#### ARTICLE





# Between Philosophy of Mind and Metamathematics: The Metaphysics of Disproportion in Nicholas of Cusa

Annarita Angelini

Università di Bologna Email: annarita.angelini@unibo.it

(Received 11 November 2024; accepted 11 November 2024)

#### Abstract

Is Nicholas of Cusa's neglect of Aristotelian logic and a theory of substance that is both underlying and, at the same time, dependent on that logic sufficient to say that metaphysics disappears from his thought? The answer is, of course, in the negative. In the following, I will attempt to illustrate the characteristics of what could be called a metaphysics of mind rather than being, which is linked in Nicholas of Cusa's writings both to mysticism and to a measuring theory. *Metaphysica paupera, mathesis, meta-mathesis*, are non-asseverative knowledge, linked to a problematic nature, insufficiency, movement, shadow, rather than to the solidity and density of ontology, recognizable in those fields in which the disproportion between *mensura* and *mesuratum*, i.e., between the infinite and the finite, is most evident.

From the first chapter of *De docta ignorantia*, where Nicholas of Cusa makes explicit the comparative character of human knowledge and the disproportion between the finite and the infinite, the link that had held theology and scholastic logic together was severed.

After Occam and *Terminism*, Cusanus takes a further step in the direction of relaxing the link between logic and ontology.

If Cusanus' theology abandons Aristotelian logic, it certainly also abandons a metaphysics as a theory of substance, a metaphysics that is both underlying and, at the same time, dependent on that logic. This, however, does not mean that when a logic symmetrical to an ontology disappears from Cusanus' horizon, logic and metaphysics also disappear. Given the oneness in which the 'precise truth', namely, the object of classical and medieval metaphysics consists, and consequently the disproportion with respect to the finite character of human knowledge, the identification of a heuristic and demonstrative criterion for the handling of ultra-sensible and ultra-rational entities, which cannot be traced back to Aristotle's categories, becomes all the more urgent.

© The Author(s), 2025. Published by Cambridge University Press on behalf of Fédération Internationale des Sociétés de Philosophie / International Federation of Philosophical Societies (FISP). This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (http://creativecommons.org/licenses/by/4.0), which permits unrestricted re-use, distribution and reproduction, provided the original article is properly cited.

Once the organ of that knowledge – i.e., a logic that must account, at least problematically, for disproportion and no comparative relation – has been identified, then it will be also possible to somehow identify the object to which that *new organon* is addressed. Such an object, inexpressible and incomprehensible, able to reach beyond reason's otherness will be the object of metaphysics, or at least the object from which the character and aim of Cusanus' metaphysics is grasped.

Three clarifications are required. *Metaphysics* occurs very rarely in Cusanus' works, and recurs essentially in relation to Islamic thought, associated with philosophers such as Avicenna and al-Ghazali, while the lemma *First Philosophy* appears, mostly with polemical intentions, in reference to the Aristotelian tradition. When Cusanus – in *De mente*, for example – refers to science leaning towards the 'immutable essences of things', he is thinking of a kind of knowledge characterized not by absolute necessity, but by a 'necessary connection' (Nicholas of Cusa 2001e: 556)<sup>1</sup>, referring to a function of the mind rather than to substances or proven propositions.

As rare as the word metaphysics is in Cusanus' writings, the noun mens is frequent. It is worth noting the etymology the Cardinal attributes to it: 'mind is that from which derive the boundary and the measurement of every thing. Indeed, he surmises that mind [mens] takes its name from the verb measuring [mensurare]' (ibid.: 535-536). Terminus indicates the limit, so that terminus and determinatio tend to overlap indicating the field of the finite, the field of what is *contractus* and *ex contingentia*. Following the pairs of opposites that characterize Cusanus' philosophical language - infinitefinite, complicatus-explicatus, contractus-absolutus - the terminus is other than what has the power to terminate, just as what is measured is other than the measure or the condition of measuring (Nicholas of Cusa 2001a: 7); see also Hopkins (1983). Only in God 'the measure and the measured coincide', while on this side of infinity, he points out in *De theologicis complementis*, 'there is no measuring-standard [*mensurae*] of a measuringstandard [mensura], even as there is no boundary [termini] to a boundary [terminus]' (Nicholas of Cusa 2001g: 770). If God is the measure that knows no term, the human mind is defined by its function, which is precisely that of measuring. Insofar as it is neither mensura nor mensuratum, but mensurare, it differs as much from God [mensura] as from created entities [mensurata], with an immediate impact on the status of metaphysics: a 'metaphysics of the mind' and not of being, which establishes a metaphysics that mirrors, or rather symmetrizes, a 'measuring theory'.

