot' where something is; kenon, the lack of anything tangible and chronos, the duration in which something can become mature. In translations we often come across the words 'space', 'vacuum' and 'time', concepts still unknown to Aristotle. Chronos is not the countable course of time, but is the 'time' we mean when we say 'there is a time to come and a time to go' or 'time will tell'. Or to indicate that it is now 'time' to harvest or to sow, or that after nine months 'the time is ripe' to give birth. In the same way that topos is the suitable or appropriate place 'in order to ...'. chronos is the appropriate time 'in order to ...'.

In order to ... what? To undergo punishment and atonement, 'for their injustice', according to our translation. *Dikèn (...) didonai* meant for Simplicius to pass a sentence and impose a penalty. For Herodotus and the Attic orators the meaning these words had a millennium earlier was more likely to 'receive satisfaction'. If justice has been done, both parties will be satisfied and each receive their rights. That is not a punishment, neither is *tisis* a penance. *Tisis* is the compensation, the requital, that which counterbalances the suffered wrong doing.

The phrase used in the translation, 'retribution to each other for their injustice', is wanting in expressing the interaction and reciprocity. 'One after the other they give satisfaction and when the time comes, put to right the injustice done.'

Anaximander is the first philosopher of whom we have a portrait and the first Greek, according to Themistios, 'who had the courage to publish a text "About nature".' Through his writing the word *archè* became the term for 'beginning' and 'principle'. Also, the statement discussed here would be about the principle of all things and the ability to see nature as inexhaustible because its elements continually change with the tide; they grow and perish, they awaken and wilt.

Why cite these earliest sentences in a study about the philosophy of Late Antiquity? To show the path, the long and laborious path along which the words of the wise men have reached us. A path partly lost, but visible within quite another context. It is our task to derive something else from the same words and sentences.

² Themistios: *Oratio*, 36; D.K. 12 A 7.

Nietzsche pointed out how the earliest archaic Ionian thinkers were covered under the 'blankets' of the Attic Greek of Athens' classical philosophy, the Hellenistic interpretations of the scholars of the library of Alexandria and the Roman appropriation of Greek philosophy that also involved the Christian revival. Through the above-mentioned processes the words of the archaic Ionian thinker were lost to a large extent. He showed that the road leading to Anaximander from Milete went from Berlin via Paris, Rome, Alexandria and Athens and ... then we usually got stuck somewhere. We read the Presocratics in the manner in which Plato and Aristotle cited and interpreted them. When we read Plato we also hear the voices of Plotinus and Augustine echoing through these texts and thoughts. Who is able to reach Aristotle without first having to bypass Hegel and Thomas Aquinas?

Late Antiquity is a philosophical landscape that is neglected to a large extent: the Athens of Plato and Aristotle is the focus of interest and even Cicero's and Seneca's Rome is seen as a derivative. The world of Late Antiquity appears to offer a confused and diluted form of philosophy. And yet, most of Greek and Latin philosophy has reached us because of the efforts of the thinkers and writers of Late Antiquity and often in the shape they finally gave them.

b. Birth and growth

Almost everything changes over time. Anaximander used *genesis* for birth and growth, the induced gestational force. In the time when the break between the tradition of antiquity and later forms of Platonism was nearly completed, Plutarch of Chaeronea explained in his essay about the gods and evil, that *hè genesis* meant 'tendency towards the earth – *neusis eis gèn*'³ and Origen came some decennia later with the devastating opinion and statement that 'birth on earth is the germ of death – *hè epi gès genesis thanatou archè estin*'.

For the earliest thinkers, for Heraclitus, but also for Aristotle and his followers and for the Stoic philosophers, Logos was the divine power and force that brought unity, coherence and meaning. But Philo of Alexandria turned this upside down and described logos as a 'cutting weapon – $tomeus\ t\bar{o}n\ sumpant\bar{o}n$ – always busy cutting off all immaterial from material things'.⁴

It was not merely this increasingly sharp division between two worlds, two realities that made the difference. The ideas of philosophers or Church

³ Plutarch: *Moralia*. *De sera numinis vindicta* § 27.

⁴ Philo: Quis rerum divinarum heres sit, cap. 26.

4 Introduction

Fathers in their turn reflected the actual changes in the world: the different ways of living and regarding one's body, the relationship between women and men, mind and body, slaves and freedom, state and family.

In this study, as in my previous books *Greek Philosophy: First Questions* and *Philosophy in Ancient Rome: A loss of Wings*, we will time and again look at change, at being different and thinking in a different way. We shall not restrict ourselves to looking merely at the differences between the philosophies of the different eras – Archaic, Hellenistic, Roman, early Christian, Byzantine and that of the Church Fathers. Once of the main themes of this book is how Greek philosophy had its roots severed when the knowledge of Greek was practically lost in the West. The result of this was that for more than a millennium until Immanuel Kant, Western philosophers thought and wrote in Latin. Another break is caused by the arrival of Christianity. Cities and states, armies, tricks and ruses of man will appear in shrill contrast with the City of God in Late Antiquity. Edward Gibbon eagerly cites Voltaire's witticism: 'Le christianisme ouvrait le ciel, mais il perdit l'empire. '6

The major theme of this treatise will be (hence the fragment of Anaximander) the birth of 'time'. The world of antiquity knew duration and sustainability, the harmonic order of the whole, the *kosmos* and the recurring cycle of giving birth, of growth and flourishing, of wilting and decaying and then once more re-germinating. Not until Roman philosophy was 'time' seen as temporal, as something beginning and ending, a reality that was finite. 'I have put life on a slope,' says Seneca when he considers that for him reality is temporal and will stop. 'Being' and 'time' are placed in an essentially different relationship. The last chapter of this book, dealing as it does with the Venerable Bede indicates indeed the end of the philosophy of antiquity.

Although obviously keeping an eye on the chronological order, in this book there is also a geographical structure: from the Greek to the Latin world and subsequently to the peripheries of the declining empire: Andalusia and the remote country of the Anglo-Saxons. The design is thematic, in which the decay of the Greek language and the birth of 'time' play a major role. Other choices could have been made. I would have liked to include Philoponus in this study, but at the time of writing an excellent

⁵ Ch. Vergeer: *Eerste Vragen: Over de Griekse filosofie.* Nijmegen 1990 (English translation will be published in 2020); Ch. Vergeer: *A Loss of Wings: Philosophy in ancient Rome.* Newcastle upon Tyne (CSP) 2018.

