

THE FIRST OF THE MODERNS
OR THE LAST OF THE ANCIENTS?
BERNARDINO TELESIO
ON NATURE AND SENTIENCE

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nihil apud nos impatibile est

BERNARDINO TELESIO, *De rerum natura*

SUMMARY

Bernardino Telesio's philosophy of nature marked a momentous change in the philosophical panorama of late Renaissance. By redefining the notion of sentience (*sensus*) as the ability, inherent in the two principle forces of the universe (heat and cold), to react and adapt to a reality in constant change, Telesio championed a view of nature and man that radically departed from the principles of Aristotle's natural philosophy. In developing his new notion of sentience, Telesio insisted on the aspects of *receptivity* and *awareness*. Through the first, he stressed the primary role of pneumatic matter (*spiritus*), understood as a thin, supple and swift vehicle capable of accounting for all material changes in the universe; through the second, he raised the property of self-perception to the level of a universal natural property. This allowed him to replace the key Aristotelian concept of unintentional teleology with the idea of a self-organising power inherent in nature and to endow the material spirit with the ability to feel and react to all phenomena occurring in the universe (*spiritus omniscius omnino*). By relying on subtly discerning tendencies of pursuit and avoidance, Telesio's spirit was thus capable of preserving life at all levels, both higher and lower, physical and ethical.

FRANCIS BACON's representation of Bernardino Telesio as the first of the moderns is well known. His portrayal of Telesio as the restorer of Parmenides' philosophy proved to be influential as well. The reason that such an interpretation became so successful is that it epitomised the characteristic tensions of Telesio's philosophy, especially his attempt to provide a radically new view of nature whilst remaining faithful to very ancient systems of thought. In the following centuries, Bacon's reading became extremely popular in the annals of history of philosophy, perhaps too popular. As a result, Telesio remained frozen in his role of the iconoclastic thinker who availed himself of the materialistic interpretation of Eleatic monism in order to overturn the Aristotelian universe from its foundations. (To be fair, in this story one should also remember Francesco Patrizi, who played

a crucial role in the construction of the Telesian myth, which, as any other myth, contains a certain amount of truth).¹

There is no doubt that Telesio's attack on Aristotelian natural philosophy was original and groundbreaking. However, it would be fair to say that his work remained deeply rooted in the hermeneutical situation of Renaissance Aristotelianism and adhered to the characteristic scholastic formats of the commentary and the *quaestio* (with its stringent successions of objections and replies). This is not surprising if we think that Telesio studied at Padua and that his trip to Brescia in 1563 to consult with Vincenzo Maggi – a renowned authority on Aristotelian matters at the time – wasn't just a courtesy call.² Moreover, it is evident how Telesio decided to conduct his critique of the Aristotelian worldview by producing a slow, word-by-word, almost parasitic appropriation of the Aristotelian text (and the same could be said of the relationship that connects Telesio's medical tracts to the body of Galenic works). Finally, a large part of his materialistic reinterpretations of key tenets of Aristotelian philosophy relied on the recovery of past doctrines. Leaving aside for the moment the Parmenidean affair, Telesio's ar-

¹ F. BACON, *Thema coeli*, in *Philosophical Studies c. 1611-c.1619*, ed. with introduction, notes and commentaries by G. Rees, transl. by G. Rees and M. Edwards, Oxford, Clarendon Press, 1996, p. 128; IDEM, *De principiis atque originibus secundum fabulas Cupidinis et Coeli*, in *ibidem*, pp. 224, 250-258. On Bacon's attitude towards Telesio, see V. GIACHETTI ASSENZA, *Bernardino Telesio. Il migliore dei moderni. I riferimenti a Telesio negli scritti di Francesco Bacone*, «Rivista di Storia della Filosofia», xxxv, 1980, pp. 41-78; J.-C. MARGOLIN, *Bacon, lecteur critique d'Aristote et de Telesio*, in *Atti del Convegno Internazionale di Studi su Bernardino Telesio*, Cosenza, Accademia Cosentina, 1990, pp. 135-166; E. DE MAS, *Bernardino Telesio e la falsità di Aristotele. Il giudizio di Bacone e di Tobia Adami*, in *ibidem*, pp. 167-179. On Telesio and Parmenides, see: M. MUCILLO, *La storia della filosofia presocratica nelle Discussiones Peripateticae di Francesco Patrizi da Cherso*, «La Cultura», xiii, 1975, pp. 48-105; M.-P. LERNER, *Le «Parménidisme» de Telesio. Origine et limites d'une hypothèse*, in *Bernardino Telesio e la cultura napoletana*, ed. by R. Sirri and M. Torrini, Naples, Guida, 1992, pp. 79-105; DE MAS, *Bernardino Telesio e la falsità di Aristotele*, cit., pp. 176-178; R. BONDÌ, *Bacon e la restaurazione di Parmenide*, «Rivista di Filosofia», xcii, 2001, pp. 327-339.

² Further evidence of Bacon's acumen in his interpretation is the acknowledgment of the Aristotelian background in Telesio's philosophy and Telesio's ability to overturn the peripatetic system from within («Vir Peripateticis rationibus (si aliquid illae essent) potens et instructus, quas etiam in illos ipsos vertit» (Bacon, *De principiis atque originibus*, cit., p. 224)). In Padua Telesio studied philosophy (under Gerolamo Amalteo), mathematics (under Federico Delfino), medicine and 'perspective'. Cesare Vasoli emphasises the importance of the Paduan experience in order to understand Telesio's relationship with Aristotle's philosophy (C. VASOLI, *Ragioni di un convegno*, in *Bernardino Telesio e la cultura napoletana*, cit., pp. 497-498). As pointed out by Charles Schmitt and Brian Copenhaver, Telesio happened to be in Padua when Vesalio was teaching anatomy and when the debate on the soul sparked off by Pomponazzi's philosophy reached its apex (B. P. COPENHAVER and C. B. SCHMITT, *Renaissance Philosophy*, Oxford, Oxford University Press, 1992, p. 310). On Telesio's appropriation of key Aristotelian tenets, see M.-P. Lerner, *Aristote «oblieux de lui-même» selon Bernardino Telesio*, «Les études philosophiques», n. 3, 1986, pp. 371-389.

