The Cusanus Map and Nicholas of Cusa's *Cosmographicus*[*]

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Abstract

This paper first considers how a geophysical map such as the »Cusanus map« is itself a significant visual text. Then it turns to reflect on Nicholas' use of maps and mapmaking as powerful metaphors for understanding the way we use the mind to put ideas together. Nicholas' making a map of mentality provides an entryway for making sense of thinking itself and its conceptual products. Nicholas ultimately proposes that, just as God creates the world we humans we create such maps of the world and the mind. With his typical aplomb, Nicholas of Cusa terms us »second gods«, ourselves divine.

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Nicholas of Cusa is a fascinating transitional figure whose writings often illuminate how even the theological texts of the fifteenth century evolve as premodern thinking. He often selected some contemporary invention, artifact or device and employed it as a metaphor or analogy for theological and philosophical reflection.[1] In a late work, *Compendium* (1464), Nicholas takes the act of mapmaking beyond the merely geographical or textual and into the realm of mind and imagination, thus demonstrating an intuitive grasp of the import and flexibility of both geophysical maps and their metaphorical extensions. Chapter 8 of the *Compendium* turns to a mapmaker or *cosmographicus* who constructs an imaginary city map

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1 Of particular note are the beryl eyeglass in *De Beryllo* (1458), the measuring compass and wooden spoon in *Idiota de mente* (1450), contemporary portraiture and the clock in *De visione Dei* (1453), the spinning top in *De Possest* (1460), and the use of geometrical diagrams and mathematics through a good number of his works. Moreover, Nicholas never separated theology and philosophy in his writing.

as a way of organizing human sense perception and its deliverances.[2] This mapmaker image calls attention to the new interest in more geographically »accurate« and complete geophysical maps. There is even a late fifteenth-century map of central Europe still attributed to Nicholas, though we have no independent textual evidence of or reference to his own mapmaking experience.

In this paper I first explore briefly how such geophysical maps prompt reflection as significant visual texts. Then I examine the notions of maps and mapmaking as Cusan metaphors for our understanding of the way imagination and thought can attempt to put ideas together. Making a map of mentality provides an entryway and an invitation to make sense of thinking itself and its conceptual products.

I

The so-called »Cusanus map« of late medieval Germany and central Europe is fascinating in its own right, though no copy of Nicholas' supposed original is extant. That original likely dated to sometime after 1450 when Nicholas of Cusa was bishop of Brixen. The later woodcut map of Etzlaub at Nuremberg and the copper engraving map from Eichstätt are both said to derive from Nicholas' map. Because both his birthplace (Kues – today Bernkastel-Kues) and his diocese (Brixen – today Bolzano – Bressanone) are designated on these maps, and because neither place was otherwise particularly important, it was supposed that the map originated with Nicholas of Cusa. These two maps (Etzlaub and Eichstätt) are the basis of the several early 16th century maps attributed to Cusanus.[3]

2 The whole *Compendium* amounts to a booklet. It also discusses signs, speaking about the reality that is God and adds, toward the end, some considerations about the human mind and human knowledge. The mapmaker passage from chapter 8 is quoted below.

3 Peter Mesenberg, Untersuchung zur Geometrie und zur Genese alter Karten. ⟨http://www.mesenberg.de⟩. A Cusanus map of 1492 can be viewed at ⟨http://www.mesenburg.de/Seiten/Geographische-Karten/Regionalkarten/Nicolaus-Cusanus/N-Cusanus_Karte.htm.⟩ (Accessed 01.14.2015.) Mesenberg's material stands at the end of more than a century of German and other scholarship on the Cusanus map. See, among studies since 1970, Hans Kinzl, Geschichte, Form und Inhalt der Cusanus-Martellus-Karte, 599–606, and Franz Mayr, Verzerrungsgitter des Tirol-Ausschnittes der Cusa-

Even with later additions, what is called the »Cusanus map« was clearly a travel map, undoubtedly based on the many years that Nicholas spent travelling through Germany as papal legate and reformer.[4] One later version of 1491 depicts rivers and mountains, as well as the towns that were stopping places for travelers. Its margins contain scales for meridians and parallels. Another version has a compass rose to show how to orient the map toward the magnetic north pole. These depictions marked a way many fifteenth and sixteenth-century maps worked to supplement the limits of using a lined, two-dimensional plane surface to account for three-dimensional physical locales in relationship to one another. They also are related to earlier more descriptive, symbolic and pictorial maps.