⁶ Voltaire: Essai sur les moeurs, chap. XII. 'Christianity opened heaven, but it lost the empire.'

study by Koenraad Verrycken about this late Alexandrian philosopher was published.⁷ A chapter on the logic and theory of necessity concerning Alexander of Aphrodisias was left out because it would have been too technical. But, whoever devotes three chapters as I do to Augustine and leaves out Ambrose, Jerome and Chrysostomus may well have to explain his choices.

c. 'The field I till is time'

During Late Antiquity, the relationship between questions, the searching and feeling one's way in philosophy and the answers from which support was derived, seemed to change. The Greeks gave us a desire for wisdom in which reality was not self-evident, and neither could we silently pass it by. Philosophy is the arduous effort to put reality into question and to put it into words. In Late Antiquity reality is considered to be only temporal. Not everlasting, as Anaximander said, but created at some time and finite. 'Time' was a blurred smear on the immense blackboard, a line into nothingness that once will be erased again. The existence of man is a token at the boundary and only behind these boundaries of being does a different, radiant and 'true' reality lie hidden.

In this world, Augustine observes merely the stones and the dust, the falling debris and the ticking of time rapidly running to the end. Because of 'time' we are bound to lose everything Many, many centuries later Goethe would describe 'time' thus:

'Mein Erbteil wie herrlich, weit und breit: Die Zeit ist mein Besitz, mein Acker ist die Zeit. *8

⁷ K. Verrycken: De vroege Philoponus: een studie van het Alexandrijnse neoplatonisme. Brussels 1994.

⁸ J.W. von Goethe: *Divan*, Hamburger Edition 2, 52.

^{&#}x27;My inheritance how wonderful, far and wide:

Time is mine, my field is time.'

CHAPTER ONE

THE TREE OF PORPHYRY

a. An introduction as epilogue

The cave of Plato, the tree of Porphyry, the razor of Ockham and the whip of Nietzsche are philosophical metaphors that are well-known but rarely understood fully. The tree of Porphyry is a method of ascending from the most general to the most specific, a method which served its purpose for more than a thousand years. Moreover, this tree of Porphyry indicates the dividing line between ancient philosophy and all subsequent forms of philosophy, which are essentially different. Its roots are nourished by antiquity, its trunk and branches offering shelter to the newer forms of philosophy.

Porphyry was born in AD 232 or 233 in the ancient Phoenician port of Tyre in Lebanon. He was given the cognomen Porphyry – purple – either because of his home town where the purple dve was produced or because of his Syrian name Malkos, in Greek Basileus – King. He usually called himself Tyrios, refering to his native town. The Christians only spoke about him with contempt, giving him various nicknames which described him as an ignorant yokel. He probably studied first at the university in what is now Beirut. He became quite familiar with Chaldean, Egyptian, Christian and Gnostic writings. Afterwards he studied in Athens where Plato's philosophy was taught by Cassius Longinus and his collaborators. Apart from philosophy, he studied rhetoric and mathematics. When he was about thirty he moved from Athens to Rome; it was here that Plotinus had founded his school twenty years before, after having studied for about ten years at Ammonius Saccas in Alexandria. Plotinus was then fifty-nine and Porphyry about thirty. This encounter was of enormous importance for the course of philosophy.

They worked intensively and closely together for five years. In his *Vita Plotini*, Porphyry tells us about his kind and gentle teacher and especially about his way of teaching philosophy. His lectures consisted of conversations in which the Socratic dialectical method was used together

with the Academic epochè, the putting aside and postponing of any judgment.

Porphyry writes that the orator Diophanes, during a discussion about Plato's *Symposion* defended Alcibiades and proclaimed that love should also be expressed physically. 'Plotinus jumped up several times and was about to walk away', but each time he pulled himself together and at the end asked Porphyry to write a riposte of Diophanes' proposition and to present it the next time.

In this accommodating manner Plotinus won Porphyry over. In Athens Porphyry had learned from Longinus that the object of thinking existed outside thought. At one of the first lectures he attended, Porphyry came up with a thesis in which he fiercely opposed Plotinus' idea that *ta noèta* existed only in the *nous* and not outside of it. Plotinus only smiled and turned to his co-worker Gentilian Amelius and told him that it would be just in his line of work to solve the problems in which this Porphyry had entangled himself because he understood little of Plotinus' teachings. Amelius then wrote a voluminous exposition, Porphyry a defence, Amelius a reaction to this defence which was followed by one more defence by Porphyry. Not until after Amelius had written for the third time about the subject and an extensive exchange of opinions had followed during the lectures did Porphyry give in and write a *Palinodie*, a revocation which he read out at the next lecture.¹

We understand that after having studied at Plotinus intensively for five years Porphyry fell ill and became depressed by the deep philosophical problems that seemed insoluble and following the advice of his master he went to 'gentle' Sicily in AD 268.

But is it true? We will never know, but there are indeed indications of a profound difference of opinion. Plotinus was the last philosopher of antiquity who was involved in thinking about and commenting on Aristotle's theory of categories, and he objected in particular to the ontological status of these categories. In the treatises in particular (according to the chronological ordering 42 to 44,² the last ones he wrote before Porphyry left Rome) Plotinus took the position about the status of 'being' of the categories which must have given Porphyry much thought, or rather, were unacceptable to him.

In Sicily Porphyry wrote his own commentary on the theory of categories and does not even mention the name of Plotinus.

While in Sicily he also received a letter from Longinius, who had left Athens for Palmyra where Amelius joined him. It is a clear attempt to have

¹ Porphyry: Vita Plotini 18.

² Plotinus: Enneads V 1, V 2 and V 3.