Wath emerges is an ontological vacuum as that of *necessitas complexionis*, which Cusanus compares to a mirror before anything is reflected in it. Metaphysics, measuring theory, *mathesis, meta-mathesis*, whatever you want to call it, is a non-asseverative knowledge, linked to a problematic nature, insufficiency, shadow, rather than to the solidity and density of ontology, so poor in relation to philosophical tradition as to be recognizable in the domains of *fictio*, game, evanescence of mirror images, that

<sup>&</sup>lt;sup>1</sup>See also Nicholas of Cusa (2001l: 1201). For the English translation of Cusanus' works, I resort to Hopkins' edition (Nicholas of Cusa 2001). The individual treatises will be cited according to the following references: *De docta ignorantia* (2001a), *De coniecturis* (2001b), *De filiatione Dei* (2001c), *Idiota de sapientia* (2001d), *Idiota de mente* (2001e), *De visione dei* (2001f), *De theologicis complementis* (2001g), *De beryllo* (2001h), *Trialogus de possest* (2001i), *Apologia doctae ignorantiae* (2001j), *Dialogus de ludo globi* (2001l). This English edition is based on the critical edition of the Heidelberg Academy (Nicholas of Cusa 1932-2010).

is, in those fields in which the disproportion between *mensura* and *mesuratum* is most evident.

#### An impossible science of being

Human intelligence, like any created intelligence, has a finite actuality. This fact suffices to place a full understanding of (infinite) objects beyond the reach of human intelligence. Indeed, not only metaphysics as a science would lose consistency in the abyss that separates the finite from the infinite – an abyss interminatus, by definition disproportionate and immeasurable and, consequently, unknowable; but this disproportion would also seem to undermine a mens which can only be defined by its task of *mensurare*. Not only the possibility of a metaphysical science would vanish, but nothing would remain for the would-be sage except a profession of learned or devout skepticism, to which, however, the mature Cusanus does not subscribe, and neither does the Layman [Idiota], 'a very unschooled man' and yet 'an instrument' of God (Nicholas of Cusa 2001d: 519-520). According to Cusanus, the Layman is the champion of a knowledge that can be inexhaustibly increased and that, while remaining incomparable to the absolute and highest knowledge, is not equivalent to error, false opinion, or ignorance. To a logic that has loosened its ties with ontology and to a metaphysics that is reflected in a theory of measure, theology then comes to the rescue, or rather, a mysticism in which the legacies of the Plotinian tradition and Meister Eckhart become evident<sup>2</sup>.

It is at least from 1450, with the dialogues of *The Layman on Mind*, that the relationship between metaphysics and mind begins to be clearly defined. The concept of mens, instead of being exhausted and impoverished, is corroborated by condensing functions and instances distributed, in earlier writings, between the notions of *ratio*, *intellectus*, spiritus, and anima<sup>3</sup>. It remains that the 'precision of truth is unattainable' and that it can only be part of human discourse on the condition that every 'assertion of man concerning the true' is not to be accepted as an incontrovertible assertion, but rather as 'a conjecture' (Nicholas of Cusa 2001b: 163). Indeed, the praecisio of God's absolute truth is to such a degree simple and prior to division and otherness that it stands before all affirmation and denial: 'every human affirmation [positivam assertionem] about what is true is a surmise [coniecturam]' (ibid.), and is based on comparative judgment between distinct and mutually other parts. It is a finite, particular, partial knowledge, but still a participation in truth understood as absolute and simple praecisio (Federici Vescovini 2010: 189-197). What is constitutive of conjecture is not so much uncertainty as otherness: the reason makes cuts in the absolute, infinite, and interminatus continuum (the 'divine caligo' within which nothing is distinguishable) so as to obtain, artificially, entities that are finite, multiple, composable and commensurable with each other. Therefore, if there were no otherness, neither differences nor proportions would exist.

<sup>&</sup>lt;sup>2</sup>See Wackerzapp (1962), Hoye (1986), Nicolle (2002), Frost (2006), Duclow (2006), Vannier (2016), Aleksander et al. (2023).