Mapmaking that embraced wider and more extensive areas of land and sea exploded in the generations after Nicholas' death in 1464, helped no doubt by the spread of the printing press, the European voyages of discovery and the further solidification of the nation-states of Europe. By the late fifteenth century medieval maps were changing and becoming more practical (and political) guides. By 1500 maps were no longer the more simplified and symbolic representations we know from earlier *mappae mundi* such the famous 'T-O' maps, but had become land and sea charts (for instance, portalan charts) that located sea coasts, cities and

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nus-Martellus-Karte und Deutung des Karteninhalts, 607–616, in: Cusanus Gedächtnisschrift, hg. v. Nikolaus Grass, Innsbruck 1970. Ekkehard Meffert, Von der Geographie Mitteleuropas. Nikolaus von Kues als Schöpfer der neuzeitlichen Kartendarstellungen Mitteleuropas, in: Erziehungskunst 46 (1982) 94–113. Peter H. Meurer, Zur Systematik der Cusanus-Karten. Überlegungen aus der Sicht der Rheinischen Landeskunde in: Kartographische Nachrichten 6 (1983) 219–225; and by the same author, Corpus der älteren Germania-Karten. Ein annotierter Katalog der gedruckten Gesamtkarten des deutschen Raumes von den Anfängen bis um 1650, Alphen aan den Rijn 2001. See the bibliography in Steffen Möller's paper in footnote 4 below.

4 The History of Cartography, hg. v. John Brian Harley and David Woodward, Chicago 1987, I, 497: »The maps that derive from Cusanus's map are essentially itinerary maps in their detailed construction, based on measurements along many routes. These measurements will have been of angles as well as of length, and behind these maps lies the introduction of the magnetic compass for measuring direction on land […] they are of great importance: their accuracy argues a high degree of technical accomplishment, and they mark the beginning of a real tradition of topographical maps drawn to scale in Europe.« See also Steffen Möller, Nicolaus Cusanus als Geograph, in: Das Europäische Erbe im Denken des Nikolaus von Kues, hg. v. Harald Schwaetzer und Kirstin Zeyer, Münster 2008, 215–227.

contiguous regions in relation to one another while reflecting actual physical land masses, coastlines and the nearby seas.[5] These maps presented in cartographic form with growing accuracy how their makers believed things stood in the geophysical world, even as they marked out significance-as we say, they »put something on the map.«

Maps, after all, do not simply tell us what's where and how to find or travel to it. They also set out boundaries and translate them into degrees of latitude and longitude, into kilometers and miles. In this way they serve purposes of possession and power, because they let us know what places and how much of them belong to whom: »This land is your land, (but) this land is mine.« Boundary disputes between individuals and larger entities such as nation states have often been the stuff of legal proceedings, violent clashes and wars.

Maps not only can guide our movements, but provide as well evidence of our possessions and authority over land and the people who dwell there. This is why just placing items on a map in relation to one another singles them out and underlines their connections and significance. Maps imply and signify a history of social influence and importance with their seemingly neutral geographical representations. In this way every map has no less meaning and rhetorical potential than that invested in any verbal or visual text. J. B. Harley pointed out that such »power« is both external and internal to maps.[6] For him, such power is external in that it is exerted on the map itself in its making or is internal and exercised with

5 David Wood, Rethinking the Power of Maps, NY 2010, 21–38, traces a brief history of mapmaking. The Cusanus map is, in the terminology of Ptolemy, an instance of chorography as opposed to geography or cosmography because it is limited to one area rather than the whole earth or cosmos. Much discussion of the Cusanus map remarks on its accuracy and conformity to the norms defined by Ptolemy. Recent discussion of chorography makes it clear that medieval chorography could include verbal descriptions and pictorial depictions of a region as well as the maps familiar to us – thus the illustrations on the Cusanus map. See Jesse Simon, Chorography reconsidered: an alternative approach to the Ptolemaic definition, in: Mapping Medieval Geographies hg. v. Keith D. Lilley, Cambridge 2013, 23–44.

6 See Deconstructing the Map in John Brian Harley, The New Nature of Maps, Baltimore 2001), 165–166. The definitive study of maps may well be Christian Jacob's The Sovereign Map, tr. Tom Conley, hg. v. Edward H. Dahl, Chicago 2006. A remark in Jacob's Conclusion 362 is apropos here: »Even when its diffusion becomes the object of restrictions or of a monopoly, the map is a social object, concerned with power, and a strategic instrument as well.«, 362.

the map in use. What results is influence exerted in the map's very representations. Many maps have been and continue to be made in the pursuit of national goals and as symbols of state prestige.