Porphyry return to the school of Plato and to detach him from Plotinus.³ But a culmination of the conflict was prevented by the death of Plotinus in AD 270. Porphyry returned to Rome to become the leader of the school. He died in Rome somewhere between 301 and 306. Once back in Rome Porphyry published his introduction to Aristotle's theory of categories, the *Isagoge*, and some other commentaries. He then dedicated himself to the compilation of the tracts of Plotinus, the six sets of 'nines', *Enneads*, and to writing the hagiographical biography of his master.

The conflict with his teacher had been forgotten and as a result Western philosophy was directed to an interpretation of Aristotle's logic in which the amazingly rich legacy of Plotinus' profound thoughts was put aside, and we were satisfied with a short introduction to this theory of categories: the *Eisagōgè*.

Although this introduction marks the end of a centuries-long discussion about the status of the categories, a method of interpretation was offered that would be used for well over a thousand years. Porphyry ended a discussion of many centuries, and eminent students of the philosophy of Aristotle such as Simplicius and Augustine praised him and accepted his views. The *Eisagōgè* is not merely an introduction but it is also the slamming of a door, the conclusion of a way of thinking.

b. The status of reality

For Plato, reality is not what we see around us; that is the surface, the appearance of what is more essential elsewhere. The truth of this reality, the true reality is 'being' – ousia. 'Being' gradually acquired the meaning of 'being here, being present': ousia shifted to parousia. This led to the question, discussed in detail by Plato in his conversation with Theaetetus: what is the status of presence and absence? In his theory of the sterèsis, Aristotle makes of this word (which in everyday Greek meant theft or robbery) a technical term: 'denial', 'negation of something', 'abolition of an idea', a technical term that played an important part in the tradition of Late Antiquity and the scholastic tradition as privatio. Later on it became all important in Hegel's dialectical thinking as Negation, Aufhebung, as exemplified by the statement⁴ that absence – apousia – is something quite different from not being present. The absence is not there – that is the taking away of being – but is not nothing: his absence still refers to the form; he could (according to Aristotle) have been present.

³ Porphyry: Vita Plotini 21.

⁴ Aristotle: *Metaphysica* 1004a 16.

Aristotle's theory of categories is not merely a tool in the process of thinking – *organon* – but is, above all, an attempt to determine what can be said about reality. The boundaries of being are examined:

what is it? – ti estin; independence – ousia – substantia quantity – poson – quantitas quality – poion – qualitas relation – pros ti – relatio location/place – pou – locus, ubi duration – pote – tempus, quando place – keisthai – situs posture – echein – habitus active – poiein – actio passive – paschein – passio

This is the list – a list, because it can also be constructed in a different way and the various attempts in the writings of Aristotle's *Categories*, *Topica* and *Analytica Posteriora* differ – with the original Greek words and the Latin rendering of them – in the appearance by which they were introduced and are known within the philosophical tradition and approach. They are fluid, glowing concepts at times, and since the time of Porphyry they have solidified and cooled off. Since the Latin translation of the *Eisagōgè* by Boethius, the *Isagoge*, forming the preconditions of our thinking about reality, is now considered to contain solid and factual concepts.

In November 1677 Antoni van Leeuwenhoek wrote a letter to the Royal Society in which he was the first to describe what under a microscope spermatozoa (*zaaddiertjes*, tiny seed animals, he calls them) looked like. He wrote to the president in Latin because he feared being embarrassing and he 'had an aversion to looking closer at this (sperm)'. In everything he saw and could discern for the very first time – the wheat weevil, flour moth, flea or clothes louse – he became increasingly able to determine the categories of the several species. It is especially through the taxonomy of Linnaeus that we know this as determining where the boundaries are when distinguishing one species from another, where the reality of one differs from the others.

Determination is based upon the increasing wealth of knowledge and insight into numerous tiny details, pieces of reality such as whether a tree

⁵ A. Schierbeek: *Antoni van Leeuwenhoek*, pp. 86-89. 'Hij tegenheijt hadde omme dit (sperma) nader te besigtigen.'

leaf is serrated or lobed. Determination is a process of deciding and limiting and in doing so establishing the reality of something. The scientists who work in this way are still working within the Aristotelian tradition of deciding and confining, determining the boundaries of being or finding out the forms within which something is what it is, that this is a form in which reality only then takes shape and shows itself as it is.

At about the same time as Van Leeuwenhoek's discovery, Spinoza, in a letter from The Hague dated 2d of June 1674 to Jarigh Jelles, writes: 'omnis determinatio est negatio.' Here determination comes to the fore in the manner as described in the tree of Porphyry and followed for more than a thousand years: limiting is robbing. Determinatio is the Latin representation of Greek prosthesis, 'to put in the first place'. In everyday use in Athens, the word meant something like 'to lean (it) against something' whereas it had a positive connotation for both Plato and Aristotle: 'to attach'. For Spinoza determinatio has a negative meaning.

Hegel, in his series of lectures on the history of philosophy, is ecstatic: this insight is the essential beginning of any form of philosophizing! What was stated by Parmenides in the Orient arrived for the first time in the Occident. The substance (God, according to Spinoza) is everything, the one and indivisible infinite and eternal. All the rest, that which was separated from the substance, is particular. This insight, the idea of Spinoza, is according to Hegel 'the liberation of the spirit and its absolute foundation.' Hegel stretches it a bit far; in the letter from Spinoza, the wording is not exactly in accordance with the 'Satz – sentence' Hegel wants to read in it; the context too casts a somewhat different light on the words.

But it is clear, the status of reality is at stake: whereas Van Leeuwenhoek increasingly learned to see reality by considering the particularities, for Spinoza – and later on for German idealism – the particular is precisely a form of negation of the absolute reality, a blemish on the true substance. Hegel even goes one step further when he considers the particular, the limited as finite. Of course, that is what Spinoza did in the second definition of his *Ethica*. For Hegel the finite is that which is restricted. The particular is therefore a limitation, an imitation of the essential and only temporary. '*Finitude*' becomes one of the most important words in Hegel's philosophy, and it always means that time is interpreted as being

⁶ B. de Spinoza: Opera III, Epistula L.

⁷ Plato: *Phaedo* 79a.