<sup>&</sup>lt;sup>3</sup>In this broad meaning of the term *mens*, as in the case of other key terms in his thinking, Cusanus' originality lies not in inventing, but in elaborating into novel solutions, elements drawn from a wide, and often varied, tradition. In this particular case, the Cusanian sources are Proclus, Albert the Great, John Scotus Eriugena, Thierry of Chartres, Boethius, Ramon Lull, Eckhart, as well as Platonic, Aristotelian, neo-Pythagorean writings. For the sources, see the apparatus of the Latin edition, see Steiger-Baur (1983<sup>3</sup>).

Indeed, otherness is produced by reason, which, in producing it, performs its function of division and delimitation that allows it to discern by comparison (Nicholas of Cusa 2001a: 11) and shows itself in numbers (ibid.: 7). This is the reason why the highest degree of scientific certainty resides in numbers, and not because of a Pythagorean or Platonic or biblical cosmogonic presupposition, but because number is in the full and exclusive possession of human reason, which generates and legalizes it (Nicholas of Cusa 2001i: 934-935).

'We have no certain knowledge except mathematical knowledge [*mathematicam*]' (ibid.: 936). The error or uncertainty or margin of arbitrariness does not lie in the activity of comparative reason – in its *de-finire, mens-urare* – of which it itself is the criterion and authority; rather, arbitrariness and limitation lie in the *facta*, in what is defined, terminated, measured. Different from each other and therefore comparable, as Cusanus remarks in *De coniucturis*, they pay the price of their knowability by compromising the unique and simple root of the very simple and interminable truth (Nicholas of Cusa 2001b: 199-200) with which they enter the same relationship as any polygon with the circle.

If Cusanus' reflection were limited to this, the comparative certainty of science would introduce much more than a margin of approximation. The outcome of any comparative *inquisitio* is always the result of comparisons between parts or individuals and can never be the result of all the possible comparisons between all the individuals that are and can be. Moreover, conjecturing is always the action of a finite reason, conditioned by its own individuality, and thus entails the introduction of subjectivity that collides with the universal character of traditional metaphysics; not, however, of Cusanus' metaphysics, which 'sustains' itself precisely on the ontological inconsistency of individuality.

Here we are faced with one of the many aspects of discontinuity with tradition, which, far from making Cusanus an isolated thinker, places him fully within Renaissance civilization. If it is true that the Renaissance removes forever the anathema that weighed on subjectivity (Burckhardt 1950: 70), in Cusanus, subjectivity, from being an obstacle to a science that claims universality and necessity, is transformed into an added value; in its turn, multiplicity, from being a *vulnus* inflicted on absolute oneness, becomes a condition for a gradual approximation that not only makes knowledge progressive, but elevates those who exercise it beyond the very limit of their own structural finiteness, making them protagonists of an *infinibilis* activity.

In late-antique Latin, *coniecturare*, an evolution of the classical *con-iacere*, means *to throw at*. Conjecture is an arrow shot towards an unreachable target because it is placed at infinity. The deficit of precision that marks conjectural knowledge then becomes the opportunity for a search for truth: the fact of never being able to hit the target so precisely that it cannot be reached with even greater precision places no limit on the investigation and indefinitely multiplies the conjectures without ever arriving at the final and definite one, just as it happens when the mathematician infinitely increases the sides of a polygon without ever arriving at the one that perfectly overlaps the circle (Nicholas of Cusa 2001b: 163, 2001a: 8). That's how the gap, unbridgeable and ineradicable, which separates the arrow from the target it cannot reach, becomes the place of metaphysics, or, rather, of a metaphysics of emptiness, disproportion, tension, limit and, as we shall see, movement.

The limit from which the productions of reason cannot escape – that is, the constraint within the sphere of the finite – becomes the occasion to render cognitive activity without end. In the iteration of the process to which it is forced by the particularity and subjectivity of each conjecture, reason in fact overcomes its own constitutive finiteness. It could be said that in its practice, in the function it performs, reason transcends the ontological statute that confines it to the finite by becoming infinite, if this did not expose it to the risk of recognizing a substantial connotation to reason that it does not have in Cusanus' conception.