senal of philosophical arguments includes elements of Presocratic hylozoism and a certain penchant for a pre-Galenic and sometimes anti-Galenic Hippocratism (especially the Hippocrates of *De carnibus*). Whilst I would be wary of dismissing Dilthey's old thesis that Stoicism (with its emphasis on reason embedded in nature and nature as embodied reason) played a significant role in Telesio's new philosophy of nature,¹ I have no qualms about getting rid of the thesis that Telesio's 'modernity' depends on his alleged empiricism, or the thesis that he was not 'modern', or at least 'not modern enough', because he did not leave any room to mathematics in his system of nature.²

1. FROM ARISTOTLE'S UNSENTIENT NATURE TO TELESIO'S SENTIENCE OF NATURE

To avoid getting caught in a quagmire of conflicting interpretations, I will try to tackle the question from a different, safer angle. Everyone agrees that the most innovative aspect of Telesio's philosophy lies in his bold statement concerning the autonomy of nature – *natura iuxta propria principia*. But what is exactly 'nature' for Telesio? It is safe to say that Telesio looked at nature as a self-sufficient system, based on the actions and reactions of two conflicting principles, heat and cold, which constantly try to get hold of the bodily bulk of matter (*corporea moles*). The preservation of the precarious balance of the universe (*conservatio sui*) results from the way in which heat and cold confront each other. The unremitting series of conflicts and truces they go through follows the model of physical change known in antiquity as 'antiperistasis', that is, a system of organised reactivity in which two or more forces manage to remain in a state of tension by alternatively chasing and fleeing each other. Heat and cold do not act blindly and arbitrarily, nor are they instruments in the hand of some omniscient power. In Telesio's opinion, the self-regulatory mechanism is internal to nature and it corresponds to the active principle that he calls «sense» (*sensus*). There is

¹ W. DILTHEY, *Weltanschauung und Analyse des Menschen seit Renaissance und Reformation* (*Gesammelte Schriften*, II), Stuttgart and Goettingen, Teubner and Vandenhoeck & Ruprecht, 1957, pp. 433-437. On Dilthey's interpretation of Telesio, see A. ORSUCCI, *A proposito dell'interesse di Dilthey per l'antropologia cinquecentesca*, in *Bernardino Telesio e la cultura napoletana*, cit., pp. 417-425. A close reading of Telesio's work reveals that the presence of Stoic themes and their role in shaping his thought cannot be downplayed. A few examples: the idea of an all-pervading, active and tenuous substance (spirit), the pneumatic and material nature of the soul, the belief in the rational order of the universe, the concept of a natural orientation to one's own good (*oikeiosis*) and the notion of virtue as a form of knowledge.

² For recent studies on Telesio's philosophy, see: L. DE FRANCO, *Introduzione a Bernardino Telesio*, Soveria Mannelli, Rubbettino, 1995; R. BONDÌ, *Introduzione a Telesio*, Rome and Bari, Laterza, 1997; M. MULSOW, *Frühneuzeitliche Selbsterhaltung. Telesio und die Naturphilosophie der Renaissance*, Tübingen, Niemeyer, 1998.

no need to look for an ideal craftsman (*artifex*) capable of moderating the forces of heat and cold according to the internal constitution of natural beings.¹ As Tommaso Campanella would point out a few years later, the extent to which things can be said to be self-sufficient depends on their level of sentience.² By providing a rigorous account of the material universe and its phenomena based on the complementary notions of nature, perception and self-preservation, Telesio managed to lay the foundation for a new vision of natural autonomy.

In a very original way, Telesio's notion of sentience combines two almost opposite characteristics: material change and the awareness that accompanies such a change. Telesio defines natural sentience as the ability inherent in the active natures (heat and cold) to recognise similarities and differences while they proceed to shape matter through movements of pursuit and avoidance. Through a direct and unmediated recognition of material reality that is based on a direct and unmediated perception of their own identity, heat and cold strive for their self-preservation, knowingly and expediently. On the other hand, though, Telesio insists on the material and transformative character of perception. Acts of sentience are corporeal because first and foremost they presuppose physical reactions and corporeal assimilations between subjects and objects of knowledge. It does not come as too much of a surprise, then, to learn that Telesio considered the sense of touch to be the primary sense. Through acts of recognition and assimilation, all sentient principles perceive and react to the material change wrought upon themselves. This means that Telesio does not confine the meaning of passion to the condition of being affected and acted upon by an external acting principle. Passion, in the context of Telesio's natural philosophy, signifies a process of receptive suppleness that includes a dimension of active response. We can therefore say that Telesio understands *sensus* as the primordial sense of being affected pervading the entire universe. By being an intentional and purposive reaction, perception is not a condition of passivity that remains at the level of unconscious activity. All sentient beings «sense», «feel» the things that act upon them, delight in their contact every time they recognise a similarity of nature and fight against them when they perceives a threat to their condition. As a synthesis of recognition and transformation – that is, insofar as it is a vital passion – Telesio's *sensus* is an undivided and seamless process in which feeling, appetite and motion mutate into each other.

¹ Citations from Telesio's *De rerum natura* are from Luigi De Franco's edition (Cosenza, Casa Del Libro, 1965-1974, vols I-II; Florence, La Nuova Italia, 1976, vol. III). *De rerum natura*, IV, 3 (ed. De Franco, II, p. 16).

² On Campanella's post-Telesian theory of natural sentience, see G. GIGLIONI, *Senso, linguaggio e divinazione nella filosofia di Tommaso Campanella*, «Rivista di Storia della Filosofia», LXIV, 2009, pp. 309-320.

Being an intentional motion that aims towards increasing levels of assimilation compatible with the preservation of the whole system, for Telesio a sensation is never a mechanical impression caused by external things. Every natural being undergoing a sensation must necessarily be aware of its own modifications and of the actions that any other natural being can cause on it. Heat and cold perceive external things only insofar as they perceive themselves as being modified by the external things.¹ Unlike Aristotle, Telesio does not think that the sentient faculty is actualised by the form of the perceived thing, nor does he endorse the view that all acts of sensation simply mirror an external world, unaffected by the perceptions of the sentient principle. Sentient powers perceive the world by perceiving themselves affected by the world.

From what has been said so far, it is clear that, as a synthesis of material change and active recognition, natural sentience implies a condition of awareness. Telesio's *sensus* is fundamentally *sensus sui* and nature is accordingly conscious nature. If the autonomy of nature relies on its being aware of its own processes, can nature still be called 'nature'? In the rest of this essay, I will argue that Telesio could in fact describe nature as a self-sufficient and self-maintaining power because he looked at the universe as a system endowed with self-awareness. I will substantiate my argument, first, by examining Patrizi's general criticisms of Telesio's natural philosophy, then, by dwelling on Telesio's account of the involuntary functions of the body and, finally, by singling out the philosophical implications underlying his ethics of self-preservation.