⁸ G.W.F. Hegel: Werke in zwanzig Bänden: 20, Vorlesungen über die Geschichte der Philosophie III, p. 164-165. 'Die Befreiung des geistes und seine absolute Grundlegung.'

temporary, finite, and that therefore this particular reality is a form of restriction and denial, of loss and failure.⁹

That is the crucial problem of Porphyry's tree and his unfinished discussion with Plotinus. The tree gives a classification of what can be said about: being; the theory of categories; the descent from the essence – *ousia*; the increase in restriction and in the stripping away from 'being'. From these he swerves to the particular, to Socrates, or to the flour moth and clothes louse of Van Leeuwenhoek.

c. Learning to read

The philosophy of Plato was, in the centuries after his death, increasingly thought through by the Academy in Athens. The Lyceum of Aristotle had less resonance. Only when Andronicus of Rhodes, probably in Rome, published the first edition of the works of Aristotle in the middle of the first century BC and added a commentary of the *Categoriae* did Aristotle's philosophy return to the centre of philosophical education.

During the first few centuries AD, the attention paid to Aristotle was mainly focused on the problems of his theory of categories. Whereas during the Middle Ages studies and discussions centred on the *Metaphysica* of Aristotle, it was between the time of Hegel and Heidegger that the *Physica* was regarded as Aristotle's most fundamental work. But the 'Utensil' – *Organon* – was pushed aside by the *Novum Organum* of Francis Bacon, introducing the *Instauratio Magna*, the overall reconstruction of the new modern sciences and philosophy.

In antiquity there was an attempt to incorporate and adapt this tool of philosophy, namely Aristotle's theory of categories, into the predominant philosophy of Plato. Did Plato too talk about categories? Plutarch was the first to point out the *Timaeus* as the work where Plato and Aristotle seemed compatible. Discussions about the *Theaetetus* and the *Parmenides* took place in the old Academy. Finally, Plotinus believed the enigmatic passage in the *Sophist*, dealing with the *megista genè* to be compatible with Aristotle's theory of categories. ¹⁰

In Late Antiquity the philosophy of Aristotle regained its prestige, but the access to this philosophy was at that time the theory of categories, which, in an attempt to align the philosophy of Plato and Aristotle, was seen as the theory about the division of the forms of being. For Plotinus, the categories were *genè tou ontos*, varieties of being.

⁹ Ibid: p. 168.

¹⁰ Plato: Timaeus 35b ff.; Theaetetus 152d ff.; Parmenides 136a ff. and Sophistès 254d ff.

Porphyry put an abrupt end to this tradition and interpretation with his introduction to the theory of categories. Porphyry wrote two commentaries on Aristotle's theory of categories: a comprehensive and systematic treatise, in which he carefully examines and attempts to refute the positions of the criticisms by the Academy and the Stoics on Aristotle. The treatise was dedicated to Gedalius; Simplicius quotes some interesting statements but the text itself is lost. What we do have is the <code>Eisagōgè</code>, a work meant for instruction written in the Socratic style of question and answer and unfortunately incomplete. A long and great tradition was brought to an end by a short and unfinished school book.

Most overviews of the history of philosophy state that Porphyry was a student of Plotinus. That is certainly true, but precisely at the point where Porphyry decisively influenced the next thousand years, he strongly opposed the views of his master. Whereas for Plotinus the categories were varieties of being, *genè tou ontos*, for Porphyry they were merely the simplest way to put something into words, *haplai sèmantikai phōnai*. The consequences of this were great. For Porphyry the categories had only validity and authority in this world of visible reality, the *kosmos aisthètos*, pertaining not at all to the other reality, the *kosmos noètos*.

Augustine recounts that, during his years as a student in Carthage when he was about twenty and before his appointment in Rome, he obtained a work of Aristotle called 'the ten categories'. Although his teachers in Rhetoric talked about it as something exceptional but excellent, no one was able to properly understand or explain this book. And Augustine rejected the book – it must have been a translation in Latin – because what he was looking for was God and he understood that 'everything that exists is included within the ten categories', but that precisely 'You, my God', so miraculous and simple 'cannot be put into words or contained within categories of thinking.'¹¹

In doing so the young Augustine followed Porphyry's interpretation of the categories as forms of thought with a limited area of validity, and not as superior concepts that apply to all forms of being. Through this, thinking lost its grip on the divine which remained outside the categories of thinking. That was a loss that would remain until Kant. All this on the basis of a simple school book.

Anyone who takes up Porphyry's short commentary on Aristotle's theory of categories will come across a series of obstacles. Perhaps the present-day reader will, like Augustine, have a number of related questions and problems. But the question that interested Augustine – which way leads to God? – was not the right question. Porphyry was a fervent

¹¹ Augustine: Confessiones IV 14, 28

opponent of Christianity and intended to take the Hellenic heritage as the starting point of his commentaries.

In our time most readers will read a translation of Porphyry's work. These translations are usually of high quality, but it is like a Toccata by Sweelinck on a modern concert grand piano: different, quite different. Anyone who can read the Greek text has a great advantage, but that reader too should realize that he or she has learned to read Homer and Plato and that the number of centuries between Homer and Porphyry is about the same as between Porphyry and us. Many words in Greek were understood and used differently over the centuries. And then there is of course the strange paradox that making the effort of reading Porphyry in Greek was not taken by Augustine. Afterwards Boethius' Latin translation became the form through which the text exercised its major influence.

Also, we are used to complete texts and assume, when we study the *Ethica* of Spinoza, for example, that the book in our hands provides the text written by Spinoza. With texts from antiquity this is seldom the case. Consider the texts of the letters of Paul which are unreliable through and through – and the text we have of the *Eisagōgè*, which is both unfinished and riddled with gaps and omissions. However, the main hiatus is not to be found in the text itself, but in the context.

The text shows the Socratic method and earlier on I pointed out that Plotinus too used this method during his lectures. We may therefore assume that this kind of commentary was not created in isolation behind a writing desk, but was the result of conversations where they took shape and content. These conversations are now silenced and we only have the solidified form of the text. But, just as present-day scholars produce books and articles based on opinions and publications of colleagues, Porphyry too was naturally engaged in discussions with those who had already expressed their views about Aristotle's theory of categories. That was the case with the first publisher of the works of Aristotle, Andronicus of Rhodes, followed subsequently by Boethius of Sidon, Alexander of Aphrodisias, Eudorus of Alexandria, Albinus, Atticus, Nicostratus, Lucius, Athenodorus, Herminus and Plotinus, who all wrote their commentaries on the theory of categories. Porphyry would in all probability have been able to consult these works in his library. We are, as it were, listening to a conversation in which most of the participants have become inaudible for us. We know about this list of authors because Simplicius mentions them in the introduction when in his turn he wrote his commentary. Apart from the texts of Plotinus and Alexander of Aphrodisias, all these texts are lost.