#### A metaphysic of the void

In an infinite universe, which is the contraction of the Oneness, monad or dense '*caligo*', homogeneous and without gaps, how is it possible for a metaphysics as Cusanus understands it to find its place? A void must be generated, and it can only be the mind that had begotten it. This begetting, which has the mind as its protagonist, is explained in theological terms in the *De filiatione dei* (Nicholas of Cusa 2001c: 341-345).

For Cusanus, there is not only a cognitive *apeiron* from which to confront the actual infinity of divine truth. The activity of *ratio* is not exhausted in the discriminating function it performs, but implies the unifying force of pure concepts, performed by the *intellectus*. In other words, it implies pure determinations that deploy it in the sphere of what is determined and limited, presupposing the *a-priori* of the unlimited, the non-distinct, the *non-aliud*, to its definitions and determinations. Reason and intellect mutually imply each other, the intellect needs the activity of reason to emerge from an abstract immobility, the reason needs the unifying force of the intellect to avoid making its own production discriminating, arbitrary or merely fictitious. In their mutual implication, *ratio* and *intellectus* are not presented as distinct faculties, one superordinate to the other, but as different and concomitant vectors of the same *mens*, the very protagonist of human knowledge.

The joint *officium* of *ratio* and *intellectus* leads beyond the finite world and physical reality, towards a metaphysical sphere that, if it cannot be placed beyond the Wall of Paradise, is nonetheless the privileged vantage point from which to look in the direction of the *coincidentia opposituorum*. A horizon – as Cusanus clarifies already in *Learned Ignorance* – that is ultra-sensible, and yet dominable by the human mind; a horizon in which the 'spiritual realities', inaccessible in themselves, are poured out 'as if in a mirror' [*quasi in speculo*] (Nicholas of Cusa 2001a: 18) to be investigated 'symbolically'.

This metaphysical space is inhabited only by *imagines*. It is Cusanus himself who warns about the use of the term: neither copies of sensible realities, nor innate or transcendent ideas, but original mind constructs whereby the cognitive faculty is brought to its full and ultimate potential. *Imagines* are numbers, symbolic forms, notions, concepts and all those devices that reason conceives and constructs to enhance cognitive possibilities, given their inadequacy with respect to incomprehensible truth (Nicholas of Cusa 2001j: 466). Faithful to the apophatic tradition, Cusanus cannot in any way describe or represent God, not even in terms of absolute truth.

If you notice very carefully, then [you will see that] Truth [*veritas ipsa*] is not God as He triumphs in Himself but is a mode [*modus*] of God by which God is impartible to the intellect in terms of eternal life. For as He triumphs in Himself

#### 346 Annarita Angelini

God is neither intelligible nor knowable, nor is He Truth or Life, nor does He exist; rather, He precedes everything intelligible, as its one, most simple Beginning [*unum simplicissimum principium*]. (Nicholas of Cusa 2001c: 346)

What is manifested is not the Father, but his faithful mirroring in the Word, the second person of the Trinity, so that 'in that first Mirror, the Mirror-of-truth (speculum veritatis), which can be said to be God's Word, Logos, or Son, the intellectual mirror obtains sonship, so that it is all things in all things, and all things are in it' (ibid.: 348). This speculum veritatis is pure, unique, perfect, a faithful image of the archetype it mirrors, but of the Creator - the Being, the Oneness - it is still a reflected image. If, from an onto-theological point of view, God and the Son are *consubstantial*, the manifestation of God is accomplished by a medium, and such a medium - Logos, Word, Son, spaculum veritatis - is an image, and, precisely, the viva imago of the infinite creatrix ars of the Father. Legitimizing this passage, at once theological and gnoseological, from the Father to the Son, from the exemplar to the image - is the Gospel of John: 'in the beginning was the Word [...] through him everything was made'; in the beginning was the speculum veritatis, and that, whether one calls it Word, Logos or Son, is the image of the divine creative power. Every passage from the model to the image is in fact realized in analogy with the first *filiatio*, a passage in which the reflected copy, though not identical to the original, manifests, so to speak, its very nature (Nicholas of Cusa 2001): 469-470).