2. HOW PATRIZI UNVEILED TELESIO'S MOST RECONDITE METAPHYSICAL ASSUMPTIONS

In his critical review of Telesio's philosophy, Patrizi did not miss the opportunity to lay bare the metaphysical implications underlying Telesio's attack on Aristotle. According to Patrizi, far from relying only on the unmediated and unadulterated perception of the senses, Telesio outlined a rather sophisticated and complex metaphysics of the senses. His notion of material sentience had both epistemological and ontological connotations. Believing that sensation could act as both a source and a foundation of knowledge, he based the reliability of reason and the intellect on the certainty provided by the senses. Indeed, for Telesio, reason and intellect were effete and decaying forms of *sensus*.

It is especially when one examines Telesio's account of man's higher cognitive faculties that his belief in the ontological primacy of the senses comes

¹ *Ibidem*, VII, 2 (ed. De Franco, III, p. 6).

to the fore. He thought that, regardless of whether one looks at knowledge as an adaptive and self-preserving activity evolving from an inner sense of touch or as an inferential skill that develops from increasingly more abstract functions of the intellect, the fact remains that by perceiving external things a natural being perceives the whole life of the universe, for from the very beginning a natural being is already furnished with the subtlest abilities and skills (*ingenium*).¹ The only difference between sense and intellect is one of degree, rather than of nature. Knowledge in all its forms, both concrete and abstract, originates from a direct material contact with reality, i.e., from a corporeal immersion into the sentient life of the universe. By contrast, the knowledge provided by the intellect, with its tortuous path of mediations and comparisons, lacks the vigour and adroitness that characterise the operations of *sensus*.

Patrizi mistook Telesio's notion of self-aware and self-organising sentience for an expression of tacit and undigested Platonism. He remained convinced that a chasm divided the senses from the intellect, and that only the power of the intellect, acting from above, could spread the light of intentional knowledge through an otherwise inanimate world of inert matter. By contrast, Telesio believed that material sentience in itself had the power of unifying the parts of the universe through recurrent patterns of actions and reactions, mediating between the whole and the parts, between the past, the present and the future, the visible and the invisible, causes and effects.² In this perspective, the intellect represented a more developed form of sentient perception, through which higher organisms were better suited to meet their complex needs. There was, therefore, no need to rely on a universal faculty supervising nature – a soul of the world – for nature, being the original repository of *sensus*, does not need intellect, memory, or imagination to be guided in its operations. This is a very important point, which is worth bearing in mind every time one is confronted with the question of Telesio's anthropomorphism and animism.

One could say that Patrizi was right in arguing that Telesio's physics of sentient spirit was, in fact, a metaphysics of natural perception. Also, one may assume that Telesio and Patrizi would in the end agree that the ultimate principle governing nature was reason, provided that by «reason» they meant the ability inherent in all natural beings to choose what is conducive to their self-preservation. Finally, Patrizi was probably right in objecting to Telesio that mere degrees of heat and cold could never result in the forma-

¹ On the notion of *ingenium* in a Telesian context, see A. PERSIO, *Trattato dell'ingegno dell'huomo*, ed. by L. Artese, Pisa and Rome, Istituti Editoriali e Poligrafici Internazionali, 1999, p. 27.

² *Antiperistasis* and *horror vacui*, reinterpreted according to the notion of adaptive sentience, are key notions in Telesio's physics.

tion of individual things and in the production of their innumerable distinguishing features. However, he missed Telesio's fundamental point that the sentient activity of nature could not be understood simply as a material change mechanically impressed on the sense organs by external objects, or as a reflection of Platonic ideas preserved in nature in a state of latent virtuality. For Telesio, natural sentience was the very activity promoted by the forces of heat and cold in their constant attempts to give shape and structure to the world.

In all likelihood, Patrizi's review of *De rerum natura* stimulated Telesio's speculative acumen. In the last edition of the work, published in 1586, he gives the impression that he took Patrizi's objections seriously. He fleshed out the notion of a teleological disposition to being affected by and responding to external things inherent in nature and presented such disposition as the foundation of the material universe. He unambiguously characterised sentience as the metaphysical rationale behind the homeostatic balance of the universe. The vicissitudes of the sentient spirit, especially in the way they are described in the last books of *De natura rerum* – i.e., as resulting from an inherently restless substance, thrown into the jail of matter (i.e., the bodily tegument), from which it strives to free itself and rejoin the heaven, its original abode – resonate with Platonic echoes, while maintaining strong naturalistic traits. Campanella – much more open to Platonic suggestions than Telesio – would bear in mind such a Platonic rereading in espousing the doctrine of the *anima mundi* and articulating his metaphysics of the primal attributes of being (*primalitates*).¹ But what Telesio seems to have accomplished in a more straightforward manner than Campanella would do was to show that the distinctions between souls and nature, on the one hand, and between nature and matter, on the other, were not as neatly specified as both Plato and Aristotle had thought. This key point becomes more evident when we examine Telesio's medical explanations concerning the involuntary operations of the body.²

3. ANATOMY AND THE SCOPE OF THE INVOLUNTARY FUNCTIONS

Telesio's belief that the universe is governed by intentional knowledge in the form of a sentient, discerning and adaptive tendency, and not by nature

¹ T. CAMPANELLA, *Philos. sens. dem.*, ed. by L. De Franco, p. 40: «anima mundi, quam Telesius praetermisit». On Campanella's changing views about Telesio's notion of nature, see M.-P. LERNER, *Telesio et Campanella: De la nature iuxta propria principia à la nature instrumentum Dei*, «Bruniana & Campanelliana», XIII, 2007, pp. 79-97. On Campanella's primalities, see G. GIGLIONI, *Primalità*, «Bruniana & Campanelliana», XIV, 2008, pp. 95-106.

² On Patrizi as an interpreter of Telesio's natural philosophy, see A. L. PULIAFITO, *La fisica telesiana attraverso gli occhi di un contemporaneo: Francesco Patrizi da Cherso*, in *Bernardino Telesio e la cultura napoletana*, cit., pp. 257-270.