But apart from being involved in a conversation where the voices of most of the participants are now silent, the manner of asking questions and the way of thinking is also unfamiliar to us. In our time a physician will ask different questions from those asked by a technician and an ethicist will raise other questions in his turn, each from his own field of thinking. In antiquity there were rules for writing a commentary on a philosophical text.

Six questions had to be raised:

- What is the purpose of this text *skopos*, *prothesis*?
- What does it contribute *chrèsimon*?
- What place does it take in the complete order taxis?
- What is the title and why epigraphè?
- Who is the author *sungrapheus*?
- What is the division into chapters diairesis?

To us this may seem medieval and scholastic. It is not but that is not the point. This scheme is usually applied in the commentaries of Late Antiquity known to us. The question whether the book we are dealing with here really is *Katègoriai* will of course never be raised if we, for instance, pick up Kant's *Critique of Pure Reason*. But we actually do not really know the title given by Aristotle, if he ever used a title at all. Porphyry found several titles for Aristotle's text and possibly did not find the requested text in public collections because he did not know under which title the work was known. In manuscripts the text about the categories is also referred to as 'Introduction to the Topica', or 'About the types of being', or 'About the ten species'. What is the correct title and what is it about? There is the unreliable anecdote about the Metaphysica of Aristotle not being the title, but that it was assigned by a librarian on the basis that these books should be given a place next to those about the *Physica*.

The reasons – *aitia* – for writing these texts was Aristotle's opinion that a closer study of nature resulted in new questions. Metaphysical questions arise from closer studies of nature. *Metaphysica* is not about something that does not concern this natural reality – as Kant implied – but a deepening of natural questions. 'A' *metaphysica* in itself is impossible and 'a' metaphysics of something other than the reality of birth and growth is inconceivable and impossible. For example, 'a' *metaphysica* of technology does not exist.

The discussion about title and author, which may seem so superfluous to us, teaches us at least three important things:

One, that philological research should indeed always raise these questions again and again. As an example: one of the most important writings of Christianity, sometimes called the birth certificate of the Christian faith, is Paul's 'Letter to the Romans'. But this text is certainly not a letter; it was not even addressed to the Romans and no more than twenty percent of the text was written by Paul. Even 'superfluous' questions such as — is this a treatise of Aristotle? may possibly be considered as solved in Wikipedia but in recent research there are many scholars who express doubts, based on solid arguments, whether this text is a) entirely, or b) merely partially or even c) not at all from Aristotle.

Two, many of the decisions about texts, titles, authors, classifications and intentions were not made until Late Antiquity and have remained valid since then. In the debate to which I am contributing on the meaning and validity of the categories, the majority of the scholars still adhere to the Late Antique interpretation of Porphyry and reject the ontological interpretation of scholars before the time of Plotinus.

Three, the question can be raised whether we are actually able to reach and understand the original meaning of Aristotle's theory of categories. As Nietzsche taught us, we only arrived in Athens, via Paris, Rome and Alexandria. The magnificent interpretation of Thomas Aquinas in the thirteenth century was the door through which we once again got to know and use Aristotle – and that access to his thinking was from then on the perspective through which we learned to understand him. The translation of the writings of Aristotle into Latin made it into a worldwide philosophy and was also the reason they lost their original meaning and words. The commentaries of scholars of the ancient world and in Late Antiquity taught us to fathom the texts, while at the same time laying a different foundation under this way of thinking.

d. Thinking or being

In his *Metaphysica*, Aristotle states that a truth and a lie are not in the things themselves but in our judgments about them. ¹² The judgments that we make and the distinctions that we make are not in the things themselves but in our words about them. In the same way Porphyry spoke about the meaning and validity of the categories: words to indicate connections or differences. Logical concepts, things you can put into words.

Categories are ways of putting everything into words – ta legomena. Categories express our thinking but the categories are not in things themselves – ta onta. The meaning behind both those Greek words becomes mutilated when a text is translated into Latin: for example,

¹² Aristotle: Metaphysica 1027b 25.

praedicamenta are voces, not res. Whereby a battle was nurtured between nominalists and realists which would last for centuries within scholasticism and which was already imprecated by one of Porphyry's pupils, Jamblichus: were not the opposing parties driven to extremes and was there no intermediate position possible?

The above-mentioned preconceived questions can be quite useful here. Why, for example, did Aristotle, if he were indeed the author of it all, write a work about the categories in three parts of which only the second section deals with those categories and the last one breaks off abruptly? Porphyry too, immersed himself in trying to solve this question and also in the remarkable series of distinctions which Aristotle deemed necessary to make beforehand. Right at the beginning of his commentary, Porphyry investigates such a distinction between two forms of necessity. This resulted in a tool that became known as the tree of Porphyry. The most common gender – genus generalissimum – is independence – ousia. That can be differentiated every time, by distinguishing between material or immaterial. Physical independence, the material 'being' we call 'body', a distinction being made between animate and inanimate bodies. A stone is an inanimate body, a human being is animate, a living being. Living beings can in their turn be distinguished in having sensibility and not having sensibility. The 'sensible' being is an animal. Animals can be distinguished as sensible and those who remain without reason. The sensible and intelligent being can be defined as a being that can laugh, the human being, and the being who cannot. Humans can then be defined as male or female, as Socrates and Xanthippe.