The human mind is also a mirror, or rather, it is an image that mirrors the *speculum veritatis*. This means that the mind is not a *pars animae*, but has the same status as images: an activity, a power, a productive capacity, 'a certain power that bears an image of the aforementioned Divine Art' (Nicholas of Cusa 2001e: 582). As an image of the divine *ars creatrix*, it imitates, as much as possible, the infinite in the manner proper to the image; and this imitation consists of a movement of continuous and unstoppable perfection, which makes it ever more conform to its exemplar, without ever reaching its perfection. This is how the Layman explains this imitative process of the mind to the Orator and the Philosopher:

Whatever things are present most truly in the Absolute Art are present truly in our mind as in an image. Therefore, mind is created by the Creative Art – as if that Art willed to create itself, and because the Infinite Art is unreplicable, there arose its image. [...] No matter how nearly perfect an image is, if it cannot become more perfect and more conformed to its exemplar, it is never as perfect as any imperfect image whatsoever that has the power to conform itself ever more and more, without limit, to its inaccessible exemplar, for this reason the image, as best it can, imitates infinity. [...] Every mind – even ours, too, although it is created as lower than all other minds – has from God the fact that, as best it can be, it is a perfect and living image of the Infinite Art. (ibid.: 582-583)

If the Logos is the faithful mirror of truth, Cusanus imagines all creatures as infinite impure [*contracta*] mirrors, arranged in a circle around the *speculum veritatis*, whose image they reflect, although in an altered manner, due to their imperfection. Like every other creature that becomes part of this theophany, the mind is an impure mirror, but unlike all other contracted mirrors, it does not identify itself with a specific

imperfection, it goes through them all one after the other without stopping at any; and the faster it transits from one to the other, the closer the image of its movement comes to that of stillness, as does the spinning top (trochus) of the De possest, which, thrown at maximum speed, appears motionless and allows no succession to be perceived (Nicholas of Cusa 2001i:923). The gap separating the human mind from God is not so much the immeasurable distance between the finite and the infinite, but rather between movement and absolute stillness.Similarly, but in the opposite direction, it is still movement (or rather, the complicatio of all sensible movements) that distinguishes it from other creatures, still images, particular and variously imperfect frames of the absolute truth. Therefore movement, instantiating the unbridgeable hiatus between the eternal and what is subject to becoming, appears as a felix culpa for the human mind, a contrivance to govern disproportion. Albeit created and finite, in the process of asymptotically approaching the model, the mind reveals an unstoppable power andtension. More precisely, it manifests that power which, by assimilating its own filiations to itself, ensures that they retain the characteristics of the exemplar (the imperfect butliving mirror).

Even though it maintains the characteristics and limits of what is created, this *speculum vivum* enters the sphere of the *coincidentia oppositorom*: it is then possible for it – Cusanus insists in *De filiatione dei* – to 'foretaste the filiation', through a concept, a symbol, an image, a device that has forged in the image of the intellect. The movement of the mind, which makes the imperfect images flow one after the other and *complicates* them all in its own living and moving surface, comes to define a space that is not that, *interminatus*, of the divine monad, nor is it the place of sensible bodies. It is a metaphysical space, as flexible as wax or a block of clay (Nicholas of Cusa 2001e: 557), empty of content, but fertile with its own *filiations*. They are *imagines vivae*, devoid of ontological status, which allow an intellectual vision that exceeds the capacities of reason: each of them is 'a mirror and a symbolism [*speculum et aenigma*] by which each reader's frail intellect [*intellectus*] may be aided and guided at the outer limits of the knowable [*scibilium*]' (Nicholas of Cusa 2001h: 792).

When the Layman reiterates the derivation of the noun *mens* from the verb *mensurare*, he looks precisely at this passage from the infinite exemplar to the infinite progression of the image in the direction of the model, as if in the verb, conjugated in the infinite, reason transcends its own *explications* and *contractions* and recognizes its criterion in the complicating force of the intellect. A *transcensus* that never entails a *transhumanare*: even if it can complicate the *vigor rationis* and bring the mind *in ultimo scibilium*, it remains a created intellect, and although this condition precludes it from being able to contain [*comprehendere*] the infinite absolute Oneness, it does not, however, prevent it from *tasting* or *overshadowing* it (ibid.).