(understood, in an Aristotelian sense, as a principle of unintentional teleology) also recurs in his anatomical explanations. Here Telesio is concerned with the role of what he calls «sentient substance», that is, the entire reserve of spirituous matter circulating within the nervous network (*universitas spiritus*) and distributed by the nerves throughout the body starting from the ventricles of the brain, where the spirit is located for the most part. Telesio calls the whole system of nervous ramifications carrying the spirit, including the brain, the nervous system (*genus nervosum*). In contrast with both the Aristotelian notion of vegetative soul and the Galenic doctrine of the natural faculties – a view that, according to Telesio, relies on the assumption that there may be a kind of substance that is «dull and completely devoid of knowledge» (*bruta cognitionisque omnis expers substantia*)¹ – Telesio argues that there is no qualitative distinction between animal (voluntary) and natural (involuntary) actions in the body because, first, the soul – which for Telesio is the same thing as the material spirit – is one and not divided into many faculties, and, second, because the spirit is all sentient, and must be so in order to be able to perform such delicate and complex operations as the heartbeat, respiration, nutrition, attraction, secretion and excretion.² As in the greater body of the universe all material changes result from processes of condensation and rarefaction regulated by the forces of sentient cold and heat, so in the lesser body of human beings the contractions and expansions of the fibres are governed by the *ratio* of the whole spirit (*summa et ipsae [...] operantur ratione*).³ Telesio argues that the spirit must be thin, supple and continuous in order to move fast and transmit the directions imparted by the «sentient and intelligent» substance. As it is often the case with Telesio, a fine line divides the sphere of vital and sentient operations from that of the material characteristics of the vehicle.⁴

¹ B. TELESIO, *Quod animal universum ab unica animae substantia gubernatur*, in IDEM, *Varii de naturalibus rebus libelli*, ed. by L. De Franco, Florence, La Nuova Italia, 1981, p. 209.

² TELESIO, *De rerum natura*, v, 12, 14 (ed. De Franco, II, pp. 278, 282, 292). The sentient nature of the spirit is such that, by perceiving individual objects, it perceives the whole universe («*quae sentit, universa ea simul sentiat omnia*»). The perception of the spirit governing the body is universal and flawless: «*Itaque, ut dictum est, quod spiritus portionum, cui reliquarum passiones rerumque omnium vires et reliquae percipiendae sunt condiciones, motuumque, quibus a singulis commotus est, memoria cognitioque servanda retinendaque est; et ex iis remotarum et praesentium etiam, at quarum non omnes condiciones manifestae sunt, quae latent intelligendae sunt omnes; et modus insuper, quo, quae spiritus portiones patiuntur, mala reiciantur, et quibus opus habent, comparentur, motus nimirum inveniendi sunt, quibus illa omnia peragantur; et singulae spiritus portiones iis commovendae; denique quia reficiendae sunt omnes: utique spiritus universitas ejusmodi sedi itaque constructae, cujusmodi cerebrum est, et quomodo cerebrum constructum videtur, et cerebro omnino indenda fuit*».

³ *Ibidem*, v, 14 (ed. De Franco, II, p. 296).

⁴ *Ibidem*, v, 13 (ed. De Franco, II, pp. 286-288). Telesio acknowledges that the communication between the *universitas* of the spirit in the brain and the portions of spirit scattered

Telesio objects to Galen that a 'natural' (i.e., involuntary and vegetative) action, if there is any such action, should constantly follow the same pattern and should behave according to the same *ratio* because it is nature's prerogative to persist indefinitely, unknowingly and unflinchingly in the undertaken path. Any deviation from it would represent an arbitrary or violent modification of a teleologically determined course of action. However, in Telesio's view, such an inflexible necessity would not be compatible with the flexible and fallible nature of the vital economy of the body. All processes, even the simplest ones, involve a certain amount of modifications and adjustments to varying conditions, both internal or external. Such an ability to change in response to internal and external variations – what Telesio calls the *ratio vivendi* – implies the ability to abandon the usual path and to start the formation of new habits. In other words, it involves knowledge and choice, something that is categorically excluded by the Aristotelian and Galenic notions of vegetative soul and natural faculty. In Telesio's opinion, what at first sight seems to be natural and involuntary, on closer inspection is, in fact, the outcome of a learning process and the establishment of a successful custom – a type of action that presupposes at the beginning a clear act of knowledge.¹

In Telesio's anatomy, therefore, it is the soul, and not nature, that is the principle of bodily life. Of course, by 'soul' Telesio means a corporeal, sentient and knowing spirit, and not an immaterial form (as in Aristotle), nor a specific disposition resulting from a balanced combination of corporeal qualities and humors (as is the case with Galen's temperament). Telesio's soul is the result of an integrated system of myriad interconnected operations, and not a set of vital levels hierarchically nested within each other (nutrition, sense, appetite and intellect, to follow the main stages in life according to Aristotle's theory of the soul). The organic, unified and seamless activity of the soul is not determined by the unity of a formal principle;

throughout the body is a phenomenon that is *longe obscurissimum* (*De rerum natura*, v, 14 (ed. De Franco, II, pp. 298-300)).

¹ *Ibidem*, v, 13 (ed. De Franco, II, p. 286); v, 24 (ed. De Franco, II, p. 350). See also *ibidem*, IV, 28 (ed. De Franco, II, p. 192) (where Telesio infers the sun's *summa cognitio* and *summa ratio* from its ability to interrupt, increase and diminish its power); IDEM, *Quod animal universum ab unica animae substantia gubernatur*, cit., pp. 214-218. It is worth remembering that Giovanni Alfonso Borelli's explanation of the heartbeat as the result of an original learning process on the soul's part, a process that in time becomes a habit and that only apparently (or perhaps only partially) is mechanical and involuntary, seems to derive from this tradition of sentient naturalism (to be sure, through the mediation of Campanella) rather than from Descartes' programme of mechanistic anatomy. See G. A. BORELLI, *De motu animalium*, 2 vols., Rome, 1680-1681, II, pp. 153-157. See G. GIGLIONI, *The Machines of the Body and the Operations of the Soul in Marcello Malpighi's Anatomy*, in *Marcello Malpighi. Anatomist and Physician*, ed. by D. Bertoloni Meli, Florence, Olschki, 1997, p. 173.

rather, it depends on the entire system of spirituous matter channelled along a network of vessels and constantly running throughout the body. Telesio's redefinition of the vital economy of the body has a series of important consequences: it debunks the main assumption underlying Aristotelian naturalism (i.e., the existence of an all-encompassing and purposeful natural agency), it shifts the emphasis from Galen's *temperamentum* to the soul, and, finally, it makes the soul a particular case of the universal sentience of the cosmos. Knowledge (*summus sensus* and *summa cognitio*) is diffused all over the body, in the form of a faculty that is capable of both judgment and will.¹ That each single part is able to perform its own specific functions smoothly and forcefully, and – what is even more astonishing – in perfect agreement with the actions of all the other parts, depends on the fact that the whole system of sentient spirit located in the brain acts as a fully-fledged knowing subject, acquainted with everything occurring in both the body and the cosmos. Telesio's thesis is indeed astonishing, but the rigour of his philosophical demonstrations mitigates the strikingly bold move of postulating a fully aware material spirit acting in nature.

