



MONASH University

**Signs of Life: Images of the living world
in Honorius Augustodunensis and Hildegard of Bingen**

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Abstract

This thesis explores how the natural world was understood in selected works by Augustinian canon Honorius Augustodunensis (c. 1070-c. 1140) and the visionary Benedictine nun, Hildegard of Bingen (1098-1179). Through the use of intellectual history and the principles of ecosemiotics, this thesis demonstrates how Honorius and Hildegard understood the universe as a collection of signs that could illuminate the divine. As twelfth-century thinkers, both figures were beneficiaries of an intellectual climate that relished in a heightened fascination with the universe and its creative powers. Many of their contemporaries, particularly those in the French schools of Paris and Chartres, channelled their intellectualism into the newly re-discovered classical concept of *natura*; the creative power of the universe personified by a woman. Neither Honorius nor Hildegard adopted the concept of *natura* in their works. I argue that they instead opted for philosophical concepts and images that enabled their readers to interpret the natural world in which they were personally embedded. The lens of ecosemiotics draws attention to the environmental signs in medieval works. The result is a stronger appreciation of the importance medieval writers themselves placed on the signs of the universe.

Chapter One demonstrates how Honorius in the *Imago mundi* considers the world not as to be spurned, but to be understood as involving signs to be interpreted, alongside Scripture. His positive reframing of the universe has not been fully appreciated in the scholarship, yet, I argue, he enabled his contemporaries to develop positive images of the universe. In chapters Two and Three I study how key images influenced Hildegard of Bingen. Across her career, Hildegard honed her ability to integrate her awareness of the natural world into her interpretations of Scripture. The culmination of her thinking can be seen in her final visionary treatise, the *Liber diuinorum operum*, in which she presents a human being and a universe that are dynamically alive and connected through energy flows and mirrored functions. Most significantly, the human being and the universe are energised through God, who is Life. The ecological processes and components of the universe became Hildegard's language for exploring scriptural narratives, and enabled her capture, expand, and explain ideas that were circulating in her intellectual environment.

Declaration

This thesis is an original work of my research and contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

Signed

Hannah Skipworth

Date: 13/05/2021

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In memory of my mother, Carole Skipworth (1956-2019).

List of Abbreviations

CC	Corpus Christianorum, Series Latina
CCCM	Corpus Christianorum Continuatio Medieualis
CSEL	Corpus Scriptorum Ecclesiasticorum Latinorum
CPL	Clavis Patrum Latinorum
PL	Patrologia Latina, J. P. Migne
<i>LDO</i>	<i>Liber diuinorum operum</i>
<i>LVM</i>	<i>Liber uitae meritorum</i>

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Introduction

For a sign is a thing which of itself makes some other thing come to mind, besides the impression that it presents to the senses. So when we see a footprint we think that the animal whose footprint it is has passed by; when we see smoke we realize that there is fire beneath it; when we hear the voice of an animate being we note its feeling; and when the trumpet sounds soldiers know they must advance or retreat or do whatever else the state of the battle demands.¹

In the lockdowns of COVID19, those of us fortunate to enjoy a backyard or park developed personal and closely-attuned relationships with the natural world in our locality. Nature journaling gained new popularity, with novices and masters alike detailing scenes that captured their attention. Many noticed the behaviour of birds for the first time. Others miserably reported the devastating activity of caterpillars in their newly planted vegetable gardens. The warmth of spring signalled our seeds to germinate and slowly bear their fruits. The pandemic presented us with time to connect with the natural world and contemplate our place within it. For many, the changes of the seasons and creaturely activities were signs of greater meaning. This thesis is likewise concerned with personal visions of the natural world and indeed the universe, albeit in a very different time and place: the lives of the Augustinian canon, Honorius Augustodunensis (c. 1070-c. 1140) and the visionary Benedictine nun, Hildegard of Bingen (1098-1179). These two twelfth-century writers from the Rhine and Danube regions of the Holy Roman Empire inherited the textual traditions of monasticism. Both grappled with how the natural world should be understood within the Christian tradition. They formulated their

¹ Augustine, *De doctrina Christiana* 2.1.1, ed. and trans. R. P. H. Green, 57: “Signum est enim res praeter speciem quam ingerit sensibus aliud aliquid ex se faciens in cogitationem uenire; sicut uestigio uiso transisse animal cuius uestigium est cogitamus et fumo uiso ignem subesse cognoscimus, et uoce animantis audita affectionem animi eius aduertimus, et tuba sonante milites uel progredi se uel regredi, et si quid aliud pugna postulat, oportere nouerunt.” (New York: Oxford University Press, 1995).

visions of the natural world in relation to classical and Christian traditions, contemporary learning, geographical and religious politics, and their lived experiences. In their works, we see two visions of the natural world that are specific to the religious and cultural moment of the twelfth century, in the same way that the nature journals of 2020 tell the stories of personal interactions with the local environment through the pandemic.

This thesis provides a new way of accessing how Honorius and Hildegard understood their natural worlds. It combines intellectual history and the principles of ecosemiotics: a method that enables modern readers to observe the sign systems at work in a text, and in particular, signs from the natural world. The importance of environmental signs can be missed when traditional approaches to medieval materials are employed, due to a tendency to separate literature from the natural world. I use ecosemiotic principles to analyse selected representations of environmental signs in the works of Honorius and Hildegard, and seek to demonstrate the important role of these signs in their religious and cosmological worldviews. I propose that when an author's religious and philosophical contexts are unpacked with attentiveness to the environmental signs in their works, we can better understand how they conceptualised the relationship between the human, the world, and the divine. Examining Honorius and Hildegard concurrently also exposes their respective insights into the natural world, including their priorities, new ideas, and spiritual goals.

Signs in medieval thought

The study of signs and the relationships between signs has a long history. In the Christian tradition of the medieval Latin West, aspects of the visible world were perceived as *figurae*

(signs) of the invisible world.² Medieval monastics were trained to use their minds in such a way that they could place words and images upon a framework to create associative-chains, facilitating the accessibility of such images during prayer.³ Meditating on a text enabled the medieval reader or listener to participate in the symbolic sign relations of the text by figuratively walking through the map of images they had created. They could then pause at the “places” of importance and invent personal ways of thinking about God.⁴ Such skills enabled monastics to immerse themselves in the signs of the divine through Scripture and other authoritative texts. Honorius and Hildegard participated in this spiritual and intellectual environment through their writings. Despite their differing backgrounds and aspirations, both authors used the written word to create images that enabled their audiences to read the world’s signs and integrate them into their spiritual meditations.

In the Gospel of John, the first and most important sign is introduced in the opening Prologue with the words “In the beginning was the Word. And the Word was God.” In Greek, “Word” was captured by the λόγος (*logos*), a term densely laden with meanings, including “story, reason, discourse, purpose and harmony.”⁵ In the Eastern Christian tradition, these interrelated and complex meanings enabled *logos* to indicate a universe that was at once living, dynamic, and spiritual.⁶ The myriad relationships captured by the concept of *logos* can be

² Mary Franklin-Brown, *Reading the World: Encyclopedic Writing in the Scholastic Age* (Chicago: University of Chicago Press, 2012), 45.

³ Mary Carruthers, *The Book of Memory: A Study of Memory in Medieval Culture* (Cambridge: Cambridge University Press, 1990) 80.

⁴ Carruthers, 32.

⁵ Alfred Kentigern Siewers, “The Ecopoetics of Creation: Genesis LXX 1-3,” in *Re-Imagining Nature: Environmental Humanities and Ecosemiotics*, ed. Alfred Kentigern Siewers (Maryland: Bucknell University Press, 2014), 56.

⁶ Siewers, “Introduction: Song, Tree, and Spring: Environmental Meaning and Environmental Humanities,” in *Re-Imagining Nature*, 41-2. Siewers draws upon the concept of “Word thickening into Image” to capture how words can become images or iconographic metonym. See Siewers, “The Ecopoetics of Creation,” 56.

understood as “cosmic semiosis,” in that the universe is comprised of divine “energy networks of creation”.⁷ Early Christian philosophers, including Basil, Dionysius the Areopagite, and Eriugena proposed that contemplating the “hidden yet appearing divine” united the human being with the universe.⁸ Siewers has reinterpreted Genesis through a similar lens to Basil, who perceived the physical world as “text that is energy” or a web of “cosmic energy-signs.”⁹ The signs within the works of Basil, Siewers has proposed, are the energies that unite human beings with the divine.¹⁰

The intellectual traditions that enabled an understanding of the universe as a system of energy networks receded during the medieval period. The transition away from a dynamic and communicative *logos* is in part attributable to shifts in language, with the transition to Latin and thus the uptake of the Latin equivalent, *uerbum* (word) attracting different meanings. Augustine of Hippo (d. 460) interpreted *uerbum* as the Son and the beginning, which became the standard understanding in the Latin West.¹¹ The Latin semiotic tradition that superseded the Greek primarily developed out of Augustine’s works. His semiotics, theorised in *De doctrina Christiana*, underpins such works as the *De trinitate* and *De Genesi ad litteram*.¹² Book I of *De doctrina Christiana* for example, opens with his most fundamental definition of *res* (things) and how things are represented by *signa* (signs). According to Augustine, “things”

⁷ Engagement with the semiosis of the cosmos was called *theoria*, which would come to mean “scientific knowing” or the study of the inner principle that governs things. See Siewers, “The Eco-poetics of Creation,” 61.

⁸ Dermot Moran, “‘The Secret Folds of nature’ Eriugena’s Expansive Concept of Nature,” in *Re-Imagining Nature*, 106.

⁹ Siewers, “The Eco-poetics of Creation,” 56-58.

¹⁰ Siewers, 56-58.

¹¹ Beverly Mayne Kienzle, *Hildegard of Bingen: Gospel Interpreter* (Lanham: Rowman & Littlefield, 2020), 141.

¹² Augustine’s ideas developed across his long career as an exegete, with his understanding of Creation reflecting this. See Karla Pollmann, “Human Sin and Natural Environment: Augustine’s Two Positions on Genesis 3:18,” *Augustinian Studies* 41, no. 1 (2010): 69–85.

are “those that are not mentioned in order to signify something”, while “signs” are “those things [...] which are used in order to signify something else”.¹³ That is to say that every sign is a thing, however not every thing is a sign.¹⁴ As an example, he explains that a stone is a thing. But a stone can also be a sign, as in the stone used by Jacob as a pillow. In this instance, the stone can signify the house of God, Christ, humanity’s salvation; the possible treatments go on.¹⁵ It has been suggested that the *res/signa* dualism works in concert with the distinction between *uti* (use) and *frui* (enjoy).¹⁶ In the *uti/frui* paradigm, there are things that should be used and others should be enjoyed.¹⁷ Mapping this onto the universe, Augustine proposed that all creatures should be used for the purpose of enjoying God, and God alone is to be enjoyed.¹⁸ In reading Augustine’s teachings in *De doctrina* semiotically, Susannah Ticciati proposes that if *signum/res* and *uti/frui* can be mapped onto one another, then “the world is to be used for the end of the enjoyment of God, therefore (carrying out the mapping) creatures are signs of God, the supreme thing.”¹⁹ Modern semiotics has the capacity to unlock medieval understandings of sign relations, and the implication of these understandings on interactions with the natural world. Through semiotics, Ticciati articulates fuller meaning of Augustine’s theory, so that the

¹³ *De Doctrina Christiana* 1.2.4, ed. Green, 13: “quae non ad significandum aliquid adhibentur”; 1.2.5, 14 “res eas uidelicet quae ad significandum aliquid adhibentur.”