#### Numeri semovents

Among the productions that the human mind derives from itself, numbers have a special value:

How could anything be conceived to be more similar to mind than is number? Isn't a *oneness* of the number three trine? And isn't an *equality* of the number three trine? Likewise the *union* of the number three is trine. Therefore, number's essence is the mind's first exemplar. For a triunity (or unitrinity) that is contracted in plurality is found to be impressed antecedently on every number. Indeed, inferring symbolically and surmisingly from the rational numbers of our mind to the real, ineffable numbers of the Divine Mind, I say that in the Mind of the Creator number is the first exemplar of things, just as number that arises from our reason is the first exemplar of our corresponding menta world. (Nicholas of Cusa 2001b: 9)

As principles of rational knowledge, numbers are the first exemplar *pullulans* from the mind; the mind, in turn, in begetting them looks to its own productive activity to conjecture the divine *ars* by analogy. In fact, the biunivocal relationship linking the knowledge *more mathematico* to the *divina filiatio* is stronger than an analogy. It is a kind of isomorphism that, while keeping the plane of being (God-universe infinite) on a different and parallel level to that of knowledge (*mens*-system of sciences), nevertheless determines a reciprocal correspondence between one and the other: while the constructive activity of the notional universe has its model in divine creation, the mind, looking at its own intellectual production, sees – albeit *per imaginem* – the infinite mind that communicates being to things through its coeternal Word (ibid.: 163). In the symbolic character of number, it would be tempting to recognize a theologization of mathematics that is, at the same time, a mathematization of theology.

If this were the case, the possibility of a metaphysics, even a *poor* one, would disappear, as would that of a theory of measurement, whose spaces would be exhausted by the overlapping of theology and mathematics. This is not the case, because Cusanus does not think of one, but two mathematics. In addition to traditional mathematics, which reason uses to approach and know the world, Cusanus admits another mathematics that he calls 'intellectual' [*intellectualis*] (Nicholas of Cusa 2001b: 181) or 'theological' [*theologicalis*] (Nicholas of Cusa 2001g: 747). It is made up of non-quantitative quantities and the diagonal (Nicholas of Cusa 2001b: 181, 2001e: 552, 2001i: 935), and again, geometric figures that are open and non-Euclidean, *improportionabiles, immensurabiles, infinibiles*, such as the triangle with a flat angle, the circle that coincides with its own diameter, or the chord that overlaps the arc.

Also produced by reason, they are interminable entities in which oneness prevails over otherness, irreducible to the relationship between integers, in whose creation reason does not complete its sequential process of delimitation, proving to be, so to speak, in contradiction with its own delimiting function. Rather than placing themselves under *rationale caelum* (Nicholas of Cusa 2001b: 201), they interpose themselves between the infinity of God and the finite of science, between the *apeiron* of rational numbers and the infinite actuality of the divine monad (Nicholas of Cusa 2001a: 20, 2001i: 935-936), occupying a virtual distance that keeps the finite separate from the infinite. Cusanus makes it clear that this distance is the excess [*excessus*] generated by that *perennis motus* (Nicholas of Cusa 2001e: 555-556) that qualifies the mind not as a generic measure, but as *viva mensura*, and that qualifies its productions not simply as numbers, but as 'self-moving numbers' [*numeri se moventes*] and 'living numbers' [*quasi numeri vivi*] (ibid.: 569). It is a flexible space, a kind of *chora* or, as Cusanus prefers to put it, a ductile wax or clay, which is not the place of bodies, but the *precondition* for relations between series and for rational and irrational ratios. Metaphysical space and

pliability of mind enter into a cause-effect relationship, not to say that they identify with each other:

as if absolute pliability (i.e., pliability free from wax, clay, metal, and all pliable materials) were alive with a mental life, so that of itself it could assimilate itself to all shapes as they exist in themselves and not in any material [...] Because of all the foregoing mind, looking unto its own simplicity (not only insofar as this simplicity is free from matter but also insofar as it is incommunicable to matter, i.e., ununitable thereto in the manner of form), uses this simplicity as an instrument, in order to assimilate itself to all things – assimilate itself not only abstractly, apart from matter, but also in terms of a simplicity that is incommunicable to matter. And in this way mind beholds, in its own simplicity, all things – just as if it were to behold in a point every magnitude and in a center every circle. (ibid.: 559)