4. *SENSUS, SAPIENTIA AND SPIRITUS OMNISCIUS*

The study of the human body and its vital functions demonstrates that the *universitas spiritus* has the ability to accommodate the organism to the changes of its environment in the best possible way, for it knows what needs to be modified in order to preserve a balanced interplay between inward and outward changes. In contrast to the Hippocratic, Aristotelian and Galenic view of nature as a power that uniformly and relentlessly accomplishes all the ends it has in view (provided that matter is not too recalcitrant), and that in so doing it contributes to the general order of the universe, Telesio insists on the aspects of contingency, mutability and uncertainty through which the sentient spirit responds and adapts to the varying circumstances of an ever changing world. In each situation and at the right moment, within the system of antiperistaltic actions and reactions created by the forces of heat and cold, the spirit finds the appropriate means to maintain the overall balance.

Here Telesio identifies another crucial difference between Aristotle's and his own system. In Aristotle's philosophy, natural powers cannot act differently from the way they do because the many possibilities of material development are determined by an unstoppable tendency to be actualized by their corresponding forms, and therefore there is no need of cognitive

¹ TELESIO, *Quod animal universum ab unica animae substantia gubernatur*, cit., p. 228; IDEM, *De rerum natura*, v, 14 (ed. De Franco, II, p. 292). See *ibidem*, v, 16 (ed. De Franco, II, p. 304): «Neque enim, nisi partibus insit omnibus, omnium necessitates percipiat».

principles or souls to regulate the process of actualisation; which means that, when the potentiality of a natural power is fully developed and no obstacle intervenes, such development, the end result comes about as a necessary outcome. In the *Metaphysics*, Aristotle had explained that, while rational powers have the flexibility to choose between contraries and are therefore able to act in opposite directions, natural powers can only be determined in one direction.¹ Telesio's view introduces a crucial difference: the ability to discriminate between alternatives is embedded in the primal motions of nature, i.e., the cold's and heat's tendencies respectively to contract and to expand. The active natures modify their operations according to the ever changing circumstances of the whole system of antiperistaltic actions and reactions, and therefore they need to be sentient and intentional powers. In the key notion of *self*-preservation, Telesio's emphasis is on the 'self'; all the more so because heat, cold and the sentient spirit do not act driven by self-interest or immediate pleasure, but are provided with the ability to know what is the best option for them (i.e., self-preservation), to defer immediate gratification and to tolerate a certain amount of pain in view of a greater advantage.²

Telesio can therefore identify the cognitive power of the active natures with their virtue. Spirits are virtuous because «they know what operations they need to perform in order to preserve and perfect themselves».³ In contributing to the best disposition of the world, they act 'morally'. Since spirit is a mixture of heat and matter, its specific virtue (that is, the degree of knowledge with which it is endowed) depends on the way in which heat takes possession of matter and deals with the antagonistic principle of cold. Telesio defines virtue as corporeal knowledge, i.e., both a natural force and a material quality, a property that, in the final analysis, coincides with the degree of warmth, subtlety and purity contained in the matter of the spirits. This is in line with Telesio's belief that heat, motion and sense share the same active and purposive nature. Virtue is the spirit's ability to intensify or restrain its own actions and passions in order to preserve its own nature, and by preserving itself, the spirit contributes to the preservation of the universe.

It is no wonder, then, that in Telesio's list of virtues, *sapientia* ranks as the most important. Telesio characterises *sapientia* as «the intelligent faculty that is in command of and tries to perceive the nature and the forces

¹ ARISTOTLE, *Metaphysica*, IX, 1; *Physica*, VIII, 1, 251ab.

² On the Stoic concept of self-preservation, see: G. STRIKER, *The Role of oikeiosis in Stoic Ethics*, «Oxford Studies in Ancient Philosophy», I, 1983, pp. 145-168; B. INWOOD, *Ethics and Human Action in Early Stoicism*, Oxford, Oxford University Press, 1984; A. A. LONG, *Stoic Studies*, Berkeley, Los Angeles and London, University of California Press, 1996, pp. 250-263.

³ TELESIO, *De rerum natura*, VIII, 36 (ed. De Franco, III, p. 328).

of all things and to understand those which cannot be perceived; in short, it is a faculty that has the power to understand».¹ In his treatment of the principal virtues, Telesio relies on the common definition of *sapientia*. «The wise man is the one who has investigated the nature and the forces of all things», he says in *De rerum natura*;² however, as Campanella will point out in a perfect Telesian spirit, *sapere* means, first and foremost, «to savor», «to have sense and discernment» and, accordingly, «to be sensible».³ The practical knowledge of the world – the virtue of wisdom – is rooted in the corporeal sense, i.e., in the embodied knowledge that organises and governs the universe. Nature, understood as the Aristotelian unsentient power that actualises the virtual dispositions of matter out of a teleological necessity, is once again rejected.⁴

In this case, too, the linchpin of Telesio's ethical doctrine is strikingly bold. It is based on the assumption that the spirit is aware of everything (*omniscius omnino*). In order to be up to its task of promoting the self-preservation of the universe, the spirit must perceive the nature and power of all things, deduce the experiences and events it cannot perceive in a direct way, remember everything that has happened in the past and foresee future developments. It has the ability to react to every single thing and to adjust itself to the constantly changing conditions of the universe.⁵ One might say that the whole amount of knowledge and spirituous matter scattered in the universe is constantly affected by a powerful 'butterfly effect'. The omniscient *sapientia* inherent in nature represents the metaphysical foundation of the universal condition of antiperistaltic reactivity. When Telesio says that everything in the universe has the ability to be affected (*nihil enim apud nos impatibile est*), he is attaching an active meaning to the word *passio*.⁶ Telesio is reversing Aristotle again: far from being a condition ontologically

¹ *De rerum natura*, IX, 5; ed. De Franco, III, p. 352.