¹⁴ *De Doctrina Christiana* 2, ed. Green, 14-15: “Quam ob rem omne signum etiam res aliqua est; quod enim nulla res est, omnino nihil est. Non autem omnis res etiam signum est.”; “So every sign is also a thing, since what is not a thing does not exist. But it is not true that every thing is also a sign.”

¹⁵ Genesis 28.

¹⁶ Rowan Williams, “Language, Reality and Desire in *De doctrina*,” *Journal of Literature and Theology* 3, no. 2 (1989).

¹⁷ *De Doctrina Christiana*, I.3.3, ed. Green, 14: “Res ergo aliae sunt quibus fruendum est, aliae quibus utendum, aliae quae fruuntur et utuntur.”; “There are some things which are to be enjoyed, some which are to be used, and some whose function is both to enjoy and use.”

¹⁸ *De Doctrina Christiana*, I.22.20.

¹⁹ Susannah Ticciati, “The Human Being as Sign in Augustine’s *De doctrina christiana*,” *Neue Zeitschrift für Systematische Theologie und Religionsphilosophie* 55, no. 1 (2013): 25.

sign, whether it is a natural sign or a given sign, transcends “the divide between nature and culture,” and “pervades the universe”.²⁰

Under Augustinian influences, Christianity shifted focus from the “ongoing uncreated energies” of Greek and Syriac traditions to celebrate “one-time acts by God’s will in Creation”.²¹ Augustine was highly concerned with the role of language in signification, interpreting words as signs of things. His approach to signs and language was not concerned with the substance or energy of the thing, instead portraying things as static indicators of a greater meaning. It is difficult to make broad statements about Augustine’s exegetical positions due to the length of his writing career and shifts in focus. However, it is reasonable to say that his teaching tended to promote dualisms between mind and body, Trinity and theophany, signifier and signified, and the interiorised human experience. It also amplified the divide between the autonomous creator and the created object.²² Creation, he proposed in his most developed exegesis, is good. The problem lies in the human being’s relationship with Creation, which can become disharmonious if the human being does not act morally.²³ For Augustine, a most important task of the human being is learning how to interpret creatures as signs of God, to better “use” them and to “enjoy” God.²⁴

²⁰ Ticciati, “The Human Being as Sign,” 26-7.

²¹ Siewers, “The Ecopoetics of Creation,” 56.

²² The creation model was inherited from Greek philosophy and can be seen in the works of the Stoics and Plato. For example, in Plato’s *Timaeus*, the demiurge “creates the world, fashioning it as a potter would.” See Phillippe Descola, “Beyond Nature and Culture: Forms of attachment,” trans. Janet Lloyd, *HAU: Journal of Ethnographic Theory* 2, no. 1 (2012): 459.

²³ Britton Elliot Brooks suggests that it is difficult to distil Augustine’s perception of the natural world, due to the shifts in his position across his career, and even his own early uncertainty on the issue. See Britton Elliot Brooks, *Restoring Creation: The Natural World in the Anglo-Saxon Saints’ Lives of Cuthbert and Guthlac* (New York: Boydell & Brewer, 2019), 10-12. See also Pollmann, “Human Sin and Natural Environment”; Charles Mathewes, “A Worldly Augustinianism: Augustine’s Sacramental Vision of Creation,” *Augustinian Studies* 41, no. 1 (2010): 333-348.

²⁴ Ticciati, “The Human Being as Sign,” 28.

The Augustinian conceptual framework heavily influenced medieval thinkers in the Latin West. Moving down the centuries, the tenets of Augustinian exegesis that focussed on the interior experiences of the human – which were distinct and separate from Creation – were expanded and emphasised, particularly by the scholastics, to become the dominant tradition.²⁵ The Greek notion of *logos* as a cosmic concept faded from religious and cultural memory, and the process of transforming *uerbum* into image became less instinctual in the Latin tradition. Successive interpretations of the Augustinian paradigm led to an estrangement from the natural world, which can be seen in texts as an expanding concern for hierarchically-organised and static “classes of individuals”.²⁶

Writers like Honorius and Hildegard inherited layered interpretations of the natural world, which had the capacity to limit their own explorations. Unlike their major religious authority, Augustine, their experiences of the natural world and the divine were not steeped in the moral dilemmas of an infinitely-tempting urban environment. As a canon regular who likely travelled between England and the Holy Roman Empire, Honorius was exposed to the vicissitudes of a changing environment throughout his career. As a nun and physician, Hildegard’s livelihood was in part focussed on the environment that her community cultivated and harvested from. The lives of both Honorius and Hildegard were shaped by daily interactions with an unpredictable environment, whose biological signs they read for its capacity to signify greater, invisible meanings. Located in a rural monastery like Disibodenberg, Hildegard might ask: what is the meaning behind this unseasonable storm?

²⁵ Siewers, “The Ecopoetics of Creation,” 56.

²⁶ Siewers, 57, 65.

What does this infestation of pests in our crops mean? Such diverse and potentially ruinous environmental conditions meant that their communities were not wholly served by texts like *De ciuitate Dei contra paganos* (*The City of God Against the Pagans*), which neglected the natural world in favour of total focus on the heavenly Jerusalem.

I contend that Honorius and Hildegard were both attentive to the dynamism of life on earth and sought to present images of its sign relations in their writings. They responded to their environs in their cosmological writings, yet, they achieved varying levels of success in integrating these positive images of the world in their texts. They produced texts that not only reflected the signs in their local environments, but informed how their audiences interacted with them moving forward. By responding to the needs of their communities in their writings, Honorius and Hildegard utilised the conventions of their chosen genres to challenge the traditional boundaries that dictated how the world should be perceived. The results were personal cosmological perspectives that progressed the twelfth-century pursuit of the meaning of the natural world. Before proceeding further, it is necessary to develop a clearer understanding of how semiotics can shed new light on the thought of Honorius and Hildegard.

Modern semiotics and ecosemiotics

In the twentieth century, the study of signs, or semiotics as it came to be known, regained popularity. Within the modern field of semiotics, the term “sign” refers to the processes and activities within a communications system. In the earlier theorisation of the field, signs could be language-based and non-linguistic, and captured a full range of human communications. Jakob Johann von Uexküll (1864-1944), one of the pioneers of semiotics, provided a cognitive framework for understanding the physiological relations between every organism and its

environment. These relationships were energy exchanges as well as generators of meaning.²⁷ He called this framework the *Umwelt*, with every organism existing within its own *Umwelt*. The *Umwelt* comprised all possible experiences of the organism and these completely surrounded the organism like an invisible, porous soap bubble. When many of these bubbles naturally came together, they formed what Uexküll called a “living foam.”²⁸ Uexküll used metaphor to explain how each organism’s *Umwelt* interacted “harmoniously” with other *Umwelts*, “like a symphony.”²⁹ To the medievalist and particularly the Hildegard scholar, the metaphor of a living bubble brings to mind one of her key images, the universe as a wheel, “*integra, rotunda et uolubili*” (whole, round, and whirling) imbued with life by the divine.³⁰ The idea that bubbles come together to create a symphonic harmony also conjures Hildegard’s musical compositions, which came from a divine source and enabled her nuns to sing in *harmonia* with the heavens.³¹ Whilst Uexküll’s vision opened new avenues of enquiry in the twentieth century, across the fields of ecology and environmental humanities, Uexküll’s framework is now criticised for its underpinning belief that the natural world inherently seeks equilibrium and harmony.³² This idea of ecological yearning for harmony sits uncomfortably with modern understandings of the environment. However, it aligns closely with medieval thinkers like Honorius and Hildegard, whose worldviews were influenced by Galen. Like Uexküll, medieval writers, and particularly the cosmologists of the twelfth century, drew upon

²⁷ Matthew Clements, “The circle and the maze: Two images of ecosemiotics,” *Sign Systems Studies* 44, no. 1/2, (2016): 77.

²⁸ Clements, “The circle and the maze,” 79.

²⁹ Clements, 79.

³⁰ *LDO* 1.2, ed. Derolez, 66; trans. Campbell, 55.

³¹ Tova Leigh-Choate, William T. Flynn, and Margot E. Fassler, “Hearing the Heavenly Symphony: An Overview of Hildegard’s Musical Oeuvre with Case Studies,” in *A Companion to Hildegard of Bingen*, ed. Beverly Mayne Kienzle et al. (Leiden: Brill, 2014), 169.

³² Clements suggests that Uexküll’s theory portrays “a resonant biological universe, rich in sense and feeling, but in its bleaker aspect this image also invokes isolation, as if every individual organism were ultimately confined to its own private circular cell.” See Clements, 79-81.

a long history of authorities to form the understanding that the universe was harmonious and ordered.³³ Indeed, an ordered and *temperata* (tuned) world comprised of signifying creatures was a key principle of the twelfth century.³⁴ As such, we can bring the notion of an *Umwelt* to our reading of Honorius and Hildegard's personal environments.

Unlike Uexküll, another early pioneer of semiotics, Charles Peirce (1839-1914) was not interested in the biological universe or its impact on the interpretant's mind.³⁵ Peirce's semiotics is primarily concerned with human sign systems, especially language and language-based signs.³⁶ This preoccupation with human symbolic thought has the effect of muting signs that emerged from outside this realm, such as "biological" or "environmental" signs. Environmental signs are the icons and indices of the natural environment perceived and interpreted by humans and other living organisms.³⁷ To Augustine, environmental signs might translate to natural signs, as natural signs make something known without intentionally signifying.³⁸ Within contemporary semiotics, environmental signs are not adequately incorporated into the theoretical models.³⁹ To address this lacuna, scholars established the field of ecosemiotics – a variously defined and evolving branch of semiotics. Olga Panzaru

³³ Authorities included Augustine, Boethius, Calcidius, Plato, Proclus, and Pythagoreans Philolaus and Achytas. For an examination of how twelfth-century cosmologists studied the universe using late-ancient and Christian ideas, see Andrew Hicks, *Composing the World: Harmony in the Medieval Platonic Cosmos* (New York: Oxford University Press, 2016), 30-36.