As instruments of such influence, maps have been and are employed by governments and nation states and property owners (whether institutions or individuals) to stake claims, to highlight desirable natural and social resources, to rebuff encroachments from without, to reaffirm ancient borders and national or ethnic histories and identities, to deny the presence or claims of others, even to warn others to stay away. To rephrase the famous line, borders »make good neighbors«.Maps function as »objective« (though socially constructed) instruments or means for advancing any or all of these goals or purposes. This is the way one uses what the map portrays as a powerful aid for economic and political ends.

But such service to these ends – what one does with the map – all depends on the map's putative claims. To make a map is to exercise control over what it contains and represents, as well as over its omissions and emphases. Maps are texts that separate and relate the places they single out; they are the result of an ordering mind that selects and omits for both explicit and implicit reasons. Maps can become definitive statements of what is not there, not just of where the borders are placed. They also state what or whom a designated territory includes or excludes. This is the rhetorical power internal to the map that makes it into an »objective« statement of »where things stand« both geographically and otherwise.

Maps have had a long history of telling us what places are to count because of their size, location and connection to other places. Maps thus open a perspective on past and current social history, not just how to get from one place to another. They emphasize the places that count for the mapmakers and their audiences, even when there come to be standard procedures and protocols for how maps designate and symbolize whole countries and continents and the places important within them.

The Cusanus map, with its designation of Nicholas's home town, is one such example. It also served to underline the importance of central Europe and the Holy Roman Empire – even perhaps to Nicholas's ecclesial and secular colleagues and acquaintances in Rome. Even though there is no evidence available, we might well suppose that such a map could let Renaissance Rome and Italy encounter the »real« Germany.

This is the kind of rhetorical influence that can be exercised with the help of a map. The Cusanus map thus anticipates what would very soon be deliberately done by nations constructing and employing their own maps of both homelands and colonies.

Since we do not know Nicholas' intentions for his map, we can only suppose that he did not reflect on all of the social and political implications of the place of Germany and the Holy Roman Empire in north central Europe.[7] But being the premodern man he was, Nicholas created a novel text in cartographic form that reflected the national, religious and social-political interests of his era, not simply the geography of central Europe.[8]

II

We can turn then to the metaphorical map that Nicholas described in his *Compendium*.[9]

Nicholas writes:

> Therefore, a completely developed animal in which there is both sense and intellect is to be likened to a geographer who dwells in a city that has the five gateways of the five senses. Through these gateways messengers from all over the world enter and report on the entire condition of the world. […] Suppose the geographer to be seated and to take notice of every report, in order to have within his city a delineated description of the

7 Yet his early *De concordantia catholica* (1433) included a plan for election of the Holy Roman emperor, as well as the pope. Nicholas' change from the conciliarists to the papal side at the Council of Basel suggests as well his awareness of the political problems of Europe and of the church of his time.

8 The question whether Nicholas was more a medieval or more a Renaissance thinker has been debated by Cusanus scholars such as Ernst Cassirer, Hans Blumenberg, Paul Kristeller, Edward Cranz and Jasper Hopkins. I employ the term »premodern« because, while Nicholas' theoretical writings work changes on ideas from the past that he privileges, his original examples and images (see footnote 1 above) and his view of human nature, more positive than that of the late scholastics, reflect the fact that he was living and working in Renaissance Rome and Italy and hardly unaware of the innovations and changes happening around him.

9 Throughout I assume that a literal geophysical map is a two-dimensional representation of some portion of the earth's surface that depicts the relative distances between the places or located features it shows, and does so using a flat or spherical surface. James H. Andrews compiled 321(!) definitions of map for: What Was a *Map*?, in: Cartographica 33 (1996) 1–11.

entire perceptible world. Now, if a gateway to his city – say, sight – always remained closed, then because messengers with news about visible objects would have no entrance, there would be a defect in the [geographer's] description of the world. For the description would not make mention of the sun, the stars, light, colors, the shapes of men, of brute animals, of trees, of cities, and – in greater part – would not make mention of the world's beauty […] The case is similar regarding the other senses. Therefore, [the geographer] endeavors with all his effort to keep all the gateways open and to continually receive the reports of ever-new messengers and to make his description ever more accurate.