In this 'tree' the starting point is always – *ousia* – the essence, the most general, the independent. Everything else is always ancillary. Precisely that which is so decisive for us in reality is for Porphyry merely that which comes with it. It is a Neoplatonic way of thinking in which 'being' is the true reality, reality descending further and further into something collateral. Take the red nose of Socrates and his pot belly – was the image really an addition or did it betray more about the being of this person than a most general being?

e. The table of categories

At present the best known and used 'Table of categories' originates from Kant and actually gives only four categories, each as a title for three underlying variations. Remarkably, the 'first category' of Aristotle, the essence or the substance is not included in this list of twelve. Essence or substance, is strikingly absent. Within Kant's critical way of thinking,

'the-thing-in itself' has become unknowable and unattainable and is therefore missing in this overview. Does this mean that every remaining category is 'for-itself'?¹³ Certainly not; they are pure concepts, *a priori* principles, not impure and polluted by being 'attached to something' or anything else that could affect their purity and *a priori* character.

Are the pure principles of Kant really neither 'an sich' nor 'für sich'? They are indeed, their status is purely formal, separate from experience and sensory perception; they are a priori valid logical concepts.

The schèma katègorias tou ontos of Aristotle consists primarily of the first category, essence or substance, followed by the nine accidental categories, of which Kant adopted the most important ones (quality, quantity and relationship). The categories which Kant adopted and developed were only accidental according to Aristotle. 'Accident' implies that it is surmountable, what we can do without. The accidental categories are outsiders and really secondary; they are outside the essence and the essence can very well exist without them. But this is not the case the other way round; all of the nine accidental principles are based on the first category, the essence. None of the nine accidental categories can exist on its own; it merely assists the essence. Take colour for example – the blackness, quality, size or whatever are no more than the blackness, quality or size of this or that.

This gives the categories an important ontological status. It is an attempt to provide assistance to the essence and to attach all sorts of fleeting phenomena, such as blackness and size, to the essence. Blackness is not, as with Plato, an *eidos*, an entity form; it is 'something attached'. The construction of an overview of the basic principles, the categories, is in itself an attack on and a turning away from Plato's theory of ideas. In his *Analytica posteriora*, Aristotle briefly points out his categories and then sharply discusses whether whiteness can be something in itself, a form of being. 'An object cannot be white unless it is something in itself,' he states and then – to the consternation of the English editor of his work who rebukes Aristotle in a footnote stating that his remark is impertinent, goes on to say: 'We can take our leave from the forms of being (of Plato) – *teretismata te gar estin* – as it is merely idle cackling.'¹⁴

Aristotle's attempt to adequately approach reality by formulating the categories drove a kind of wedge into thinking: the substance-accident model. When the first edition of the writings of Aristotle was published in Rome around the year 40 BC, this provoked, especially in the Greek speaking part of the empire, an endless stream of commentaries which

¹³ 'Das Ding an sich. – Das Ding für sich'.

¹⁴ Aristotle: *Analytica posteriora* 83a 33-34.

went on for centuries. In the Latinised West, the introduction to the *Categoriae* by Porphyry became of decisive importance mainly through its translation into Latin, known as the *Isagoge*, and the commentary of Boethius. The majority of later Latin editions of the works of Aristotle place the *Categoriae* as the first text but preceded by the introduction of Porphyry.

In antiquity, right from the beginning, some thinkers object to the 'substance accident' model. Augustine, for example, in his work about the Trinity recognizes the validity of the basic principles of thought and reality, but states that they only apply to our reality, not to the essence of God. Therefore, according to him, the Trinity does not fit into the substance accident model.¹⁵ One and a half centuries later Boethius has similar objections.

In the following centuries Aristotle still plays a major role in the Greek and Arab speaking world, but has fallen into oblivion in the Latin West. It was not until the tenth century that the *Isagoge* reappeared with the comments of Boethius. By then it was an introduction to scant remains, the reason being that of the six writings of the *Organon* only *Categoriae* and *De interpretatione* were available. It was as late as 1135 AD that the first edition of the Latin version of the *Organon* was published.

The problems started when around 1040 Berengar at the cathedral school of Tours for the first time took up the ideas of Aristotle that every concrete thing on earth, such as a piece of bread and some wine, for example, has properties (*accidentia*) such as form, taste and colour, which cannot exist if the substance itself does not exist. Because bread and wine do not change taste, colour or shape at the Eucharist, the substance cannot essentially be changed in its entirety. So bread and wine did not become the body and blood of Christ; at most it could be said that a divine substance was added to bread and wine. That was obviously a reprehensible statement for the Church authorities and was strongly condemned. Divine secrets such as the transubstantiation could not be captured in human concepts like the categories.

The renewed increase of confidence in philosophically and scientifically supported thinking relying on the Aristotelean categories, forms of logic or dialectics, which had once again gained ground through this formulation of the basic principles, provoked an unprecedented fierce response. In the Latin West this came from the side of a well-schooled hermit from the area of Ravenna, later the powerful cardinal of Ostia, Peter Damian. According to him it was the devil that invested man with the arrogant delusions of believing that through his thinking he was able to understand

¹⁵ Augustine: De Trinitate X, 10.

truth and reality. Dialectics and logic are the spawn of Satan and philosophy has no more status than that of a lowly servant in the service of theology. God's omnipotence is completely free to do away with any logic or natural necessity. The point of view of Jerome which was that even God could not undo all that had ever happened, such as – possibly quite a surprisingly worldly example for a Church Father – defloration, was fervently rejected by Peter; God could undo anything, even the fact that Rome had ever been founded. Opposite the extreme view that every reality, natural or supernatural, was founded on the basic principles of thought and reality set by Aristotle, stood the equally disconcerting standpoint that God's omnipotence was able to undo all causality, logic or natural necessity – in fact, every truth and reality.

At the same time, in the Arab world where similar philosophical discussions were held, Al-Gazhali published his work *Tahafut al-falasifah*, *Incoherence of the* Philosophers. This book put an end to the flourishing and freedom of Arab science and philosophy for centuries. Not nature, but God is the cause of everything and causes to happen all that He chooses, wrote Al Gazhali. According to him, this meant that pointing out cause and effect in nature and the world and, formulating, in imitation of Aristotle, the prevailing principles of thought and reality, had to be dismissed as an illusion; even worse, the activity was an affront and an infringement of God's omnipotence.