³⁴ Hicks, *Composing the World*, 34.

³⁵ Clements, "The circle and the maze," 81.

³⁶ Timo Maran and Kalevi Kull, "Ecosemiotics: main principles and current developments," *Geografiska Annaler: Series B* 96, no. 1 (2014): 41-50. 42; Eduardo Kohn, *How forests think: toward an anthropology beyond the human* (Berkeley: University of California Press, 2013), 58.

³⁷ Timo Maran, "On the Diversity of Environmental Signs: A Typological Approach," *Biosemiotics* 10, no. 3 (2017): 356.

³⁸ *De doctrina christiana*, 2.1.2, ed. Green, 57: "Naturalia sunt quae sine uoluntate atque ullo appetitu significandi praeter se aliquid aliud ex se cognosci faciunt..."; "Natural signs are those which without a wish or any urge to signify cause something else besides themselves to be known from them..."

³⁹ Timo Maran, "On the Diversity of Environmental Signs," 356.

designates ecosemiotics as a “border discipline” because of its concern for the boundaries between cultural and natural phenomena.⁴⁰ This concern for the margins of knowledge makes ecosemiotics a beneficial tool for analysing medieval writers including Honorius and Hildegard, who themselves freshly explored the universe’s signs and what they meant for Christian spirituality. Ecosemiotics, like semiotics, is not interested in the materiality of the living world, but rather, the interconnections between its signs and how these are interpreted by all living organisms.⁴¹ The goal of modern ecosemiotics, thus, is similar to the goal of the twelfth-century thinker, who sought to improve how their communities read the world’s order through its signs.⁴² Ecosemiotics shares its aims with fields including environmental history, ecocriticism, environmental anthropology and myriad others dedicated to the relationship between the human being and the world.⁴³ As a discipline, it is built upon principles that consciously move beyond the inherited categories and assumptions that shape how we think about the world.

Ecosemiotics is a relatively new field, with scholars endeavouring to solidify its central tenets and applications. Whilst this fluidity introduces some difficulties, it provides space for experimental use, such as its application to authors like Honorius and Hildegard, whose understandings of the universe emerged from a century that is most renowned for deep contemplation of *natura* (nature). As scholars continue to explore the boundaries of ecosemiotics, two key approaches have emerged: biological ecosemiotics and cultural

⁴⁰ Olga Panzaru, “Introduction to Ecosemiotics,” *Scientific Papers. Agronomy Series. Universitatea de Științe Agricole și Medicină Veterinară Iași* (2008): 421.

⁴¹ Maran and Kull, “Ecosemiotics: Main principles,” 41.

⁴² Hicks, *Composing the World*, 35.

⁴³ Maran and Kull, “Ecosemiotics: Main principles,” 43.

ecosemiotics.⁴⁴ Biological ecosemiosis focusses on how environmental structures and organisms are influenced by sign relations.⁴⁵ Cultural ecosemiotics is primarily concerned with human relationships with the living world. In the area of cultural ecosemiotics, some researchers apply ecosemiotic principles to questions such as: can narrative description adequately capture environmental signs? What problems arise when humans interpret environmental processes using metaphors?⁴⁶ I follow the guiding questions and concerns of cultural ecosemiotics, which enable researchers to interrogate ideas such as those preserved in the works Honorius and Hildegard through a new light.

Applying ecosemiotics to the twelfth century

In this thesis, I interrogate twelfth-century ideas utilising the key precepts of ecosemiotics, to uncover how two influential writers understood the environmental signs they perceived in authoritative texts and their own environs. Maran and Kull propose that there are eight principles within the discipline, from which researchers can choose those most relevant to their case studies.⁴⁷ For this study, I am guided by four of these principles. I am primarily directed by principle one, which accepts that human culture exists within a “wider context of biological semiotic processes”, and principle two, which acknowledges that living organisms change their environment “on the basis of their own images of that environment”. This impacts memory and representation. Moving through the list of principles, I have also grounded this thesis in the seventh principle (that narrative descriptions of ecological events are inherently metaphoric

⁴⁴ See Kalevi Kull, “Semiotic Ecology: Different natures in the semiosphere,” *Sign Systems Studies* 26, no. 1 (1998): 351; Maran and Kull, “Ecosemiotics: Main principles,” 43.

⁴⁵ Maran and Kull, “Ecosemiotics: Main principles,” 41.

⁴⁶ Maran and Kull, 46.

⁴⁷ The eight principles can be found in Maran and Kull, “Ecosemiotics: Main Principles.”

and cannot adequately describe ecological semiosis) and the eighth principle (that because human culture exists within an ecological semiosphere, theories of culture require an ecosemiotic aspect).⁴⁸ These four principles work productively within an intellectual history framework, which prioritises the relationship that writers have with their world, as reflected in their theological and philosophical writings.⁴⁹ Focussing on the medieval author's guiding theology and philosophy is especially important to environmental histories of the medieval period, as there is a risk of obfuscating the very concepts we seek to expose with modern definitions and ideas.⁵⁰

Honorius and Hildegard both perceived the importance of environmental signs, and had access to texts and experiences of the world that informed their interpretations of these signs. Honorius was notably interested in the cosmology of Eriugena, which inspired him to revise the ideas relating to the world that he inherited from classical and early-Christian writers. In his *Imago mundi*, written as early as 1110, Honorius encouraged his audience to see the universe through the dynamic and energy-rich allegory of the cosmic egg and the model of the universe as the macrocosm of the human microcosm.⁵¹ Before the surge of twelfth-century works on *natura* written from approximately 1150 onward, Honorius captured classical concepts that had receded from his contemporary intellectual milieu, and distilled them into comprehensible resources for his readers. Hildegard embraced some of the concepts that she found in Honorius' writings, and set them to work in a much richer way in her

⁴⁸ Maran and Kull, 44-46.

⁴⁹ Brooks, *Restoring Creation*, 3.

⁵⁰ For a discussion of this issue in medieval history, see Nicole Guenther Discenza, *Inhabited Spaces: Anglo-Saxon Constructions of Place* (Toronto: University of Toronto Press, 2017), 3.

⁵¹ V.I.J. Flint, "Honorius Augustodunensis," in *Authors of the Middle Ages: Historical and Religious Writers of the Latin West*, ed. Patrick J. Geary (Aldershot: Variorum, 1995), 108.

reconceptualisation of the relationships between the human, the world, and God. Unlike Honorius, she strictly avoided the terms *microcosmus* and *macrocosmus*, or *minor mundus* and *major mundus*, despite the fact that these philosophical models profoundly shaped her worldview.

Although Hildegard claimed ignorance and a lack of education, her aristocratic status ensured that she was afforded an excellent education. Thus, the absence of such terms as *minor mundus* and *major mundus* was not indicative of a lack of connection to intellectual networks. She was certainly an active and influential participant in book-sharing and correspondence.⁵² Hildegard engaged with hundreds of individuals, not just locally, but across Europe, to such an extent that on many occasions, theologians and monastic exegetes requested her visionary perspective on theological dilemmas.⁵³ As a participant in the Hirsau monastic network and the broader Christian community of the Rhine region, she undoubtedly came in contact with the widely copied works of Honorius. Several of his most unusual philosophical images, including the universe as an egg and the microcosm/macrocosm feature in her visionary and medical treatises. When the passage of ideas from Honorius to Hildegard is closely examined, we uncover moments of innovation and achieve better understandings of their personal visions of the signs of the universe.

⁵² This is even more likely later in her career, once she had established her own monastery, Rupertsberg. Rupertsberg was on an imperial thoroughfare, and she enjoyed strong relations with Ludwig, the abbot at St Eucharius in Trier, and the leadership at the Michelsberg library in Bamberg. The Michelsberg is known to have had within its collection the earliest copy of Honorius' *Clavis Physicae*. Peter Dronke, "Introduction," *LDO*, xix.

⁵³ See Giles Constable, "Hildegard's Explanation of the Rule of Saint Benedict," in *Hildegard Von Bingen: in ihrem historischen Umfeld*, ed. Alfred Haverkamp (Mainz: Verlag Philipp von Zabern, 2000), 166. For more on Hildegard's involvement in the wider intellectual environment, see Justin A. Stover, "Hildegard, the Schools, and their Critics," in *A Companion to Hildegard of Bingen*, ed. Beverly Mayne Kienzle et al. (Leiden: Brill, 2014), 111; Anne Clark Bartlett, "Miraculous Literacy and Textual Communities in Hildegard of Bingen's *Scivias*," *Mystics Quarterly* 18, No. 2 (June 1992): 45; Victoria Sweet, "Hildegard of Bingen and the Greening of Medieval Medicine," *Bulletin of the History of Medicine* 73, no. 3 (1999): 384.

I advance the argument that Hildegard's works are the fruit of a life-long commitment to understanding Scripture *through* images of the world and its ecological processes.⁵⁴ More specifically, I contend that her reading of Scripture is grounded in her experiences of ecological processes, as well as her reading of authoritative texts.⁵⁵ Within her worldview, all components of the universe are interconnected and require a strict balance to remain abundant. The key term here is abundance, due to the fact that Hildegard centralised ideas of moisture, warmth and fertility when articulating how the human being should exist within God's divine works. Observing and re-conceptualising the interconnections between the universe and the human being were integral to Hildegard's reading of Scripture and thus her writings.

Hildegard also re-designed her physical environment through her activities in the monastic garden. Our four ecosemiotic principles help us move beyond the nature-culture dichotomy that so often thwarts our ability to perceive connections between biological signs and human symbolic signs.⁵⁶ Within the monastic garden, Hildegard and members of her monastery cultivated a variety of plants, and in so doing, radically modified the environment.⁵⁷ We might label this cultivation as "farming", but in fact, the work was much closer to modern-

⁵⁴ This argument can be found in Constant Mews, "Process Thought, Hildegard of Bingen and Theological Tradition," *Concrescence: Australasian Journal of Process Thought* 1, no. 1 (June 2000).

⁵⁵ Ecosemioticians would call her interpretation of these processes "semiotic construction". See Maran and Kull, "Ecosemiotics: Main Principles," 42.

⁵⁶ The notion that human culture is separate from the natural world has long roots within the Western worldview. This paradigm, known as the Cartesian divide between the human symbolic realm and the realm of objects, gained pervasiveness during the Enlightenment period. It is inappropriate to analyse pre-modern perspectives on the natural world without dismantling the assumptions borne out of this perspective. See Lawrence D. Roberts, "Preface," in *Approaches to Nature in the Middle Ages*, ed. Lawrence D. Roberts (New York: Medieval & Renaissance Texts and Studies, 1982), ix; Kalevi Kull, "Semiotic Ecology," in *Encyclopedia of Ecology*, vol. 4: *Systems Ecology*, eds. S. E. Jorgensen and B. D. Fath (Oxford: Elsevier, 2008), 3211.