² *Ibidem*. On Telesio's ethical naturalism, see F. W. LUPI, *Il sublime secondo Telesio*, in *Atti del Convegno Internazionale di Studi su Bernardino Telesio*, cit., pp. 47-63.

³ CAMPANELLA, *Senso delle cose* 2007, pp. 108-109.

⁴ Telesio's notion of *spiritus omniscius* as an expression of the inherent *sapientia* of the universe is similar to Agostino Doni's concept of a *primus sensus*. See DONI, *De natura hominis*, Basel, Froben, 1581, f. 104: «Quam quidem sui ipsius statusque sui abditam in se intellectio-nem esse quoque sensus, atque adeo primum sensum, iure opinor aliquis dicere posset, et ex intentione in sese fieri atque constare». On Doni, see L. DE FRANCO, *L'eretico Agostino Doni. Medico e filosofo del '500*, Cosenza, Pellegrini, 1973.

⁵ TELESIO, *De rerum natura*, IX, 6 (ed. De Franco, III, pp. 358-360).

⁶ *Ibidem*, IV, 20 (ed. De Franco, II, p. 134). Telesio criticises Aristotle for having denied the first principle the ability to be affected: see *ibidem*, IV, 3 (ed. De Franco, II, p. 14); IV, 8 (ed. De Franco, II, p. 38). See CAMPANELLA, *Senso delle cose*, cit., p. 12 and especially p. 35, with reference to matter, («sendo passione il senso, e la materia nata a patire, è attissima a sentire») and p. 112 («chi è più passibile e molle, più è atto a sentire e diventar savio, e chi è duro manco pate e bisogno ha di sapienza»).

inferior to activity and actuality, the disposition to be affected is the real source of the life of the universe.

Paradoxical as it may seem, Telesio's ethical views reinforce his thesis that all natural operations postulate a condition of primordial awareness, for in the domain of ethics more than anywhere else, Telesio makes clear that the notion of nature presupposes, in fact, a fully developed consciousness, i.e., a truly omniscient power, capable of representing the whole universe, both in its spatial and its temporal dimensions. As an ethical power, even more than as a cosmological power and a physiological agent, nature proves to be a fully-fledged intentional and voluntary subject, a true 'self'.

5. NATURE'S APPARENT AUTONOMY IN ARISTOTLE'S PHILOSOPHY

Telesio's *De rerum natura* provides a systematic account of the world, starting from the original forces of the universe up to the most sublime deeds that make human nature the pinnacle of nature. It is a picture in which the progress of ethical life develops as a natural consequence from the life of the material spirit. For this reason, the concluding stages in Telesio's system of nature prove to be of decisive importance to understand better how battling forces of heat and cold operate.¹

In Telesio's opinion, Aristotle's notion of nature shows all its limitations when one examines his concept of motion. Aristotle claimed that motion represented «a kind of life for everything that is constituted by nature», a «deathless and never failing property» belonging to all things.² What Telesio criticises of this notion of motion is that the underlying Aristotelian idea of nature as an internal principle of activity is, in fact, a contradictory concept. It is true that in Aristotle's philosophy nature is supposed to be a radically internal source of change; in fact, though, Aristotle ended up by defending the thesis that any change in the universe derives from something outside nature that does not belong to nature itself, and this in order to avoid the unwelcome consequence that the motion of nature, being intrinsically teleological, may derive from an internal and autonomous source of knowledge. Natural motions are purposeful, but their directions do not depend on the actual knowledge of the purposes possessed by the natural agent, but on the inescapable tendency to be actualised that characterise all nature beings. On the contrary, Telesio is firmly convinced that things are able to move precisely because from time to time they perceive and interact with other

¹ Luigi De Franco rightly emphasised the revolutionary aspect of Telesio's ethical doctrines. See his *La prima vera rivoluzione in filosofia: Bernardino Telesio*, in IDEM, *Filosofia e scienza in Calabria nei secoli XVI e XVII*, Cosenza, Edizioni Periferia, 1988, p. 101.

² ARISTOTLE, *Physica*, VIII, 1, 250b; tr. by P. H. Wicksteed and F. M. Cornford, Cambridge (Mass.), Harvard University Press, 1935, p. 269.

things, with their natures and the surrounding environment; they move away from them when they are bothered by them, they get closer to them when they recognise a similarity of nature. In other words, Telesio rules out the possibility that natural motion may be separated from knowledge. Natural beings move not because of an impersonal and unintentional actualisation caused by external and unmovable forms (regardless of whether these forms are the natural places in the case of inanimate beings or the souls in the case of animate beings). Beings move (they move themselves, and are not moved by something else, Telesio reaffirms criticising Aristotle's solution as a merely verbal trick)¹ because of and according to their perception of reality. It is because of this cognitive tendency that the iron is attracted to the magnet, i.e., because it feels such a similarity of nature between its heat and the heat of the magnet that it is able to overcome the heaviness of its constitution, «to which it normally succumbs if it is not stimulated by any desire». (The same thing happens when the spirits of the animals are aroused by vehement desires.)²

According to Aristotle, each element is characterized by the tendency to move towards its proper place and to remain at rest in that place once the motion is fully actualised. Everything that moves is moved by something else: the elements are moved by their respective natural places, the senses by the sensed object, the animal by its environment and the very purpose of its action; the whole universe, finally, is moved by the unmovable mover. Telesio demonstrates that, by advocating such a view of natural motion, Aristotle necessarily reached the conclusion that «things that move in a natural way are not moved by themselves and in virtue of their own nature, but as a result of another nature, distinct and separate from them».³ For Telesio, Aristotle's thesis of nature as an internal principle of motion cannot be reconciled with his other thesis that everything that moves is moved by something else. The consequence, Telesio concludes, is that Aristotle made the various «natures» and «forms» of things «inert and lazy».⁴ Having been deprived of the knowledge of their purposes, natural beings lose the spontaneity of their motions and the control over their actions. What is more – says Telesio adding a further objection – Aristotle reduced the motion of the natural elements to an accidental property by describing it sometimes as a consequence of the so-called «generating principle» and some other times as a mechanical effect resulting from the release of a previous tension or from the removal of an obstacle.⁵

¹ TELESIO, *De rerum natura*, IV, 21 (ed. De Franco, II, p. 139).

² *Ibidem*, IV, 23 (ed. De Franco, II, p. 156).

³ *Ibidem*, IV, 20 (ed. De Franco, II, p. 130).

⁴ *Ibidem*, IV, 20 (ed. De Franco, II, pp. 132-134).