At length, after he has made in his city a complete delineation of the perceptible world, then in order not to lose it, he reduces it to a well-ordered and proportionally measured map. And he turns toward the map; and, in addition, he dismisses the messengers, closes the gateways, and turns his inner sight toward the Creator-of-the-world, who is none of all those things about which the geographer has learned from the messengers, but who is the Maker and Cause of them all. He considers this Maker to stand antecedently in relation to the whole world as he himself, as geographer, stands in relation to his map. And from the relation of the map to the real world he beholds in himself, qua geographer, the Creator of the world – [beholds Him] when he contemplates the reality by means of its image and contemplates, by means of its sign, that itself which is signified. During his speculation he notices that no brute animal – although it seems to dwell in a similar »city« and to have »gateways« and »messengers« could have made such a map. And, hence, he finds in himself the first and nearest sign of the Creator. In this sign the Creative Power shines forth more than in any other known animal. For an intellectual sign is the first and most perfect sign for [signifying] the Creator of all things, whereas a perceptible sign is the last [and farthest-removed sign for signifying the Creator of all things]. Therefore, the geographer withdraws himself, as best he can, from all perceptual signs [and turns] toward intellectual and simple and formal signs. With the full sharpness of his mental sight [the geographer] takes very intent note of how the Eternal and Inaccessible Light shines forth in these [intellectual, formal signs]. (Hopkins translation)[10]

10 »Est igitur animal perfectum in quo sensus et intellectus considerandum ut homo cosmographus habens civitatem quinque portarum quinque sensuum, per quas intrant nuntii ex toto mundo denuntiantes omnem mundi dispositionem. […] Sedeatque cosmographus et cuncta relata notet, ut totius sensibilis mundi descriptionem in sua civitate habeat designatam. Verum si porta aliqua civitatis suae semper clausa remansit, puta visus, tunc quia nuntii visibilium non habuerunt introitum, defectus erit in descriptione mundi. Non enim faciet descriptio mentionem de sole, stellis, luce, coloribus, figuris hominum, bestiarum, arborum, civitatum, et maiori parte pulchritudinis mundi […] Ita de reliquis. Studet igitur omni conatu omnes portas habere apertas et continue audire novorum semper nuntiorum relationes et descriptionem suam semper veriorem facere. Demum quando in sua civitate omnem sensibilis mundi fecit designationem, ne perdat eam, in mappam redigit bene ordinatam et proportionabiliter mensuratam. Convertitque se ad ipsam, nuntiosque amplius licentiat, clauditque portas, et ad conditorem mundi internum transfer intuitum, qui nihil eorum est omnium quae a nuntiis intellexit et notavit, sed omnium est artifex et causa. Quem cogitat sic se habere ad universum mundum anterioriter, sicut ipse ut cosmographus ad mappam. Atque ex habitudine

The mapmaker in Nicholas' comparison begins by envisioning his external senses as the five gates of a city where he lives, gates that are open to messages from without. Late medieval cities were often represented in diagrams and paintings as circular, so we might imagine this circular walled city as circumscribing a pentagon with a gate at each of the five vertexes and thus equal distances from each other in those walls. This is the first part of the symbolic diagram Nicholas constructs. The mapmaker locates each sense at one of the gates of his city and takes mental stock of what comes to him from each as adding information to a noteworthy description of the perceptible world.

Next, Nicholas locates in that mental city a further representation of the senses' deliverances – the »well-ordered and proportionally measured map« that constitutes »a delineation [*designatio*] of the entire perceptible world.« His first step was to imagine a map of the sensorium and the city or thinking mind inside the gates. Now we are to notice that this imagined city structured as senses and mind has cognitive contents since it delineates »the entire perceptible world.«

We may appreciate both »sign« and »design« in the Latin *designatio* – this is what the mind's powers do: selectively record, reorder (here using the »map sign«[11]) and connect the deliverances from sense perception.

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mappae ad verum mundum speculatur in se ipso ut cosmographo mundi creatorem, in imagine veritatem, in signo signatum mente contemplando. In qua speculatione advertit nullum brutum animal, licet similem videatur habere civitatem, portas et nuntios, mappam talem facere potuisse. Et hinc in se reperit primum et propinquius signum conditoris, in quo vis creativa plus quam in aliquo alio noto animali relucet. Intellectuale enim signum primum et perfectissimum est omnium conditoris, sensibile vero ultimum. Retrahit igitur se quantum potest ab omnibus sensibilibus signis ad intelligibilia simpliciaque atque formalia signa.