⁵⁷ Sweet, "Hildegard of Bingen and the Greening," 388; Hedwig Röckelein, "Monastic Landscapes," in *The Cambridge History of Medieval Monasticism in the Latin West*, eds. Alison I. Beach and Isabelle Cochelin (Cambridge: Cambridge University Press, 2020), 818-9.

day gardening: it required few tools, but high-intensity manual labour and profoundly personal relationships between the human being and the environs of which they were stewards.⁵⁸ Hildegard's activity within her local ecosystem – or her involvement in “ecosemiosis” – was thus extensive. It enabled her to grow and formulate the remedies needed for easing the spiritual and physical ills of those in her community. These formulations are a constant undercurrent in her writings, irrespective of the genre in which she is writing. An ecosemiotic framework enables the researcher to appreciate that human culture, as captured in textual sources, exists within the sign relations of the environment. Textual sources, for example Hildegard's visionary treatises and medical texts, represent the embeddedness of the human in an ecosystem.

The approach of combining ecosemiotics with intellectual history facilitates careful consideration of the impact of particular landscapes on textual sources. The environment of the Rhineland presented its inhabitants with conditions in winter that were extreme and oppressive, while the warming temperatures and fecundity of spring provided enlivening relief. Such environmental conditions contributed to the cultures of the area, yet the traditional research methods of historical studies struggle to access their impact. To combat this, my analysis is grounded in the fact that Honorius and Hildegard were both embedded in particular environments when creating their works. Their images and concepts related to the ecosemiosphere in which they were created. Of course, the language and images that humans use to represent environmental events convert them into signs that are by their nature, symbolic.

⁵⁸ For an informative discussion of the nature of medieval farming and in particular the “personal relationship[s]” gardeners had with their gardens, see footnote 19 in Sweet, “Hildegard of Bingen and the Greening,” 388; Mauro Ambrosoli, *The Wild and The Sown: Botany and Agriculture in Western Europe, 1350-1850*, trans. Mary McCann Savatorelli (Cambridge: Cambridge University Press, 1997), 96.

Spiritual works by thinkers like Honorius and Hildegard are filled with signs by virtue of the fact that they involve human narratology, but these are made more complicated by the fact that they also contain manifold layers of religious and philosophical symbolism. Hildegard wrote to illuminate the divine, yet she undoubtedly drew upon her experiences of environmental events to communicate this message. Leveraging the tools of ecosemiotics returns a sense of embeddedness to works that have been long-disconnected from their ecosemiospheres. When married with intellectual history, which prioritises historically-accurate readings of culture, we can be bolder in our conclusions about how medieval writers understood the natural world.

The ecosemiotic principles that I have not used are concerned more explicitly with the semiotic activity of animals within ecological systems and the relationship between human symbolic semiosis and environmental degradation.⁵⁹ Whilst these aspects of the theory assist with the analysis of modern questions like the role of human cultures on the environment and reading the signs left in the landscape by different species (for example, tracks and burrows), these were not the concerns of Hildegard and Honorius. As such, the principles that guide this thesis are those that enable deeper interrogation of the human understanding of the signs of the universe in these twelfth-century examples.

Recovering medieval concepts of the natural world

Accurate use of language and classification is essential in intellectual history, and this is certainly the case when examining concepts relating to the natural world. Honorius and Hildegard shared a desire to rethink concepts of the natural world and create new ones. I seek

⁵⁹ Maran and Kull, "Ecosemiotics: Main Principles," 46.

to recover the concepts they used, despite the unfamiliarity of their terms or indeed our modern overfamiliarity with some of them. This is in line with anthropologist Phillipe Descola's discouragement from using "familiar language" to access and analyse a material or conceptual reality.⁶⁰ When we find terms like "nature" in a medieval context, we cannot afford to burden them with the centuries of meaning that we have inherited. In his re-reading of Genesis LXX 1-3, Siewers demonstrates how utilising "ancient terms" instead of over-familiar terms like "nature" enables the recovery of "ecocentric threads in pre-modern texts".⁶¹ Similarly, Kohn selected the term "living world" to represent the nonhuman surrounds of the Runa village of Avila, in Ecuador's Upper Amazon.⁶² For Kohn, the term "living world" captures the Runa's interactions with the forest in which they live much more effectively than "nature" or "environment." During the medieval period, the term *mundus* (world) designated not just the world, as the English translation might suggest, but the whole universe. Used heavily by Honorius and Hildegard, I have selected the term "world" and use it to designate the universe throughout this thesis.

Similarly, employing the term "living world" is beneficial to the medievalist for several reasons. Firstly, it counteracts the longstanding perception that the natural world – including its animals and elemental forces – was solely represented allegorically or anthropocentrically by medieval writers.⁶³ "Living world" also assists with the wider scholarly project of dismantling the idea that the natural world in the medieval period was seen in a negative light,

⁶⁰ Descola, "Beyond Nature and Culture," 460-1.

⁶¹ Siewers, "The Ecopoetics of Creation," 51.

⁶² Kohn, *How forests think*.

⁶³ Brooks discusses this prevalent interpretation. See Brooks, *Restoring Creation*, 22.

or even considered “evil”.⁶⁴ A phrase like “living world,” which captures the world’s ongoing processes of generation and decay, removes judgments of good or bad. Instead, it focusses attention on transfers of energy and relationships between living organisms. In recent decades, scholars working on perceptions of the natural world in the medieval period have carefully assessed the terminology used. Some choose one term, like “natural world” and use it exclusively. Others use a small range of terms interchangeably, for example, Corinne Dale uses “natural world” and “created world,” while Britton Elliot Brooks also incorporates “non-human world.”⁶⁵ Encouraged by their caution, and in light of the medieval definition of the term “world” as “universe,” I have selected the phrase “natural world” when referring to Honorius’ understanding of the world.

Across her writings, Hildegard uses the concepts of *uita* (life) and *uiuens* (living) to capture the processes of the natural world. For Hildegard, the processes of the natural world are inherently connected to the human experience of living in the world, and how the human and the world relate to the divine. Within her cosmology, the universe is a living world and God is the *Lux uiuens* (Living Light) that powers it. While she adopts many variations of the term “living” to capture the dynamism of her understanding, it is clear that she perceives the universe and God as “living and true.”⁶⁶ She asserts in her first visionary treatise, *Sciuias*, that God is “uiuentem, totumque uitam exsistentem” (wholly living and wholly Life), and his activities can be seen in the living world.⁶⁷ The idea of the universe as a living world provided

⁶⁴ These terms were used by Timothy Morton and Alexandra Harris respectively. See Timothy Morton, *Ecology without Nature: Rethinking Environmental Aesthetics* (Cambridge, MA: Harvard University Press, 2007), 15; Brooks, *Restoring Creation*, 2.

⁶⁵ Corinne Dale, *The Natural World in the Exeter Book Riddles* (Cambridge: Boydell & Brewer, 2017).

⁶⁶ Hildegard of Bingen, *Sciuias* 1.3.8, ed. Führkötter-Carlevaris, 44: “ubi ipse uiuus et uerus Deus hominibus in ueritate demonstratus est.”; trans. Hart, 97.

⁶⁷ *Sciuias* 2.1, ed. Führkötter-Carlevaris, 110; trans. Hart, 149.

Hildegard with the language and images to describe a dynamic universe; unbridled by static classifications and categories.⁶⁸ Such terms as *totum uiuentem* transform in the mind of the reader or listener, to create images of cosmic energies in action. These images are not “static theological concepts,” but alive and dynamic.⁶⁹ To emphasise the physiological process of “living” in relation to the divine was unusual in the twelfth century. As such, it beckons the researcher to ask how Hildegard understood God’s relationship with humans and the “living universe”. Throughout this thesis, I use the term “living world” to discuss Hildegard’s understanding of the world. This term is used deliberately as we navigate the development of Hildegard’s thought towards her most mature conceptualisation of the relationships between the human, the world, and the divine in *LDO*. When exploring the world in Honorius’ writings, I maintain use of the phrase “natural world”, as exemplified by Corinne Dale in *The Natural World in the Exeter Book Riddles*.

Many scholars have noted the presence of the natural world in Hildegard’s works, with varied assessments emerging. For example, proposing that her representations of flora, fauna, weather and climate were purely allegorical in her visionary treatises; that she crafted a theology of Creation that included the human and natural orders; and that she perceived relationships between that cosmos, humankind, and salvation, and medicinal treatments.⁷⁰

⁶⁸ Mews argues that Hildegard “employs an image of organic life to transform her understanding of static theological concepts.” See Mews, “Process Thought,” 3, 7. Mews also proposes that her works are evidence of “reasoning from nature.” See Mews, “Religious Thinker,” 58.

⁶⁹ Mews, “Process thought,” 3.

⁷⁰ This followed Eriugena’s assertion that it is simple-minded to believe that divine texts can be interpreted literally. For an examination of the allegorical in Hildegard’s works see Laurence Moulinier, “Abbesse et agronome: Hildegard et le savoir botanique de son temps,” in *Hildegard of Bingen: The Context of Her Thought and Art*, ed. Charles Burnett and Peter Dronke (London: Warburg Institute, 1998). For observations on the relationships between the human being and the universe see Marian Maskulak, “Balancing Tensions in the Work of Hildegard,” *Magistra* 16, no. 1 (2010): 38; Sabina Flanagan, *Hildegard of Bingen, 1098-1179: A Visionary Life* (London: Routledge, 1989), 93.

Matthew Fox, who popularised Hildegard's works in the twentieth century, has argued that she was an early advocate of a "creation-centred spiritual tradition," and proposed that a "grid of creation theology" should be utilised to unpack her ideas.⁷¹ While not all have adopted this terminology, many authors often respond to the presence of the natural world in Hildegard's works by acknowledging her fascination and insight, but avoiding deep interrogation of these ideas.⁷² In this thesis, the risk of incorrectly centring the world is mitigated through the use of an ecosemiotic lens, which sees the components of the living world as signs that interact to create unique meaning for the interpreter.

Natura in the twelfth century

Honorius and Hildegard's perspectives on the world emerged from their twelfth-century intellectual and environmental contexts. Their contemporaries including Bernard of Chartres (d. 1130), Bernard Silvestris (c. 1085-c. 1159), William of Conches (c. 1080-c. 1154), and Alan of Lille (c. 1128-1202), created imaginative and influential cosmologies of the universe.⁷³ These writers were particularly fascinated by the allegory of *Natura*, a personified woman they found in the pages of the classical authors. In the ancient texts, *Natura's* vivifying power ordered and perpetuated the world. In her, twelfth-century poets found great interpretative potential. To the classical philosophers, *Natura* was the "secondary creative force" who "acted upon matter" to create everything that is born, grows and dies.⁷⁴ With these powers, she ruled

⁷¹ Matthew Fox, *Hildegard of Bingen's Book of Divine Works: With Letters and Songs* (Bear & Company, 1987), xviii-xix.