The geometric entities and mathematical relations of which this space is the referent, correspond to nothing but mind-generated magnitudes, whose malleability and capacity for transformation they share, and which, due to their ductility, continually force their respective otherness towards the ultra-rational point of their coincidence. Cusanus never tires of repeating that even these non-rational numbers are always and only human productions. However, they are not contractions of simple oneness, but images of absolute simplicity, just as the intellect is not contractio but imago of divine intelligence. The properties and operations that these mathematicalia make possible are the same as those of rational numbers, with the difference that they can be transferred ad infinitum (Nicholas of Cusa 2001a: 20). Through them, the universe of rationality, which is located under *rationale caelum* and governed by the logic of the finite and of non-contradiction, seems almost to reach or align itself with that Murus Paradisi, which is surrounded by the coincidence of opposites (Nicholas of Cusa 2001f: 722). Because of their greater simplicity, they are 'the essences' of all other numbers, rational and sensible (Nicholas of Cusa 2001b: 181); but what is more important is that being the essences of things mathematically reconfigured, for Cusanus, means complicating them all in themselves, that is, being their presupposition or their *a-priori*. The transsumptio ad infinitum that these numbers promote is nothing other than the setting into motion of rational numbers and closed forms of classical geometry.

For since all mathematicals are finite and otherwise could not even be imagined: if we want to use finite things as a way for ascending to the unqualifiedly Maximum, we must first consider finite mathematical figures together with their characteristics and relations. Next, [we must] apply these relations, in a transformed wat, to corresponding infinite mathematical figures. Thirdly, [we must] thereafter in a still more highly transformed way, apply the relations of these infinite figures to the simple Infinite, which is altogether independent even of all figures. (Nicholas of Cusa 2001a: 20)

The *mens* that produces and makes use of them is not a different faculty from ratio and intellect; instead, it is an instance in which reason goes beyond the outcome of its own

activity to recognize itself in the power that moves it to act and that gives its products the same tensive character that belongs to it. As intellect, i.e., essence and active ownership of unifying criteria meant for successive 'explications' and 'contractions' (Flasch 2011: 332-333), the mind identifies itself in the interminable space separating the *mensurata* (the magnitudes and entities to which it assimilates) from the criterion of measurement (the image of divine complication), and in that distance which it draws only from itself, it escapes the role of Neo-Platonic hypostasis by realizing itself as 'living substance' [viva substantia] (Nicholas of Cusa 2001e: 547), inseparable from the officium it performs and from its own productions. And it is in that distance, empty of being and plastic to the point of being 'absolute pliability' [flexibilitas absoluta] (ibid.: 559) that lies the precondition of a symbolic articulation that opens a gap between theology and mathematical science. This is not, therefore, a theologizing of mathematics, but a metamathematics in which reason sees the plus ultra of a mind impatient with the limits of the finite; a metamathematics which in the indefinite progression reveals not a demonstrative insufficiency, as the classical and medieval traditions wanted, but the greater power of an intellectual logic or a metaphysics of the mind, which allows one to see, as 'in a mirror and a symbolism' [in speculo et in aenigmate] (Nicholas of Cusa 2001a: 18), an otherwise inaccessible ultra-sensible reality.

Here is the gap between traditional mathematics and that transcendent mathematics which Cusanus uses as a metaphysics and a method. And it is precisely here, in that gap, in that empty space mobilized by mathematics, that a metaphysics different from traditional ontology is established: a metaphysics of instability, of movement, of emptiness, of shadow, of the coincidence of opposites. A metaphysics that does not deny otherness and contradiction, but ventures to look beyond that opposition. The condition of the mind that casts its gaze beyond the finite is that of Cusanus' happiest metaphors: the *eicona* observed by the monks of *De visione dei*, the impure mirror of the human mind of *De filiatione dei*, or the spinning top of *De possest* (Angelini 2017: 64). The monks observing the motionless, all-embracing gaze of God that seems to follow them, the apparent immobility of the *trochus*, the vision formed on the *speculum vivum*, empowering their movement to the utmost become the image of eternity.

Buscar el levante por el poniente was the meaning of Columbus' route to a 'West' that he mistakenly but with good reason judged to coincide with 'the extreme East'. An unknown and immense sea separated and at the same time united the unreachable extremes of a navigation reversed from tradition. Cusanus' exploration followed similar assumptions: to probe the infinite by seeking the maximum of the finite; to taste the eternal stillness of the divine by placing oneself in the eye of the storm, in the midst of the convulsive movements that agitate the infinite portions of the finite; to assume the innumerable othernesses and imperfections in order to overshadow the absolute perfection of the Oneness. The route from which Cusanus 'cannot escape' and of which even he 'can never come to grips' is not that of the deluded Kantian sailor who sets sail from the floating isle of knowledge towards an elsewhere that lies beyond human sensibility and intellect. Buscar l'immoto nel movimento, seems the suggestion the Cardinal gives to the Dukes of Bavaria in De ludo globi, because it is not in absolute stillness, but only in the relations between motion and friction, in the acts of a subjective will, in the skill of a ball thrower and in the unpredictable contingencies of a bumpy terrain from which it is not possible to escape, that it is given to seek the incomprehensible perfection, the unity and even the invisible image of God.