⁵ *Ibidem*, IV, 20 (ed. De Franco, II, pp. 128-130).

By now, Telesio's critical remarks directed at an Aristotelian universe populated with inactive natural forms should not come as too much of a surprise. However, it is not only the assumption of an external source of motion that, in his opinion, looms large in the Aristotelian explanatory framework. On a broader level, it is the very existence of motion and the reality of activity to be threatened. In Aristotle's cosmology, all elements reach their actuality, that is, their perfection, when they rest in their proper place: full activity is the activity of rest (and, in this respect, the ultimate perfection lie in the unmovable mover). By contrast, in Telesio's cosmology each active nature constantly pours out of its own boundaries and tries hard to invade the sphere of action of the other competing nature. In this case, perfection lies in a perpetually unresolved tension and not in actualized rest. While the unintentional teleology of nature that governs Aristotle's universe reflects the impersonal character of the unmovable mover, unrest and appetite are the very hallmark of Telesio's universe.

There is, however, a further, deeper reason why Aristotle ruled out the possibility that natural beings could be seen as self-movers. His argument was that there had to be a clear distinction between the 'moved' and the 'mover'. Likewise, natural beings devoid of a sensitive soul were not able to perceive themselves and reach the level of sentient awareness, for the distinction between the perceiving subject and the perceived object, like the distinction between the moving and the moved being, presupposed the ontological difference between a state of potential change and its actualised form. In Aristotle's metaphysics of sublunar life, no natural thing could be agent and patient at the same time and in the same respect. As is well known, Aristotle argued that «in so far as it is a natural unity, nothing is acted upon by itself; because it is one, and not a separate thing».¹ Aristotle's nature was no self-moving, self-active, certainly no self-perceiving entity. Indeed, nature in Aristotelian terms was by definition unable to perceive, while sentience belonged to a different ontological level. In the Aristotelian division of natural powers and souls, the motion of the elements towards their natural places, the processes of nutrition, growth and reproduction, and finally the growth in sense awareness from the primordial manifestations of appetitive life represented three distinct degrees of actualisation which could not be bridged, nor could they overlap in any way. The fulfilment of the virtual dispositions of matter, the assimilation of the form of food and the ability to receive the form of perceived things without their matter were three different stages in a process leading to increasing levels of disembodiment. It is true that, for Aristotle, perception, like natural motion, was just another

¹ ARISTOTLE, *Metaphysica*, IX, 1, 1046a; tr. by H. Tredennick, Cambridge (Mass.), Harvard University Press, 1933, p. 431.

instantiation of the unremitting actualisation of potentiality through which the life of the universe was constantly preserving itself. However, unlike natural motion, perception presupposed an even more clear-cut division between the acting principle (i.e., the knowing form) and the acted upon substratum (i.e., the corporeal change brought about in the organ of perception by the sensory material).

To recapitulate, then, we might say that, whereas Aristotle explained all natural movements as a result of the unintentional process of actualisation pervading the universe, Telesio conflated the very notions of movement and perception by defending the existence of a natural and sentient appetite of self-preservation in each part of the universe. By shifting the focus from nature to sentience, Telesio set out to dismantle the very foundations of the Aristotelian natural world. He dramatically transformed the traditional categories of *nature* and *soul* by introducing a notion of *sentient selfhood* that could be applied to both nature and man. Most of all, by replacing the distinctively Aristotelian notion of unintentional teleology with a principle of sentient intentionality diffused everywhere in nature, Telesio rejected a deterministic view of natural change based on the purposive (and yet unintentional) fulfilment of natural potentialities. Instead, he introduced a more flexible picture of the physical universe in which the ability to survive and adapt to a world ruled by forms of vital expansions could escape the pressure of a teleological plan.

6. CONCLUSION

Eager to present Telesio as the herald of new developments in the field of seventeenth-century physics (and maybe led astray by Bacon's own modernist rhetoric), historians of early modern philosophy have in the past downplayed the role that natural sentience plays in Telesio's view of nature or have dismissed the very notion of natural sentience as a residue of outmoded animism.¹ However, if we want to understand the original character of Telesio's position, we cannot pass over his theory of an all-sentient spirit (*spiritus omniscius omnino*) or ignore those passages in which he unambiguously vindicates the existence of sense and appetite in natural beings. Modern explanations of heat and matter have often come to the rescue of historians who feel uncomfortable with Telesio's omniscient spirit. Other interpreters have pointed to his defence of knowledge through the senses as a manifesto of modern empiricism. By rediscovering nature and the senses, some have argued, Telesio prefigured the movement towards objective

¹ G. SAITTA, *Il pensiero italiano nell'umanesimo e nel rinascimento*, Florence, Sansoni, 1961, III, p. 11; P. O. KRISTELLER, *Eight Philosophers of the Renaissance*, Stanford, Stanford University Press, 1964, p. 107; COPENHAVER and SCHMITT, *Renaissance Philosophy*, cit., p. 313.

representations of nature characteristic of the scientific revolution – not to mention the way he allegedly prefigured the Newtonian concepts of space and time by rejecting Aristotelian notions of place and change.¹

Nobody can deny that such a return to *die Sachen selbst* represents an integral part of Telesio's programme – «we have followed sense and nature, nothing else» (*sensum videlicet nos et naturam, aliud praeterea nihil sequi sumus*), he says indeed in the proem to his main work.² However, nature could also mean something else at the time, as Telesio knew very well. The technical meaning of nature, so to speak, still referred, first and foremost, to the Aristotelian internal source of motion and unsentient principle of order. Such a principle represented the defining characteristic of Aristotle's naturalism, different from both the Democritean concept of material necessity and the Platonic notion of self-motion. No doubt, the long series of interpreters who through the centuries espoused Aristotle's model of natural philosophy testifies to the explanatory success of the Aristotelian notion of unintentional teleology over Democritus' non-purposive determinism and Plato's intentional teleology. Theoretically speaking, though, the Aristotelian notion of nature suffered from an ineliminable residue of Platonism, in that all natural beings, in their irresistible tendency to be actualized by the form, appeared to be drawn to a principle that in the end transcended nature itself, regardless of whether that principle was the unmoveable mover, the pure actuality of the ultimate form or the active intellect. Put in a nutshell, the actions of nature were supposed to terminate in something other than nature itself. Telesio challenged this view on two levels: first, he dismissed the notion of nature as an unconscious source of activity by emphasizing instead its fully sentient character; second, he demonstrated that the view of unintentional finalism was a pure abstraction of the intellect, for nature could not be regarded as occupying an autonomous sphere of activity without adding the decisive qualification that it has to be aware of its ends and purposes.