⁷² For an overview of the current directions in scholarship, see *A Companion to Hildegard of Bingen* ed. Beverly Mayne Kienzle et al. (Leiden: Brill, 2014).

⁷³ For an overview of learning in the twelfth-century cathedral schools, see Willemien Otten, *From Paradise to Paradigm: A Study of Twelfth-Century Humanism* (Leiden: Brill, 2004).

⁷⁴ George D. Economou, *The Goddess Natura in Medieval Literature* (University of Notre Dame: Indiana, 2002), 1, 23-24.

the sublunary world, which included everything under the moon, and was directly subordinated to “the mind and will of God”.⁷⁵ The Roman Christian, Boethius (d. 524) introduced a more complex understanding, in which the term *natura* could hold two meanings simultaneously: one was incorporeal and connoted “the nature of all created things”; and the other was corporeal, and designated physical matter.⁷⁶

Poets, trained in the scholastic discourses of the twelfth century, used contemporary theological programs to understand *natura*. Their communities had long histories of interpreting the universe through a particular lens, and their new access to classical philosophy unlocked imaginative possibilities.⁷⁷ They often theorised through a “hierarchical view of the universe that might be extended, through analogy, to its transcendent source in God.”⁷⁸ For example, Bernard Silvestris commenced his depiction of the universe in the *Cosmographia* (also known as *De mundi uniuersitate*) with the personified *Natura*. Alan of Lille’s *De planctu naturae* illustrated creation by presenting *Natura* clothed in fabric embroidered with all creatures. When Alan wrote *De planctu* in the late 1160s, he had a swathe of allegories relating to *natura* at his disposal, including: the personified virtues; the journey through the cosmos and creation of man; and the battle of the soul.⁷⁹ Toward the end of the twelfth century, there emerged a “more free-ranging poetic use of Platonism” that was heavily inspired by Pseudo-Dionisius the Areopagite, Eriugena, and Boethius.⁸⁰

⁷⁵ Economou, *The Goddess Natura*, 25-6.

⁷⁶ Economou, 31.

⁷⁷ Franklin-Brown, *Reading the World*.

⁷⁸ James J. Bono, “Medical Spirits and the Medieval language of Life,” *Traditio* 40 (1984): 112.

⁷⁹ Alan modelled his *De planctu naturae* on Boethius’ *De consolazione philosophiae*. See Economou, *The Goddess Natura*, 98.

⁸⁰ Thierry of Chartres, for example, explored how divine forms were imagined and mapped onto the universe. See Winthrop Wetherbee, “Philosophy, Cosmology, and the Twelfth-century Renaissance,” in *A History of Twelfth-*

Amidst these poetic representations of *natura*, a shift in devotional practise took place across the Latin West. New monastic orders were established and reformist ideas transformed existing houses. Most famously, the abbey of Cîteaux, established in France in 1098, and the affiliated abbey of Clairvaux, established in 1128, propagated a new set of monastic customs.⁸¹ The Cistercian Order moved away from the liturgical extravagance practised at many of the great abbeys, instead opting for wilderness and withdrawal into the natural world.⁸² The image of Cistercians establishing their monasteries in inhospitable locations was entwined deeply with the Order's foundational narratives and legislation.⁸³ Indeed, Bernard of Clairvaux's foundational writings suggest that the movement was defined by its new relationship with the natural world. In the 1130s, Robert of Molesme, a monk at Cîteaux drew upon Deut. 32.10 to label the Cîteaux site a "place of horror and vast solitude."⁸⁴ Bernard of Clairvaux chose a valley for his abbey, which was unsuitable for habitation compared to flat lands situated near streams.⁸⁵ Scholars have been attuned to the presence of *natura* and the interesting place of the

Century Western Philosophy, ed. Peter Dronke (Cambridge: Cambridge University Press, 1988), 45; Economou, *The Goddess Natura*; Maria Eugenia Gongora, "Feminae Forma and Virga," 29.

⁸¹ Constant Mews, "Hildegard of Bingen and the Hirsau Reform in Germany, 1080-1188," in *A Companion to Hildegard* ed. Beverly Mayne Kienzle et al. (Leiden: Brill, 2014), 57. A general survey can be found in Constance H. Berman, *The Cistercian Evolution: The Invention of a Religious Order in Twelfth-Century Europe* (Philadelphia: University of Pennsylvania Press, 2000).

⁸² A pan-European phenomenon, Cistercian houses were founded at locations as diverse as England, Scandinavia, and Poland. By the end of the twelfth century had given rise to approximately five-hundred male houses and an unknown number of female houses across Europe. For an introduction, see Martha G. Newman, "Foundation and twelfth century," in *The Cambridge Companion to the Cistercian Order*, ed. Mette Birkedal Bruun (Cambridge: Cambridge University Press, 2013). For an environmentally-focused history of the Cistercian movement, see Erin L. Jordan, "Transforming the landscape: Cistercian nuns and the environment in the medieval Low Countries," *Journal of Medieval History* 44, no. 2 (2018).

⁸³ Martha Newman designates the mentality as a "metaphorical condition" rather than images from topographical observations. See Martha G. Newman, *The Boundaries of Charity: Cistercian Culture and Ecclesiastical Reform 1098-1180* (Palo Alto, CA: Stanford University Press, 1996). Since the 1980s, Cistercian specialists have negated the earlier historiographical argument that the order set up their houses in inhospitable zones. See Mette Birkedal Bruun and Emilia Jamroziak, "Introduction: Withdrawal and engagement," in *The Cambridge Companion to the Cistercian Order*, ed. Mette Birkedal Bruun (Cambridge: Cambridge University Press, 2013), 1.

⁸⁴ Bruun and Jamroziak, "Introduction: withdrawal and engagement," 5.

⁸⁵ Stephen Harding, a founder of Cîteaux, put forward a model for the movement that new houses be situated in

natural world in early Cistercian stories since the seminal works of Marie-Dominique Chenu.⁸⁶ However, this interest has fuelled the perception that in the medieval period, the natural world was exclusively represented through allegory or anthropocentrically.⁸⁷ This position ignores the fact that as humans, we engage with the world semiotically, and the signs we perceive inform how we represent it through the written word. These interpretations become a network in which the allegorical cannot be so easily separated from the perceived world. Despite the scholarly tradition of interpreting medieval depictions of the natural world as solely allegorical, it is clear that during the twelfth century there was noteworthy interest in the relationship between philosophical, sacramental and scientific theories of the world.⁸⁸

Hugh of Saint Victor (c. 1096-1141) provides an example of a twelfth-century thinker who diverged from the common interest in *natura*.⁸⁹ Hugh received his doctrinal training as a canon regular in Saxony, before moving to the Abbey of Saint Victor in Paris in approximately 1115 to take on the role of master.⁹⁰ In his early career, he worked to understand how God manifested within the natural world. He focussed on the signs of the divine that were visible

suitable locations. Bernard of Clairvaux differed in his perspective. Harding's preference was the more successful. See Newman, "Foundation and Twelfth Century," 30-31.

⁸⁶ Marie-Dominique Chenu. *Nature, Man and Society in the Twelfth Century: Essays on New Theological Perspectives in the Latin West*, ed. and trans. Jerome Taylor and Lester Little (Toronto: University of Toronto Press, 1997).

⁸⁷ In 1948, Ernst Robert Curtius opened the chapter of his book titled "The Ideal Landscape" stating that "Medieval descriptions of nature are not meant to represent reality." See Ernst Robert Curtius, *Europäische Literatur und lateinisches Mittelalter* (Bern and München: Francke, 1948); trans. Willard R. Trask, intro. Colin Burrow (New Jersey: Princeton University Press, 2013), 183.

⁸⁸ Economou, *The Goddess Natura*, 58; Maria Eugenia Gongora, "Feminea Forma and Virga: Two images of incarnation in Hildegard of Bingen's Symphonia," in *The Voice of Silence: Women's Literacy in a Men's Church* (Turnhout: Brepols, 2002), 28-30.

⁸⁹ Hugh belonged to the cohort of masters in France, though he was educated in the Holy Roman Empire. See Bono, "Medical Spirits," 91-130.

⁹⁰ Constant Mews, "The World as Text: The Bible and the Book of Nature in Twelfth-Century Theology," in *Scripture and Pluralism: Reading the Bible in the Religiously Plural Worlds of the Middle Ages and Renaissance*, ed. Thomas J. Hoffman and Thomas E. Burman (Leiden: Brill, 2005), 105.

within the natural world, and considered Creation a “kind of divinely inspired book” that was so immense and complex that it could only be the work of God.⁹¹ His early work was experiential in nature, deriving from his personal awareness of the natural world and its signs.⁹² He sought to communicate with learned and unlearned audiences alike, and environmental signs served as tools available to this large audience. As his eminence as a theologian grew, he transitioned away from his early focus on the divinity in the natural world, engaging instead in contemporary theological debates and concentrating on the Christian sacraments.⁹³ His early interest in the operation of divinity within the world set him apart from the philosophically-trained writers associated with the schools of northern France, whose fascination lied in the personified *Natura*; the power that perpetuated the natural world. For Hugh, it was not so much the power of *natura* that compelled his thinking, but the signs of the world that had the capacity to direct one’s thought to God.⁹⁴

Hildegard and Honorius emerged from the geographical and doctrinal contexts that inspired writers like Hugh. Indeed, Hugh’s desire to interpret Scripture in relation to the dynamism of the natural world reflected theological priorities akin to many in the learning centres of the Holy Roman Empire. In this context, thinkers experimented with interpreting Scripture through the signs of the natural world, which led to a version of Neo-Platonism that imbued the universe and its components with a mystical importance and dynamism reminiscent

⁹¹ Mews, “The World as Text,” 96-98.

⁹² Mews, 99.

⁹³ For Hugh, God could be known in this world through the sacraments. See *On the Sacraments of Christian Faith*. Jack Ford suggests that Hugh “blurred the lines between mystic and theologian” and was not satisfied by the contemplation of the divine exercised by the scholastics. See Jack Ford, “Divine Love in the Medieval Cosmos: The Cosmologies of Hildegard of Bingen and Hermann of Carinthia,” *Chicago Journal of History* (2017): 19.

⁹⁴ Mews, “The World as Text,” 107. James Bono suggested that Hugh sought to develop a “medieval language of life.” See Bono, “Medical Spirits,” 128.

of the energy-rich Eastern Christian traditions of John Chrysostom and Basil the Great.⁹⁵ Diverging from the French scholastics, and the Chartrians in particular, who eagerly explored *natura*, Hildegard and Honorius centralised the signs of the world in their endeavours to understand Scripture.⁹⁶ *Natura* did not serve Honorius, who sought to lead his readers into a deeper appreciation of the world and Scripture. Similarly, Hildegard made no reference to a feminised *Natura* across her oeuvre, due to her preferred representation of the universe as alive with the signs of biological life. Both authors must be examined for their significant contributions to this counternarrative, in which *Natura* is not the motivating allegory.