Et quomodo in illis splendet lux aeterna et inaccessibilis omni acumine mentalis visus, attentissime advertit, […].« *Comp.*.8: h XI/3, n. 22–24, p. 17–20. Both Latin and English can be found in Jasper Hopkins, Nicholas of Cusa on Wisdom and Knowledge, Minneapolis 1996, 409–411. (The Hopkins translation is also available online at ⟨http://jasper-hopkins.info/*Compendium* 12–2000.pdf⟩; the Latin at ⟨http://www.cusanus-portal.de/*Compendium*⟩, both accessed 1.2.2015).

11 It should be noted as well that the first seven chapters of *Compendium* present Nicholas' ideas (following Augustine) on signs and their functions in and for human cognition. The mapmaker image is a kind of summary and culmination of Nicholas' ideas on these matters. For his earlier remarks on signs and language, see *Idiota de mente* 2. See also Michael-Angelo Schramm, Zur Lehre vom Zeichen innerhalb des Compendiums des Nikolaus von Kues, in: Zeitschrift für philosophische Forschung 33

This is the imaginative »designing« and constructing of the gates, the city within, plus the knowledge content that results. Since the senses are the gates to this city, the inner city symbolizes the knowledge the mind puts together based on perception. This imagined city thus presupposes the work of the powers of the human mind: sense, imagination, memory, reason.[12] The results are here organized as the contents of an imagined map or cartographic construction.

Both the structure and the contents of this map lead us to reflect on map making itself. A mapmaker presents a diagram or chart that selects and focuses and limits through its two-dimensional matrix and conventions what its users can understand about the part of the earth it traces and represents. Users are expected to become familiar with the conventions, standardized scaling, legends and other symbols portrayed on the map. What users see, as a result, is a selective representation that omits much in the physical landscape as well as alternative ways of framing on a map the physical places and locales and the connections between them. The Cusanus map already mentioned is an advanced example of such geographic mapping.

Contrasting one's looking at an actual physical locale with what one sees on a map is also useful.[13] What one perceives visually from a given standpoint divides into foreground, middle ground, and background all the way to the horizon, to use the terms from landscape painting and photography. While on maps we see the measurable relationships between places using lines and symbols, visiting an actual place reveals more extensively the actual depth and visible qualities of a given locale. All that one perceives in a given place is taken in from the standpoint of the spectator. Maps also embody a viewpoint, but it seldom appears obvious or important.

(1979) 616–620; Joachim Hennigfeld, Verbum-Signum. La definition du langage chez s. Augustin et Nicolas de Cues, in: Archives de Philosophie 54 (1991) 255–258, and Nikolaus von Kues. Präziser Name und menschliches Zeichen, in: Geschichte der Sprachphilosophie. Antike und Mittelalter, New York 1994, 292–315.

12 Usually Nicholas usually distinguishes *ratio* and *intellectus* among human cognitive capacities, but *Compendium* uses them interchangeably, presumably to simplify instruction for his young interlocutors.

13 Edward S. Casey, Representing Place: Landscape Painting and Maps, Minneapolis 2002.

Both maps and landscapes let us see things »in a larger perspective«, though it is worth asking what exactly the viewpoint is that one adopts in making or looking at a map. However we reply, viewing both maps and landscapes involves a framing and an organizing, maps from without and landscapes from within. Since any landscape or photograph is based on the standpoint of its maker, a mapmaker's presence is hardly adverted to or noticed, in spite of earlier dreams and myths of a God's-eye view and despite our current experiences of seeing the earth as photographed from the air or from space. Maps and landscape painting and photographs organize and relate to one another the features one sees; both impose order and present a world organized. Indeed, both enjoy St. Augustine's famous »tranquility of order,« reminding us that aesthetic appreciation involves the imposition of order no less than political peace.[14]

Ordinary maps do omit foreground, background and horizon. When we compare them to paintings or photographs of an area (e. g., compare Google maps to Google »street view«) we discover that maps are more like schematic diagrams or geometrical drawings. Whatever its usefulness, mapmaking cannot match the qualitative richness of what confronts us as intelligent perceivers. Given their purposes, maps need to cut through the varied multiple features of an actual location, if merely to focus on how to relate locations and thus get there from one place and back from another. Both the Cusanus map and the mapmaker image in the *Compendium* attest to Nicholas' understanding of how maps work. This selection and abstraction both reorient us to a larger context and invite us to a different viewpoint than what we can see from where we stand here and now.