These opposing attitudes adopted by the Latin West and the Arab East with regard to the philosophical thinking of Aristotle was the cause of a decisive rift between the further development of both cultures. Whoever believes that God, through his omnipotence is free to act against all logic, necessity, reasonableness and human understanding, does away with any ground for any reasonable or moral act and destroys every certainty. That God should be able to play cruel games with mankind was always a fearful dream for Luther; and Descartes needed to do away with a God who was capable of deceit and able to upset the regular and reasonable order, before he could establish the certainty of thought. 'Something can only be certain and indubitable (*certum et inconcussum*)' if the possibility of 'the cheating God – *le Dieu trompeur*' is ruled out.¹⁷

We talk about the *Organon* as being the writings on logic of Aristotle. But in his *Categoriae* Aristotle does not formulate the logical principles of our thinking at all. In his two main works, *Physica* and *Metaphysica*, he investigates nature and the backgrounds of nature. In *Categoriae* and *Metaphysica* Γ he is looking for the basic rules that are valid in nature, he

¹⁶ Petrus Damiani: *De divina omnipotentia*, Ed. Migne, 603c.

¹⁷ R. Descartes: *Méditations*, VII 24.

is describing and thinking about natural phenomena and movements. The basic concepts that he finds apply only within the natural reality of growing and blossoming, begetting and withering. If these categories are also meaningful for thinking, then that is merely because they reflect the *logos*, the logic of natural coherence and meaningful connections. Aristotle realizes very well that the categories are only valid when we are thinking about natural phenomena and that if we start from other fields of study, such as looking for proper rules of conduct or the rules that apply to mathematics, we should use other basic principles than the categories formulated here.

Starting in Late Antiquity, in the fierce discussions among the Neoplatonists and between Plotinus and Porphyry, the categories are transformed from basic principles that can be applied to natural relations, to basic concepts of thinking.

Then in scholasticism, the validity of the categories is shifted away from thinking about the ways of nature to thinking about the supernatural being. The criticism then focuses on this aspect, as is already apparent from Augustine, that the basic principles of our thinking means that we can never grasp or understand the unthinkable beyond all grounds and boundaries. Something Aristotle never claimed anyway.

With Kant everything is once again thoroughly shifted and thinking gets a completely different foundation. Whereas for Aristotle the categories for carefully looking at natural processes were applied in order to discover the basic principles, logic and to formulate rules, Kant turns away from all experience and sensory perception and tries to construct his 'Table of the Categories' based upon purely logical judgments, thereby establishing purely logical principles. Those clean or pure principles can be applied *a priori* because they have just been purified of any contamination from experience or the senses. Kant then reproaches Aristotle that his principles are naive and remain logically impure, something that Aristotle, however, never claimed or even intended.

The categories of Aristotle are not the basic principles of morality or reason nor the basic principles of formal logical thinking; they are not even the basic rules of thought. They are the principles through which we can understand nature, other than in a mechanical or geometric manner. Obviously, we cannot grasp or understand anything on the basis of the categories; Aristotle was not concerned with this, but we can 'touch – *thigein*' 18 – what we are interested in.

¹⁸ Aristotle: *Metaphysica* 1051b 24.

And first and foremost, that both insight or understanding – $kai log\bar{o}i$, transparency or knowledge – $kai gn\bar{o}sei$, and duration, durability – $kai chron\bar{o}i$: is the 'being' – $h\dot{e}$ ousia'.¹⁹

f. Where?

Then follow two categories that at first glance we immediately believe to recognize: pou – where? And pote – when? Space and time therefore. In his Critique of Pure Reason, Kant discusses the concepts of space and time in the 'transzendentale Aesthetik' before he introduces in the 'transzendentale Logik' the 'Table of the Categories'. Kant attempts to come to pure concepts of space and time, concepts that are in no way affected by things, 'von Gegenständen affiziert werden'. Space and time may in no way be attached to the things; nothing is allowed to be 'on' or 'at' them. After a remarkably short analysis, Kant comes up with the well-known definition: 'Time is the formal condition a priori of all phenomena in general.' 'Time' is a necessary representation that underlies all contemplation of reality. Kant writes about the role that time plays in the realization of our knowledge of reality, not the ontological status of time. If there was no time, reality would become unimaginable, but time itself is nothing. 22

Immanuel Kant, with his analysis of the pure principle of time, separates himself from the things in time, whereas Aristotle asks by means of an *interrogativum*, *pote*, (when?) for an orientation, a time-determined place in reality. *Pote* asks for the 'sometime ever', 'once'.

The pure principles of Kant's time and space are only logical, but have no point of engagement in reality. The logic of both the syllogism and the Pythagorean theorem apply everywhere and at all times and are neither bound to space nor time. But what Aristotle is asking for is exactly this connection with reality: where and when?

As in the case of 'to be' and 'to have' in modern philosophy, 'space' and 'time' are separated as each other's counterparts stand in a completely illogical way. In fact, they are separate from each other in a kind of logical vacuum, as both are necessary conditions for coming to a perception of

¹⁹ Ibid: Metaphysica 1028a 32.

²⁰ Kant: Kritik der reinen Vernunft B 33, A 10.

²¹ Ibid: B 51, A 34. 'Die Zeit ist die formale Bedingung a priori aller Erscheinungen überhaupt.'

²² Ibid: B 52, A 35. 'Die Zeit ist also lediglich eine subjektive Bedingung unserer (menschlichen) Anschauung (...) und an sich, ausser dem Subjekte, nichts.'

world and reality. They are necessary conditions for getting to know reality and are completely unreal in themselves.

For Aristotle, the requirement that the categories have counterparts, and thus have a place in the natural balanced order, is met. Unlike Kant who deals with space and time in the context of the theory of knowledge, his *Critique of Pure Reason*, Aristotle deals with time and space (let us hold on to these words for the moment) in his book on living nature, the *Physica*. There are the chapters about: *Topos (Physica* Δ 1-5), *kenon* (Δ 6-9), *chronos* (Δ 10 - 14) and *apeiron* (Γ 4 - 8). Space is the opposite of emptiness, time is opposed to the indefinite.

g. And when?