Thesis outline

This thesis is structured in three chapters, which examine the works of Honorius and Hildegard chronologically. It is geographically limited to the regions of the Rhine and the Danube within the Holy Roman Empire, which were prosperous through the twelfth century, supporting important cities in the Empire, including Cologne and Mainz, and Regensburg. The cities of Regensburg and Mainz also stood at the epicentre of conflicts between the papacy and the emperor, with Honorius and Hildegard undoubtedly influenced by the resulting social, institutional and political pressures.⁹⁷

⁹⁵ Winthrop Wetherbee, "Introduction," in *The Cosmographia of Bernard Silvestris*, trans. and intro. Winthrop Wetherbee (New York: Columbia University Press, 1973), 15.

⁹⁶ Mews, "The World as Text," 100-101; Winthrop Wetherbee, "Introduction," 15.

⁹⁷ Scholars including Marie-Dominique Chenu, Willemien Otten, Stephen Jaeger and Peter Dronke provide broad overviews of the twelfth century and uncover important themes from the time. Please see Chenu, *Nature, Man and Society*; Otten, *From Paradise to Paradigm*; and Stephen Jaeger, *The Envy of Angels: Cathedral Schools and Social Ideals in Medieval Europe 950-1200* (Philadelphia: University of Pennsylvania Press, 1994). An important exception can be found Brian Stock's study of creation and naturalistic allegory in the *Cosmographia* by Bernard Silvester. See Brian Stock, *Myth and Science in the Twelfth Century: A Study of Bernard Silvester* (Princeton: Princeton University Press, 1972).

Chapter One amplifies the often-neglected work of Honorius Augustodunensis (c. 1070–c. d. 1140), who seems to have been an Augustinian canon before becoming late in life a monk. I analyse Honorius’ most popular work, *Imago mundi* (*Image of the World*), which enlivened the encyclopaedic genre with stimulating images from the classical era. I focus on the ecosemiotic meaning of its title and closely analyse two of the most significant representations of the natural world: the universe as a cosmic egg; and the human as a microcosm of the universe. When close examination of these images is combined with a study of the Prologue, in which Honorius represents the tensions of his intellectual context, it becomes clear that he deliberately reframed the natural world in the *Imago mundi* through subtle compositional features. Ascribing this level of innovation to Honorius’ work is uncommon in the scholarly literature. I argue that it is wholly necessary though, as his reframing of the natural world in fact generated new philosophical and cosmological ideas amongst the following generation of writers.

Chapter Two captures Hildegard’s early worldview through a close analysis of environmental signs within *Sciuias*. *Sciuias* has a strong ecclesiological and moral focus, with many of its visions revolving around Church order and appropriate behaviour. However, the ecclesiological content is embedded within representations of the living world that are truly cosmic in scale. In this chapter I explore Hildegard’s relationship with the learned circles of the twelfth-century Rhine region, to situate her ideas amongst the influential reform movements of the time. This sheds light upon her choice of environmental images in *Sciuias*, with the cosmic egg and macrocosm/microcosm model emerging as her preferred allegories. I propose that in *Sciuias*, Hildegard experiments with ecological images that enabled her to freshly interpret Scripture and popular philosophical concepts. However, her exploration of the cosmic

egg and the microcosm/macrocosm are conspicuous, even out of place, amidst her moralising messages. I transition to a study of her second text, *Liber subtilitatum diuersarum naturarum creaturarum* (*Book of the Intricacies of the Diverse Natures of Creatures*). *Causae et curae* – as its medico-botanical portion came to be known – reveals Hildegard’s indebtedness to Honorius’ images of the universe, particularly the cosmic egg and God as a wheel. It becomes clear in these early works that Hildegard strictly avoided the common terminology for popular philosophical concepts, such as the cosmic wheel, microcosm/macrocosm, and *Natura*. I explore the implications of this avoidance in relation to Hildegard’s earliest efforts to interpret Scripture through the living world.

In Chapter Three, I examine selected visions from Hildegard’s final treatise, the *Liber diuinorum operum* (*Book of Divine Works*, hereafter *LDO*), to argue that her highest priority is empowering her audience to understand the universe and its signs within salvation history. *LDO* is the culmination of Hildegard’s theological and cosmological thinking; representing her most mature interpretation of religious and environmental ideas. Unlike her images of the universe and the human being in *Sciuias* and *Causae et curae*, which supported clerical and medical activities respectively, the universe in *LDO* illuminates her understanding of key scriptural narrative. That is to say, the sign processes of the living world, including its mechanisms, patterns and cycles, are the tools that enable her to interpret Scripture and sources of profound religious importance. Reading Hildegard’s intricate knowledge of the microcosm/macrocosm ecosemiotically, it becomes possible to look for her personal interactions with the environment in her vision of the “divine works”. How did the elements of the landscape or changes in the season impact the direction she took her allegories, and her reading of Scripture? Selected textual samples from *LDO* reveal how Hildegard’s continued

omittance of the terms commonly used to denote philosophical concepts, and her deep awareness of the living world enabled her to portray scriptural narratives and the human relationship with the divine through an interconnected and dynamic universe.

Chapter One: Germinating the seed. Honorius and his image of the world

In this chapter I examine components of the *Imago mundi* by Honorius to suggest that he used his substantial access to book collections and his authorial expertise to rouse a subtle though noteworthy shift in how the world's signs were understood. I argue that despite the patristic and medieval tradition of rejecting the natural world, Honorius promoted a different relationship with the world: one where the *mundus* (world) and philosophical concepts relating to the world could be read as signs of the divine. He contributed to a shift in ideas about the world through his summative explication of the natural world, which enabled older and rare philosophical ideas to re-emerge. What we see in the *Imago mundi* is not a ground-breaking synthesis of the world as sign; rather, an image of the world that was more positive than the one he inherited from the Church Fathers and most medieval thinkers. I argue that Honorius must be seen as one of the earliest enablers of this shift in thought in the Holy Roman Empire of the twelfth century. Through selective inclusions and omissions of traditional ideas, he gave his audience permission to move away from the dichotomy between world and God, and instead favour the practice of reading the world as a revelatory sign system. Closely examining the language and ideas of the *Imago mundi* reveals an emerging semiotic tradition within twelfth-century German thought, in which writers consciously disassociated from the tradition of *contemptus mundi* (contempt of the world) in favour of images of the world as a medium of the divine.

I begin by introducing the reader to Honorius Augustodunensis and the research on his life and works. I then explore the complex meanings embedded within the title, *Imago mundi*, relating these to the ecosemiotic principles articulated in the Introduction. The title, I argue,

has unexplored implications for the text's original purposes and how it was interpreted. I move on to assess Honorius' use of the image of the cosmic egg and the human as an image of the universe, and demonstrate how these two imaginings of the natural world serve as the key framing paradigms of the *Imago mundi*. These components of the *Imago mundi* combine to demonstrate Honorius' sustained commitment to environmental signs and concepts of the natural world.

The life and writings of Honorius Augustodunensis

Honorius garners limited attention from scholars due to the scarcity of manuscripts that capture the details of his life, and the enduring perception that he did not contribute significantly to his intellectual environment.¹ This leaves researchers with limited insight into his doctrinal training, geographical movements, and intellectual legacy. Though there is very little extant material, it is possible to extrapolate and reconstruct some details of his life. Honorius was born in approximately 1070 and spent much of his public life as a canon regular at the *alte Kapelle* in the imperial city of Regensburg. He most likely transitioned to become a Benedictine monk around 1133/4.² His early life, including where he lived and received his education, remains opaque, although Valerie Flint has argued for the "England hypothesis."³ Flint proposed that

¹ Honorius is absent from many of the standard surveys of the twelfth century renaissance, garnering but one mention in Haskins' work, and short acknowledgements in edited collections. See Charles Homer Haskins, *The Renaissance of the Twelfth Century* (Cambridge: Harvard University Press, 1927); Charles Burnett, "Scientific Speculations," in *A History of Twelfth-Century Western Philosophy*, ed. Peter Dronke (Cambridge: Cambridge University Press, 1988), 168. See also R.L. Benson and Giles Constable, *Renaissance and Renewal in the Twelfth Century* (Toronto: University of Toronto Press, 1982, 1991).

² The *alte Kapelle* is the Basilica of the Nativity of Our Lady in Regensburg, southern Germany. There is very little evidence of his life extant, with questions around his profession, location and educational background remaining opaque to the researcher. See Flint, "Honorius Augustodunensis," 95, 110-116.

³ Flint, "Honorius Augustodunensis," 127. For more, see Joseph Endres, *Das St. Jakobsportal in Regensburg und Honorius Augustodunensis* (Kempten: J. Kösel'schen, 1903); Heinrich Schipperges, "Honorius und die Naturkunde des 12. Jahrhunderts," *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften* 42, no. 1 (1958): 71.

he travelled to Canterbury, under the mentorship of Anselm of Canterbury (1033-1109) and spent time in Worcester. His deep familiarity with many key ideas of Anselm certainly points to a close proximity. In particular, both Honorius and Anselm shared appreciation for human reason, which enabled them to work through matters such as the value of world signs in a theological program.⁴

The philosophical methodologies that Honorius employed and the high concentration of manuscripts in Bavaria and Austria point to his connections with both England and the Holy Roman Empire.⁵ Flint has suggested that he returned to Germany in 1110, the year the *Imago mundi* was completed, at the same time as the young Matilda of England (1102-1167) was betrothed to Emperor Henry V.⁶ Anselm of Canterbury served as a mentor to Matilda of Scotland (c. 1080-1118), and her young daughter spent time under his care during her father's travels.⁷ Honorius may have accompanied the young Matilda in her journey from England to the German lands for her betrothal to Henry V.⁸ His connection with the Holy Roman Empire is also visible in his later works, *Offendiculum* and *Quod monachis liceat predicare*, in which he is sympathetic to the Hirsau Reforms that shaped the intellectual and religious cultures of the area in the late eleventh and twelfth centuries.⁹ His travel, appetite for knowledge, and proximity to the reformed circles of Regensburg, not least through the allied Henry V, gave

⁴ Giles Gasper, *Anselm of Canterbury and his Theological Inheritance* (London: Routledge, 2004); Stephen Gersh, "Anselm of Canterbury," in *A History of Twelfth-Century Western Philosophy*, ed. Peter Dronke (Cambridge: Cambridge University Press, 1988), 258-259.

⁵ Walter Andrew Hannam, "The *Inevitable* Of Honorius Augustodunensis: A Study in the Textures of Early Twelfth-Century Augustinianisms," (PhD thesis, Boston College, 2013), 28.

⁶ Flint, "Honorius Augustodunensis," 108.