14 Svetlana Alpers, The Mapping Impulse in Dutch Art, in: The Art of Describing, Chicago 1983, 119–168.

III

If we look again at Nicholas of Cusa's *Cosmographicus*, we may return to his final move – from the humanly constructed map and its contents to the divine creator. While taking careful stock of what he has constructed, he does not simply feast his eyes on the results of his metaphorical mapping. He takes this further step, the one that counts most for Cusanus in this context. Using his »inner sight« or intellectual intuition (*intellectus*) to move beyond what he has come to know and has inscribed on his mental map of the world's contents, the mapmaker attempts to transcend his construction toward what no earthly map can capture at all, namely, the »Maker and Cause« of all that is and can be. Nicholas does this so that he can drive home a straightforward proportion or analogy: as the mapmaker is to his map so the creator is to the whole perceptible universe.

In his *Compendium* Nicholas has the mapmaker look at the map, dismiss the messengers, close the gates to the city, and, leaving the perceptible world, reflect that the whole exercise has been in fact an image of God's relation to the created universe. As the mapmaker stands to the map, so God stands to all created things. Even more telling, perhaps, this implies (transforming the initial analogy or proportion by alternation) that the constructed map stands to the actual perceptible world as the mapmaker stands to the Creator. We human beings thus become intellectual signs, even maps of God!

For Cusanus any human symbol maker is thus him or herself a sign of the ultimate Maker of the universe. Nicholas asserts in the *Compendium* that the human *cosmographicus* is the »first and nearest sign of the Creator«.[15] He proceeds to propose that, even though this will not change or open up God's incomprehensibility for us, it will at least move us into the immaterial realm of intellect and invite us past the limits of human conceptual space to the domain where that divine incomprehensibility may best shine forth in our darkness. To see the borders of what his map includes is *ipso facto* to be beyond them, whether transcending those limits moves us toward his God or not.

15 »Et hinc in se reperit primum et propinquius signum conditoris, in quo vis creativa plus quam in aliquo alio noto animali relucet.« *Comp.* 8: h XI/3, n. 24, lin. 13–14.

What is remarkable in this brief passage is that Nicholas implicitly recognizes the creative power the mind exerts in constructing such a symbolic map of the human perceptual system and its deliverances. By combining his experience with actual maps and his realization of what maps enable us to understand in spatial and visual terms, he is able to capture all of the geophysical universe, as it were, in an imagined diagram that reflects the power of human mentality – not to mention the internal *nisus* or drive to transcend oneself and one's creations. As always, Nicholas urges us to go beyond our mapmaking to the Creator of what the mental map reflects.

In an earlier sermon preached in his diocese of Brixen (today Bolzano-Bressanone) Nicholas also compared the treasures of wisdom in the human mind to a map of a rich and fruitful field. He wrote:

> The farm worker gathers everything from the field: milk and butter and cloth and wine and bread, gold and silver and each thing that is needed for earthly life. In this way one collects from the field of intellect all that is necessary for divine, heavenly and incorruptible life. For all good things come together with wisdom, which is incorruptible life and everlasting joy. The knowledge of all things and everything desirable is gathered from the fruitfulness of that field. For that field is alive as though it were a mirror reflection exhibiting the form of each thing, since it is the treasure house or domain of the forms. Just as if the form of the world or the chart of a map were to bear in itself the likeness of the universe and contain in itself everything, the world would be reflected in it intellectually, so in this reflection the intellect would see in itself whatever it wished to know, just as the learned scribe could bring forth from the treasure in the field new things and old.[16]

Here Nicholas celebrates the human mind as a »treasure house« of conceptual forms. This leads us to realize that he understands that human creativity is remarkable, that human diagrams and maps of the mind and of geophysical reality credit our ability as world-makers, whether the world is