## Bibliography

#### Primary sources

- Nicolai de Cusa (1932-2010) Opera omnia, iussu et auctoritate Academiae Litterarum Heidelbergensis ad codicum fidata edita, 20 Bd. Leipzig-Hamburg: Meiner.
- Nicholas of Cusa (2001) Complete Philosophical and Theological Treatises of Nicholas of Cusa, ed. J Hopkins, 2 vols. Minneapolis, MN: AJ Banning.
- (2001a) 'De docta ignorantia', ivi, vol. I.
- (2001b) 'De coniecturis', ivi, vol. I.
- (2001c) 'De filiatione dei', ivi, vol. I.
- (2001d) 'Idiota de sapientia', ivi, vol. I.
- (2001e) 'Idiota de mente', ivi, vol. I.
- (2001f) 'De visione dei', ivi, vol. II.
- (2001g) 'De theologicis complementis', ivi, vol. II.
- (2001h) 'De beryllo', ivi, vol. II.
- (2001i) 'Trialogus de possest', ivi, vol. II.
- (2001j) 'Apologiae doctae ignorantiae', in De theologicis complementis, ivi, vol. II.
- (2001l) 'Dialogus de ludo globi', ivi, vol. II.

### Secondary Sources

- Angelini A (2017) Matematica e immaginazione nel Rinascimento. Milan: Editrice Bibliografica.
- **Aleksander J et al.** (2023) *Mystical Theology and Platonism in the Time of Cusanus*. Leiden-Boston: Brill.
- **Burckhardt J** (1950) *The Civilization of the Renaissance in Italy*, (trans.). SGC Middlemore. London: Phaidon.
- **Cassirer E** (1972) *The Individual and the Cosmos in Renaissance Philosophy.* Philadelphia: University of Pennsylvania Press.
- **Duclow D** (2006) Masters of Learned Ignorance: Eriugena, Eckhart, Cusanus. Burlington: Ashgate.
- **Federici Vescovini G** (2010) 'Il *De non aliud* e i trascendentali medievali', in C Catà (ed.), *A caccia dell'infinito*, p. 189–197. Rome: Aracne.
- **Flasch K** (1998) Nikolaus von Kues: Geschichte einer Entwicklung. Vorlesungen zur Einführung in seine Philosophie. Frankfurt a. M.: Klostermann.
- **Flasch K** (2011) Niccolò Cusano. Lezioni introduttive a un'analisi genetica del suo pensiero. (trans.), T Cavallo. Torino: Aragno Editore.
- **Frost S** (2006) Nikolaus von Kues und Meister Eckhart: Rezeption im Spiegel der Marginalien zum Opus tripartitum Meister Eckharts. Münster: Aschendorff.
- Hopkins J (1983) Nicholas of Cusa's Metaphysics of Contraction. Minneapolis, MN: AJ Banning.
- Hoye WG (1986) 'The Meaning of Neoplatonism in the Thought of Nicholas of Cusa'. *The Downside Review*, 104: 10-18.
- **Nicolle JM** (2002) 'Innovation in Mathematics and Proclusean Tradition in Cusanus'. in Y Kazuhiko (ed.), *Nicholas of Cusa. A Medieval Thinker for the Modern Age*, p. 85-89. Richmond: Curzon.

#### 352 Annarita Angelini

**Steiger R and Baur L** (1983<sup>3</sup>) Idiota de sapientia. Idiota de mente. Idiota de staticis experimentis. Hamburg: Meiner.

Vannier AM (2016) Intellect, sujet, image chez Eckhart et Nicolas de Cues. Paris: Cerf. Wackerzapp H (1962) Der Einfluss Meister Eckharts auf die ersten philosophischen Schriften des Nikolaus von Kues. Münster: Aschendorff.

**Cite this article:** Angelini A (2024) Between Philosophy of Mind and Metamathematics: The Metaphysics of Disproportion in Nicholas of Cusa. *Diogenes* 65(3), 341–352. https://doi.org/10.1017/S039219212400018X