⁷ Nesta Pain, *Empress Matilda: Uncrowned Queen of England* (London: Weidenfeld & Nicolson, 1978), 8.

⁸ Flint, "Honorius Augustodunensis," 107-8.

⁹ Robert D. Crouse, "Honorius Augustodunensis: De neocosmo," (PhD thesis, Harvard University, 1970), 62.

Honorius the tools and information to produce texts that responded to intellectual needs, and therefore contributed significantly to the transformation of ideas through the twelfth century.

Despite the lack of surety around his biography, the extensive collection of writings attached to Honorius stands intact. Emblematic of book-learning in the early twelfth century, he wrote polemical texts with a focus on ecclesiastical reform, liturgical support works, cosmologies and theological treatises.¹⁰ These works include the *Elucidarius*, *Eucharistion*, the *Offendiculum*, the *Summa gloria*, *Sigillum sanctae Mariae*, *Speculum ecclesiae*, *Gemma animae*, *Sacramentarium*, the lost *Pabulum uitae* and *Refectio mentium*, *Ineuitabile*, *Summa tortius*, *Cognitio vitae*, *Scala coeli maior*, *De anima et de Deo*, *Expositio psalterii*, *In Cantica canticorum*, *Questiones in prouerbia*, *ecclesiasten*, *Joannem et Matteum*, and *De luminaribus ecclesiae*. In the category of cosmology, Honorius produced the *De neocosmo*, which can be considered an exercise in preparation for the *Imago mundi* and the *Clauis physicae*.¹¹ Through his synthesis of *Periphyseon* (also known as *De diuisione naturae*) in the *Clauis physicae*, he provided a wide audience with new access to images of the unfolding universe that had been lost.¹² The popularity of these texts is clear from the number of extant manuscripts from the period, and the quality of the vellum on which they were copied. The books containing his works are uniformly small with little embellishment, indicating that they were produced en masse for ease of access.¹³ His works were truly the “bestsellers” of the early-to-mid twelfth century.

¹⁰ Flint, “Honorius Augustodunensis,” 129.

¹¹ Flint, 130-49.

¹² Flint, 141.

¹³ *Imago mundi*, ed. Flint, 19-35. Flint overviews the nature of surviving early manuscripts.

The burst of metaphysical innovation that occurred in the mid-twelfth century immediately overshadowed the works of Honorius, and this has also impacted scholarly interpretations of his contribution to ideas. Across the scholarship, exploration of his works usually occurs within the context of another thinker. An example is Mary Franklin-Brown's study of the scholastic encyclopaedic text and specifically the thirteenth-century work, the *Speculum maius* (*The Great Mirror*) by Vincent of Beauvais (c. 1190 – c. d. 1264).¹⁴ While such scholarly works shed new light on the twelfth-century's intellectual trends, they can diminish Honorius' contribution through omission of details or by comparison with later thinkers. When Honorius' works are included in intellectual histories of the twelfth-century, it is often in passing, to supplement studies of other writers.¹⁵

Where Honorius is the primary individual under examination, scholars have largely focused on his ability to synthesise vast swathes of knowledge and condense it into comprehensible and compact texts. This can be seen in Trithemius' *De scriptoribus ecclesiasticis* (1494) and the work of Jean Lebeuf in 1738.¹⁶ Since these scholars, there has been sporadic interest in Honorius' biography and works; he is generally viewed as a conservative thinker, who lacked the "nature-seeking spirit" of others, and worked as a "compiler" with "limited capacity for philosophical interpretation."¹⁷ Flint and Matthews

¹⁴ Franklin-Brown, *Reading the World*.

¹⁵ Franklin-Brown analyses Vincent of Beauvais's description of creation in *Ordo iuxta Scripturam* by setting up a comparison with Honorius' *Imago mundi*. See Franklin-Brown, *Reading the World*, 101-104.

¹⁶ Lebeuf uses the evidence from the *Imago mundi* and other works to argue that Honorius was from Germany. See Jean Lebeuf, "Dissertation où l'on combat le sentiment commun, qu'il a existé autrefois dans l'Eglise d'Autun un Prêtre nommé Honorius Auteur de differens ouvrages. Et où l'on fait voir que l'Ecrivain connu sous le nom d'Honorius d'Autun, a écrit et fleuri in Allemagne et non en France," *Recueil de divers écrits pour servir d'éclaircissemens a l'histoire de France, et de supplement a la notice des Gaules* 1 (Paris: Jaques Barois Fils, 1738).

¹⁷ Eva Matthews Sanford, "Honorius, *Presbyter* and *Scholasticus*," *Speculum* 23, no. 3 (1948): 416, 404.

Sanford have argued that Honorius wrote to educate students without access to book collections, and others who were “slow of intellect.”¹⁸ The majority of scholarship on Honorius is written in German and French, and tends to focus on his geographical movements and doctrinal influences. Exceptions include Eva Matthews Sanford’s survey of Honorius’ works, Valerie Flint’s collected works, and Robert Crouse’s introduction to and Latin edition of *De neocosmo*.¹⁹ It should be noted that much scholarship on Honorius takes the form of PhD dissertations, with few researchers progressing their findings into book chapters, articles or monographs.

There are some exceptions to the dominant scholarly position of Honorius as a compiler. Robert Crouse has argued that Honorius possessed an “openness to the world” and a “confidence in the goodness of nature.”²⁰ Claudia Di Sciacca has asserted that Honorius did more than simply digest and summarise Anselm’s ideas in his own work. Instead, Honorius masterfully captured his wide reading, and carefully edited it into highly valuable books.²¹ Re-evaluations of his contribution to twelfth-century thought are relatively unique within the scholarship. In this chapter I demonstrate that far from intellectual conservatism, Honorius possessed the “nature-seeking spirit” that moved him beyond the personified *Natura* and into the world of environmental signs. His attitude was one of agitation, in which he advocated for uncommon philosophical concepts, especially those relating to the world and its signs.

¹⁸ Sanford, “Honorius, Presbyter,” 397; Flint, “Honorius Augustodunensis,” 141.

¹⁹ Sanford, “Honorius, Presbyter,” 397-425; “Honorius Augustodunensis: De neocosmo,”; Wanda Cizewski, “The Doctrine of Creation in the First Half of the Twelfth Century: Selected Authors (Rupert of Deutz, Honorius Augustodunensis, Peter Abelard, and Hugh of St. Victor,” (PhD thesis, University of Toronto, 1983); and Hannam, “The *Inevitable* of Honorius Augustodunensis.”

²⁰ Crouse, “Honorius Augustodunensis: De neocosmo.”

²¹ Claudia Di Sciacca, “London, British Library, Cotton Vespasian D. xiv, fols. 4-169: A Case Study of an English Post-Conquest Miscellaneous Manuscript,” in *Fruits of Learning: The Transfer of Encyclopaedic Knowledge in the Early Middle Ages*, eds. Rolf H. Bremmer Jr and Kees Dekker (Peeters: Leuven, 2016), 146-7.

The Imago mundi

The most popular text within Honorius' oeuvre, the *Imago mundi* provided a wide audience with the first update to the encyclopaedic genre in centuries. For this research, I use the Latin critical edition published by Flint in 1982.²² To his readers, the *Imago mundi* communicated traditional understandings of the world and provided a foundation for an informed reading of Scripture. Today, this kind of text would be classified as an "encyclopedia." However, the term "encyclopaedia" did not exist in the medieval period and no contemporary term existed to classify a work like the *Imago mundi*.²³ Taking this into consideration, I use the phrase "encyclopaedic text" to describe the *Imago mundi*, as per Mary Franklin-Brown's recommendation for such texts written pre-Enlightenment. Franklin-Brown encourages that scholastic encyclopaedic texts are conceptualised as "heterotopias," because they allow many "ways of knowing" to exist alongside one another.²⁴ The ideas of coexisting ways of knowing aligns nicely with ecosemiotics, which emphasises the infinite networks that are possible within the ecosemiosphere. My analysis is thus built upon the idea that the *Imago mundi* is heterotopic;

²² Translations are my own, unless otherwise specified. I am very grateful to Constant Mews, Kathleen Neal, and the Monash Latin Reading Group for their assistance. Flint's edition is the only revision since Andreas Schotto in 1677, which was later reproduced in the *Patrologia Latina*, 172, 115-188. An English translation is yet to be written. Flint's edition includes an introduction to the manuscripts and Honorius' history, but leaves the purpose, aims, and originality of the text largely unexamined. See Flint, "Honorius Augustodunensis: *Imago mundi*," *Archives d'histoire doctrinale et littéraire du moyen âge* 49 (1982): 7-153.

²³ Our modern conception of the encyclopaedia is almost entirely attributable to the Enlightenment encyclopaedias of Denis Diderot and Jean d'Alembert. For a history, see Franklin-Brown, *Reading the World*, 9; Tomas Zahora, *Nature, Virtue, and the boundaries of Encyclopaedic Knowledge: The Tropological Universe of Alexander Neckam (1157-1217)*, (Turnhout: Brepols, 2014), 3.

²⁴ Drawing from Michel Foucault, Franklin-Brown argues that medieval encyclopaedism was a discourse. As such, discourse analysis in accordance with Michel Foucault can be fruitfully applied. The original historical situation of the texts that Honorius quotes must be ascertained, to make sense of its new meaning in the encyclopaedic text. See Franklin-Brown, *Reading the World*, 6-9; Michel Foucault, *The Archaeology of Knowledge and The Discourse on Language*, trans. A.M. Sheridan Smith (New York: Pantheon, 1972).

permitting his audience to explore a rich range of images, particularly as they walked through their own figurative maps during prayer.

Honorius existed within an encyclopaedic tradition in which authors wrote to assist wide audiences to access the divine. Their acts of synthesising textual models and information created new ideas and knowledge, which in turn enabled their readers to do the same.²⁵ Prior to the publication of the *Imago mundi*, readers relied on the works of Isidore of Seville and Hrabanus Maurus. Both Isidore and Hrabanus viewed the components of the universe as semiotic systems.²⁶ Within the medieval semiotic universes envisioned by Isidore and Hrabanus, the reader could encounter a description of a literal creature that simultaneously served a symbolic and even mystical purpose. Isidore and Hrabanus required a high level of abstract cognition from their audiences, as exemplified by the opening concepts of their encyclopaedic texts: Isidore commences *Etymologiae* (Etymologies) with an explanation of grammar, while Hrabanus opens Book One of *De rerum naturis* (On the natures of things) with a description of God, the Son, and the Ghost. Honorius consciously moved away from this level of abstraction by commencing the *Imago mundi* with an image from the natural world. The choice of the cosmic egg as his opening image demonstrates a departure from tradition, and captures his commitment to portraying the world as a sign of the divine, which I explore further within this chapter.

²⁵ Franklin-Brown, *Reading the World*, 47.