16 *Sermo* CCXVII: h XIX/2, n. 9, lin. 1–9, my translation. »Colligit autem de agro rusticus omnia, et lac et butyrum et vestem et vinum et panem, aurum, argentum et omne id, quod est necessarium ad vitam terrenam. Sic colligit homo de agro intellectuali omnia necessaria ad vitam divinam, caelestialem et incorruptibilem. Nam omnia bona pariter veniunt cum sapientia, quae est immarcessibilis vita et laetitia sempiterna. Omnium rerum scientiam et omne desiderabile colligitur ex fructificatione agri illius. Est enim ager ille vivus quasi specularis splendor omnium rerum speciem repraesentans, quia est thesaurus seu locus specierum. Sicut si forma mundi seu carta mappae, quae universi in se gereret similitudinem et in se omnia mundi contineret, in eo intellectualiter reluceret, in qua relucentia intueretur intellectus in se ipso quidquid scire vellet, ut tamquam doctus scriba in thesauro agri proferre posset nova et vetera;« (Latin text also at ⟨http://www.cusanus-portal.de/Sermones #CCXVII⟩, accessed Jan. 22, 2015.)

physical or mental, on paper or in imagination. »First and nearest signs of the creator« we may be, but we too articulate our understandings of the created world in »well-ordered and proportional« *designationes*, drawing on our experience with geometrical diagrams and other visual constructions in two dimensions to lay out what we have taken in from the world, making our perceptual experience available anew by combining »proportional« signs to stand for what we can see and know.

This passage recalls one of Nicholas' earliest treatises, *On Conjectures*, where he proposes that man is a »human god« (II, c. 14. [h III, n. 143]), a parallel to his naming human beings »finite gods« in *On Learned Ignorance* (II, c. 2 [h I, n. 104]). In his later *De Beryllo* (h XI/1, n. 7) Nicholas quotes with approval Hermes Trismegistus's terming humans ›second gods‹. What is finally god-like is not only that we design and make via the »mechanical arts« all the novel artifacts of his time that so intrigued Nicholas, but in particular that we are able to order and create mental maps or diagrams that lay out our understanding of what we know and how we come to know it. Not just the map that is made, but the making of the map and the understanding and experience it authorizes fit our natures as creative »second gods« and proximate signs of the divine Creator.

Nicholas is a premodern figure in part because it will not be long after his death that thinkers of northern Europe (whose locations we may find on the Cusanus map) will reject the Roman church he defended. Then, less openly, some will question the God for whom he longed. It is a very short step from taking us to be »second gods« to eliminating the »first God« who, Nicholas admits, is beyond any proportions we can construct for measuring transcendent reality. Once this faith in a God beyond human intelligence is challenged as perhaps a futile hope, the only »god« that is left is humanity itself. A map combines what it omits with what it includes. A map of the mind and its knowledge of the physical universe may fail to capture the putative God on whom everything supposedly depends. Given his own principle that there is no proportion between the finite and the infinite, Nicholas' mapmaker must leave out God, who is beyond all designation.[17] His metaphorical map thereby may cut two ways.

17 Nicholas states this principle in his masterwork of 1440, *De docta ignorantia* I 3: h I, n. 9, lin 1–2: »ex se manifestum est infiniti ad finitum proportionem non esse.«

Whether we care about this possibility or not, we must admire the human capacities that mapmaking and indeed cognition itself require. Nicholas speaks often in his writings of the sense perception, imagination, and rational understanding, all capacities that contribute to human knowledge, its conceptual contents and its artistic products. In the *Compendium* all this is again discussed and interpreted in terms of natural and conventional signs and metaphors such as that of the mapmaker. The irony is that Nicholas' mental map of the perceptible world barely mentions all the human faculties that are needed for its construction inside the imaginary city gates. Perhaps this is because cognitive activities such as thinking and imagining are not open to straightforward sense perception. But those activities are all implicitly present in the ordering and proportioning that the finished product displays.

What is the metaphor that best captures human mentality? Two terms from Nicholas of Cusa can open up leads for our own reflection. One is his insistence that we can never know the essence of anything since that essence is identical with God. Our knowledge, Nicholas says, is always »conjectural«, true as far as it goes but always perspectival and open to further insight. In his own words, »[…] you have seen […] that precise truth is unattainable, and so it follows that every human affirmation of what is true is a conjecture.«[18] Nicholas thinks of this conjectural knowledge as resulting from human measuring. This is the second term he stresses, because we take the measure of what we want to know from a particular standpoint. Here once again exactness escapes us. »Conjecture« and »measure« are both quasi-technical terms that never lose their metaphorical resonance in Nicholas' writing – that is why his metaphor of mapmaking is so apt. To make a map is to fabricate a metaphorical world in a symbolic representation that, from a particular viewpoint, takes the conjectural measure of all it includes.