Both time and space are, for Kant, formal conditions for acquiring knowledge. In the philosophy of antiquity both were primarily seen as objects of unintentionally acquired sensory perception. Later, such as in the *Timaeus* of Plato and especially in the Hellenistic philosophical schools, increasingly more attention was being focused on mathematical relations, to such an extent that even the link with the natural reality was broken and thinking tried to purify itself – *katharsis* – of all ties with the senses. For Kant, space is merely a formal condition for pure knowledge. Just as 'time' seems to unfold from one point ('now') into three dimensions: past, present and future, so the existence of 'space' too originates from one point via the line to three dimensionality. That is a logical, but not a natural perception.

In the seventeenth century the study of mechanics achieved its first highlights in the light and gravity theories of Christiaan Huygens. In his *Traité de la Lumière* of 1695 he defends the Cartesian point of view that 'in true Philosophy, we conceive the cause of all the natural effects according to the laws of mechanics. Which in my opinion is what we should do, or give up hope ever to understand anything in physics'.²³

Hegel deals with space and time in his *Enzyklopädie der philosophischen Wissenschaften* under the heading: '*Die Mechanik*'. 'Space' is the first abstract generality of the appearance of nature.²⁴ 'Space' is defined geometrically: an uninterrupted congruent infinite magnitude. Or, even more abstractly, in the theory of knowledge as a form of ordering. For

²³ 'Dans la vraye Philosophie on conçoit la cause de tous les effets naturels par des raisons de mechanique. Ce qu'il faut faire à mon avis, ou bien renoncer à toute esperance de jamais rien comprendre dans la Physique.'

²⁴ G.W.F. Hegel: Enzyklopädie der philosophischen Wissenschaften. § 254.

Kant, space is a logical form through which the acquiring of knowledge becomes possible. But we cannot live in that space.

Aristotle uses the word *topos* which actually does not mean space at all (he would use *chōra* for that) but 'place', or even more succinctly, 'spot'. *Topos* is place, area or region, favourable location, the right opportunity. Instead of 'time' and 'space', 'span' and 'zone' might be more adequate translations.

In his *Physica*, Aristotle provides an analysis and definition of the concept *topos*. Space is the innermost boundary of the surrounding body: for example, the place of the wine, the space occupied by the wine is limited by the inside of the vessel. *Topos* is therefore in the first place something like the boundary within which something is contained, the stretch or space within which there is room for this or that. Because space brings limitation and determination with it, it requires an environment whose immobility is ascertained. After all, when everything is constantly changing and moving, there is no place or 'spot' for anything, it will be nowhere. A place is a permanent, fixed spot. Something only has its place and can only take its place when it can get hold of an immovable boundary. Everything is only somewhere in this 'somewhere' which is in relation to something else that does not disappear into a nowhere or never.

It was not until the fifth century of our era that Damascius, a commentator of Aristotle, came to describe place (from the ill-understood definition of 'time' as the quantity of motion) as the set of geometrical quantities that determine the position of an object. From then on the concept *topos* – *locus* in Latin – slowly shifts from 'place' to something that could be understood without its location – *thesis* – or – *positio* – as a purely geometrical determination. In scholasticism, for example in the work of Thomas Aquinas, ingenious differences appear such as between *ratio loci, locus situalis* and *locus superficialis*. 'Space' is then only understood as an abstract, geometrically determined magnitude. The place taken in by objects or humans does not actually add or reduce anything to that abstract determination. We do not matter and have no place in this geometrically constructed space.

But for Aristotle 'place' or 'spot' is precisely 'being somewhere', being on the spot and having found your place. Things are contained within the natural order on their spot, at the place that naturally belongs to them. A heavy stone does not float and a palm tree does not grow on an icy surface. Just as everything has its own time, so everything also has its own place. Just as *chronos* is the counterpart of the indefinite and unrestricted – *apeiron*, and duration is the opposite of the vague and unestablished – so is *kenon* the opposite of being somewhere on the spot –

topos: – kenon. This Greek concept – kenon – entered the Latin tradition as vacuum, the empty space. Space is in essence 'somewhere containing something' and 'empty space' is just as impossible for Aristotle as a shortage of time. Aristotle passionately contests the possibility of the existence of an empty space. Dijksterhuis, in his classical study *The Mechanization of the World Picture* dryly observes 'on the whole the entire opposition is based more on emotional than logical reasoning, it is more the expression of self-preservation than refutation.'²⁵ Dijksterhuis found it difficult to see in Aristotle's *Physica* more than 'a fruitless wandering on paths that could never reach to an end.'²⁶

The path taken by Aristotle and the methods used in modern science and philosophy do indeed result in completely different concepts: natural experiences are then confronted by purely logical concepts. Nature abhors a void. The scholastic adage 'natura abhorret vacuum' can be traced directly to Aristotle. The natural abhorrence for emptiness – horror vacui and the fleeing away from the void, fuga vacui is apparent in every wave of the sea, in every piece of fallow land, any area of high air pressure or any heat wave. Between the trees there is open, empty space just as there is empty space to make any movement possible at all. Between the trees there is an empty space, a void, but a complete and absolute void is totally inconceivable and is not mentioned anywhere in Greek philosophy. Even to the Atomists emptiness was paresparmenon kenon, an empty space between the atoms in the same space.

Just as opposed to 'time', the 'once', 'never' remains inconceivable, in the same way that opposite space, the 'somewhere', the 'nowhere' is inconceivable. Time and space are 'attached to something', the 'somewhere' and 'once' existing as a span and zone.

In the stretch or span of time, no hiatus can occur; similarly no vacuum can exist in an area or region, no more than can a vacuum within be drawn by the region or landscape to the front of the vacuum: for the first there is no time and for the other there is no room.

Until Leibniz, scholastic principles based on the work of Aristotle maintained that 'natura non fecit saltus'. 'Nature does not make jumps' and does not skip anything; it does not allow any hiatus. The essential determination of time as a continuum is the positive opposite of it not allowing gaps. In the same way the essential determination of space is the positive opposite of it allowing no absolute void, no vacuum. It is

²⁵ E.J. Dijksterhuis: *De mechanisering van het wereldbeeld*. Amsterdam 1950, p. 43. Translation: E.J. Dijksterhuis: *The Mechanization of the World Picture*. New York 1961.

²⁶ Ibid: p. 75.