¹ The ghost of Newton hovers over the interpretations of Ernst Cassirer (*Das Erkenntnisproblem in der Philosophie und Wissenschaft der neuen Zeit*, Berlin, Bruno Cassirer, 1911-1920, I, pp. 232-240), P. O. Kristeller (*Eight Philosophers of the Italian Renaissance*, cit., pp. 103-105), Giuseppe Martano (*La "svolta" telesiana nella storia dei concetti di spazio e tempo*, in *Bernardino Telesio nel 4° centenario della morte (1588)*, Naples, Istituto Nazionale di Studi sul Rinascimento Meridionale, 1989, pp. 71-101), Karl Schuhmann (*Le concept d'espace chez Telesio*, in *Bernardino Telesio e la cultura napoletana*, cit., pp. 141-167). I tend to believe that Telesio's idea of space as a substantial disposition to receive and contain all natural things is the distinguishing trait of an all-sentient cosmos rather than an anticipation of the Newtonian notion of objective space. See TOMMASO CORNELIO, *De circumpulsione Platonica*, in *Progymnasmata physica*, Venice, F. Baba, 1663, p. 322: «Bernardinus Telesius [...] ratus est posse in rerum natura existere spatium omnis corporeae substantiae expers atque ideo prorsus inane, quanquam id non sine vi conatuque aliquo fieri posse contendit».

² TELESIO, *De rerum natura*, I, 'Proemium' (ed. De Franco, I, p. 28).

However, by replacing the peripatetic notion of unintentional teleology with the concept of universal sentience, Telesio inevitably exposed himself to charges of animism and anthropomorphism. In *De rerum natura*, he described the spirit as being «most clever» (*prudētissimū*) in all its performances, acting as a fully developed self.¹ On an even broader level, the programme of explaining nature through itself incurred in a fundamental contradiction: if it is true that Telesio endowed nature with the power to justify and explain itself (*iuxta propria principia*), so much so that even the human mind could be seen as a by-product of nature, nevertheless, the way he characterised nature's operations was too similar to the way one would have explained the actions of human beings. If this is the case, then we would have to agree with the classic objection put forward by Giovanni Gentile and Ernst Cassirer (for all their differences), i.e., that Telesio was unable to disentangle himself from the persistent and insidious traps of premodern animism.² Or maybe, what at first looks like a contradiction between a robust affirmation of the autonomy of nature and a tendency to subject nature to the dictates of human consciousness is, in fact, a new way of understanding knowledge, both the knowledge that nature has of itself and the knowledge that man has of nature. Telesio wrote on nature according to its principles, that is to say, not following his principles – meaning Telesio's mind – and not even following her principles, meaning nature as a personified agent. For Telesio, the point is not that natural beings act as human beings; on the contrary, human beings act as natural beings even when they display the loftiest expressions of abstract thought or sublime deeds of heroism.³ Telesio's aim was to demonstrate that man, despite being endowed with the faculties of intellect and will, remained an integral part of the life of nature. As Antonio Persio pointed out correctly in his defence of Telesio, the sentient power of

¹ TELESIO, *Quod animal universum ab unica animae substantia gubernatur*, in *Varii de naturalibus rebus libelli*, cit., p. 216.

² According to Giovanni Gentile (*Bernardino Telesio*, now in *I problemi della scolastica e il pensiero italiano* (Opere, XII), Florence, Sansoni, 1963, p. 133-206), within the context of the general history of philosophy, Telesio's naturalism represented the initial stage in the history of human consciousness. According to Cassirer, Telesio's tendency to empirical descriptions of nature could have become part of the new scientific view of nature if, instead of falling back into animism «in its primitive forms», such a tendency had moved towards mathematical idealism (*Individuum und Kosmos in der Philosophie der Renaissance*, Darmstadt, Wissenschaftliche Buchgesellschaft, 1963, p. 156; *Das Erkenntnisproblem*, cit., I, pp. 232-240). On Cassirer's reading of Telesio, see G. RAIO, *Telesio e la filosofia della natura in Cassirer*, in *Bernardino Telesio e la cultura napoletana*, cit., pp. 431-443.

³ In Telesio's view, heroic virtues, even the sacrifice of one's own life, have always a pragmatic motive and they all fall within the universe's tendency to self-preservation. Persio writes (*Trattato dell'ingegno dell'huomo*, cit., p. 34): «sentiamo noi, perché sente egli [i.e., the material spirit]».

nature, in charge of the preservation of the whole universe, has a broader scope than the soul.¹

To recapitulate, we might say that Telesio's notion of sentience covers at least three distinct domains, and the precise assessment of their relationships and differences is crucial for a proper understanding of Telesio's philosophy. These domains correspond to the metaphysical, the ethico-physiological and the epistemological aspects of sentience (*sensus*). The metaphysical meaning of *sensus* refers to the original discerning motions of pursuit and avoidance manifested by the active natures, heat and cold.² The physiological meaning of *sensus* is related to the spirit's ability to 'sense' its surrounding reality – the actual act of sensation with all its psychological and ethical implications – and it has the certainty and immediacy that reason and intellect lack.³ Finally, the epistemological meaning of *sensus* derives from the view of sense perception as a canon of intelligibility and a paragon of sound knowledge.⁴ Since the three domains – the metaphysical, the ethico-physiological and the epistemological – represent three stages in the unfolding of one sentient power throughout the universe, man's knowledge can be seen as a constant re-enactment of the primordial sentience of nature, while his ethical life stands out as a natural expression of the spirit's activity to adapt to the world. Sentience, the senses and sense knowledge are manifestations of the same life of nature, i.e., *sensus*.

¹ A. PERSIO, *Apologia pro Bernardino Telesio adversus Franciscum Patritium*, in TELESIO, *Varii de naturalibus rebus libelli*, cit., pp. 476-477.

² TELESIO, *De rerum natura*, IV, 2 (ed. De Franco, II, p. 8).

³ *Ibidem*, VII, 1 (ed. De Franco, III, p. 2): «modus scilicet, quo rerum, quae universae externa nimirum specie internisque viribus in spiritum agunt, speciem naturamque et motus percipit, quod sentire dicitur».

⁴ *Ibidem*, IV, 7 (ed. De Franco, II, p. 28): «quae intelliguntur, ex eorum similitudine intelligantur oportet omnia, quae sensu percepta sunt».