While Nicholas' maps of mentality and its cognitive contents may be metaphors, it is useful to recall that metaphor itself may always involve a

18 *De conjecturis*, I, Prologus, h III, n. 2, lin. 3–5: »praecisionem veritatis inattingibilem intuitus es, consequens est omnem humanam veri positivam assertionem esse coniecturam«; Hopkins translation (modified). For further reflections on conjecture and measure in Nicholas of Cusa, see Kurt Flasch, Nikolaus von Kues: Geschichte einer Entwicklung, Frankfurt am Main 1998, 147–152, 275–285, and Clyde Lee Miller, Reading Cusanus, Washington, D. C. 2003, 80–86, 127–139.

kind of cognitive mapping. This is because every metaphor is a conjectural measure that involves likeness and difference. The best metaphors use differences to underline likenesses we did not notice or may have missed. We are led to examine carefully what we are talking about and trying to understand, even if the metaphorical terms seem far-fetched or foreign. Metaphor enables us to step across the conventional boundaries of literal description and definition to see what we are dealing with from the outside and even sometimes from an inside we had not previously entertained. Nicholas' city map of mentality and its contents is an example of how an extended metaphor can »de-familiarize« us so we look at the human mind's workings and results in a different light.

Nicholas' imagined city gates demonstrate how this works. By transferring the characteristics of the gates to sense perception, we add to our understanding of sensing, even if we use our previous perceptual experience to understand what other characteristics of gates probably do not apply. The senses, after all, are hardly city gates. We sort and make judgments about which of a gate's qualities really fit the sensorium and we test them against our previous experience, even as we allow those same qualities to extend the way we previously understood and employed both gates and sensing. We can open or close our senses to some degree and »the messages« they gather about the perceptible world do require our sorting and ordering. Nicholas has selected two somewhat unlikely items for possible fit and further understanding. Aristotle's remark that employing metaphor requires an inventive eye for likenesses lets us see just how astute our judgments of fit and appropriateness can be.

One can imagine, for instance, being blocked or confused in sorting and comparing what sensation amounts to and wishing one had a map or diagram so one could better locate and relate the different deliverances of sense perception, whether in their bodily organs or in conceptual space. Working with this in mind, one can use mapping or diagramming in order to judge better just what sensation involves. What a metaphorical map of a city's gates and the information that comes through them spells out explicitly may, with a quick turn of phrase, clarify and situate the somewhat confusing sensorium all at once by bringing in a telling comparison. Nicholas' *cosmographicus* or mapmaker is such a creative image of mental interpretation and construction.

While maps are visualizations they are also selective abstractions. Geophysical maps simplify the physical landscapes they cover and thus can give useful directions for where we want to go. Metaphorical maps can let us find the neighborhood of what we want to understand and place ourselves in a way that we may discover or invent in visually imaginative terms what it is we seek. They have a heuristic as well as an explanatory function. For instance, maps designate borders within the territories they depict and they have their own borders or limits, inviting us to recall that we are somehow beyond what we grasp as a limit, even if we cannot always fill out what lies on the other side. There is an outside to any perspective embodied in our construction or mapping of human knowledge, as the histories of philosophy and psychology remind us.[19]

IV

The mapping in *Compendium* c. 8 and in *Sermo* CCXVII demonstrates how important spatial and visual depiction and metaphors are to Nicholas of Cusa. We read his mathematical works and his attempts to square the circle with their proportions and geometrical diagrams and note the importance of diagrams and geometrical examples throughout his other theoretical works.[20] We have to conclude that, while Nicholas' heart and soul may have longed for the inexpressible and incomprehensible God, his mind and imagination were located squarely in the visible world. For him humans are signs of God as knowers and mental mapmakers. Our own constructive, intelligent activity in such mapping is a powerful metaphor that lets us be seen as human maps representing and directed toward the divine.

Nicholas of Cusa often creates imagery that transforms ordinary perception of three-dimensional reality into two-dimensional diagrams, charts and proportions. The proposed symbolic map of the *Compendium* is thus another instance of the powerful spatial-visual methods Nicholas employs to communicate what he understands and believes. His views and their presentation are an opening and invitation for us to understand

19 Karsten Harries, Infinity and Perspective, Cambridge, MA. 2001, 42–52.
20 David Albertson, Mathematical Theologies, Oxford 2014, passim.

both the late medieval thought-world from which Nicholas comes and the new Renaissance and early modern ideas so much in his work foreshadows.