²⁶ See Isidore of Seville, *Isidori episcopi Etymologiarum siue originum libri XX*, ed. Wallace M. Lindsay, 2 vols. (Oxford: Oxford University Press, 1962); *The Etymologies of Isidore of Seville*, trans. Stephen A. Barney, W.J. Lewis, J.A. Beach, and Oliver Berghof (Cambridge: Cambridge University Press, 2006). See also Hrabanus Maurus, *De uniuerso: the peculiar properties of words and their mystical significance*, trans. Priscilla Throop (Vermont: MedievalMS, 2006); Franklin-Brown, *Reading the World*, 45.

The three books of the *Imago mundi* provide an overall image of a unified Christian universe, in which the natural world is categorised and explained. Book One provides basic geographical and astronomical information, which leads into the outline of the times and seasons in Book Two. Books One and Two are structured into chapters that are each approximately a paragraph in length. Book Three maps Scripture onto world history, and is delineated according to the ages of the world, rather than chapters as per books One and Two. This structure provided a comprehensive path through several centuries of learning, with each chapter cumulatively equipping its audience with the tools to understand the signs of the world, and how they illuminated the divine. The letter and Prologue that precede the *Imago mundi* point precisely to this purpose, with Honorius explicitly stating that this “little book has been produced for the instruction of the many who lack an abundance of books.”²⁷

The medieval understanding of imago

The phrase *imago mundi* was rare as a title amongst classical and medieval writers, which prompts the question, why did Honorius choose it as the title of his book? Across its history of use, the term *mundus* traditionally carried negative connotations, designating the world as something to be rejected. As such, its usefulness as a term largely lay in the authors’ ability to set it in contrast to the spiritual realm. Amongst the ancients, *imago mundi* was once used within Ovid’s *Metamorphoses* (8 CE).²⁸ Significantly, neither Jerome nor Augustine use the phrase, although it is used occasionally by Ambrose, Paulinus of Nola, Irenaeus of Lyons, and

²⁷ *Imago mundi*, ed. Flint, 49: “Ad instructionem itaque multorum quibus deest copia librorum, hic libellus edatur. Nomenque ei Imago Mundi indatur, eo quod dispositio totius orbis in eo quasi in speculo conspiciatur, in quo etiam nostrae amicitiae pignus posteris relinquitur.”

²⁸ See Ovid, *Metamorphoses* 13.105, 302.

John Cassian.²⁹ Ambrose (d. 397) used *imago mundi* on three occasions, for example, comparing life on earth and life in heaven in *Hexameron* by denoting earthly life as “hibernas glacies atque hiemales caligines” (winter ice and wintry darkness) and contrasting this with the brightness of springtime in the afterlife.³⁰ The phrase *imago mundi* also occurs in the fifth-century *Opus imperfectum in Matthaeum*, falsely attributed to Pseudo-Chrysostom.³¹ With this history of being used in a limited and negative way, it is curious that Honorius chose such a rare and even undesirable phrase for the title of his work.

I suggest that Honorius’ use of *Imago mundi* as a title holds important layers of semiotic, religious and philosophical meaning. These meanings are revealed by breaking the phrase down and exploring the etymology of each word. By using *imago*, Honorius alerts his audience that they are required to think “with images” to appreciate the work’s theological significance. Modern scholars from diverse fields as anthropology and literary criticism provide guidance on how to think “with images.” Siewers reflects on the practice of thinking with images, reminding researchers that “we form part of living image-networks of meaning that span text, earth and ourselves” and thus, we must be open to the possibilities within the image-networks of our sources.³² Taking this into account, we cannot prescribe a singular answer to the question of how Honorius understood the term *imago*, as this limits not only our potential interpretations but also how Honorius’ audiences interpreted the term. Siewers’ recommendation also points to the fact that the images conjured by a title and a text as a whole

²⁹ These observations are based on a search of “imag* mund*” in the Library of Latin Texts - Series A (LLT-A) database.

³⁰ Ambrose of Milan, *Exameron* 1.4, ed. C. Schenkl, CSEL 32.1 (Vienna, 1897).

³¹ Pseudo-Chrysostom, “Homily 53 on Matthew, 25:27” in *Opus imperfectum in Matthaeum*.

³² Siewers, “The Ecopoetics of Creation,” 74.

form a network. I seek to unpack the possible relationships between the images that can be found in the *Imago mundi*.

The medieval concept of *imago* held several co-existing meanings, which French medievalist, Jean-Claude Schmitt theorised within a triangular model.³³ The first meaning within his model was theological and anthropological in nature, taken directly from the Judeo-Christian tradition, specifically presented in Gen. 1:26-27. Here, *imago* refers to the teaching: “faciamus hominem ad imaginem et similitudinem nostram” (let us make man to our image and likeness).³⁴ This first level of meaning also captures the Platonic meaning of the term *imago*, in which the fundamental nature of the human being is as image. In the classical tradition, it was understood that the human being could only access the divine through images or “an imagined account,” because *imago* was the “very condition of human knowledge.”³⁵ The Christian Platonism of the medieval period offered more optimistic opportunities for the human to experience the divine mind in the temporal realm, through Jesus.³⁶ The Christian concern for the nature of *imago* is reflected in an excerpt from an anonymous twelfth-century author, in which it is stated that “everything is *imago*, which is far from the truth, and yet it does what it can... lest nothing should be said at all.”³⁷ When *imago* refers to the human in the image of God, it affirms the core Christian principle that the human being uniquely represents

³³ Jean-Claude Schmitt, “La culture de l’imago,” *Images Medievales, Annales HSS* no. 1 (1996): 3-4.

³⁴ Gen. 1:26-27: “And he said: Let us make man to our image and likeness: and let him have dominion over the fishes of the sea, and the fowls of the air, and the beasts, and the whole earth, and every creeping creature that moveth upon the earth. And God created man to his own image: to the image of God he created him: male and female he created them.” (Douay Rheims Vulgate).

³⁵ Dronke, *Fabula*, 34. The archetype of the universe solely existed in the divine mind, which was inaccessible to humans due to the fall from Paradise. Only the Apocalypse could change this. See Calcidius, *Timaetus*, 29 b-c, *Studien zum Timaioskommentar des Calcidius*, ed. Jan H. Waszink (Leiden: Brill, 1964), 21, 24-22, 7.

³⁶ Dronke, *Fabula*, 36.

³⁷ Dronke, 35.

God. With the choice to use it in the title, Honorius alludes to the theological backdrop of the text, and signals the reader's role as the key interpreter of the cosmic sign system to come.

Honorius worked within a tradition in which *imago* also referred to humanity's "symbolic productions," including metaphors and material representations of metaphors.³⁸ Medieval thinkers understood that metaphors, as depicted through symbolic language, were a tool for contemplating the divine. This level of meaning speaks directly to the overall purpose of the *Imago mundi*; to provide readers with the knowledge required to understand religious texts. When "image of the world" is read as "metaphors of the world" or "symbolic productions of the world", the semiotic nature of the text becomes clearer, with readers acquiring from the *Imago mundi* the skills needed to unpack the signs witnessed in scriptural readings and in the natural world. And of course, as noted in the Introduction, during the medieval period, the term *mundus* designated not just the world, but the universe and everything that existed therein. Thus, Honorius' images are cosmic in scale.

Imago also referred to the images of the mind, including memories and dreams.³⁹ Elusive images of the mind prompt us to recall my four chosen principles of ecosemiotics, and specifically the fact that human culture responds to the ecological semiosphere in which it exists. As such, images of the mind are also images of the environment, and any attempt to describe them results in the creation of sign-based metaphors. This not only has implications

³⁸ This category is the second meaning of *imago* in Schmitt's model and includes any form, such as a sculpture or painting, which symbolically represents a concept. He proposes that these three meanings be seen as a triangle, with each relating to the other. See Schmitt, "La culture de l'imago," 4-5; "seulement des images matérielles, mais d'autres, <images> qui, dans la culture médiévale tout particulièrement, en sont, me semble-t-il, inseparables." Schmitt, "La culture de l'imago," 3-4.

³⁹ Schmitt, 4.

for Honorius' image of the world, but also any image that his readers create in their own minds and written texts. The various medieval meanings of *imago*, whether referring to the human in the image of God, or the metaphors humans create through sign-systems, or the fleeting memories that cannot be easily identified, work in concert with the term *mundi*, to invite the reader into a text that sought to shift perceptions of the world and how its signs could serve as a vehicle for accessing the divine.

The *Imago mundi* begins with a brief letter from "a certain Christianus".⁴⁰ The response that Honorius provides to the letter serves as the Prologue to the compact, though comprehensive, encyclopaedic text to come.⁴¹ In his letter, Christianus implores Honorius to share his wisdom, lamenting that:

I am surrounded by the ignominious shadows of ignorance, I seem to lead a sad and mournful life like a blind person. This being the case, since I recognize you to be infused with the immeasurable light of wisdom, I beseech, together with many others, a little scintilla of your ardent knowledge...⁴²

In response to this plea for knowledge, Honorius notes that Christianus and others study Scripture fastidiously, even sucking the marrow from it.⁴³ He suggests that these individuals are committed to spiritual learning, although there are gaps in their worldly learning.⁴⁴ This

⁴⁰ Endres suggested that the addressee is Christian, the abbot of St. James of Regensburg (1133-1153). This has not been ascertained for certain. See Joseph A. Endres, *Honorius Augustodunensis: Beitrag zur Geschichte des geistigen Lebens im 12. Jahrhundert* (Kempten and Munich: Joseph Kösel'schen, 1906), 4. Many of Honorius' works follow on from a request such as Christianus', prompting scholars to suggest that he wrote both the request and the response, and that this has rendered them little more than literary devices to the modern reader. See Crouse, "Honorius Augustodunensis: *De neocosmo*," 154. Whether this letter is a literary device or legitimate epistolary exchange is of little significance to this chapter, which is interested in how the text represents the natural world, as opposed to why Honorius wrote it.

⁴¹ Nineteen of the surviving thirty-nine manuscripts and fragments from the twelfth century contain a reference to "Christianus." See Flint, "Introduction," *Imago mundi*, 8.

⁴² *Imago mundi*, ed. Flint, 48: "Quia ignorans cum ignorantibus ignorantē, tenebris inuoluor, idcirco mestam lugubremque uitam ut cecus ducere uideor. Qua re, quia te immensa sapientiē luce circumfusus cognosco, cum multis aliis deosco quatenus aliquam scintillulam tue flammium scientiē..."

⁴³ *Imago mundi*, ed. Flint, 48: "Cum iugiter lectioni studiosus incumbas, ac totius scripturę medullam sitibundus exsugas..."

⁴⁴ *Imago mundi*, 48.

argument relies upon Augustine's three levels of vision, which are organised on three planes, from lowest to highest reasoning. In this framework, the corporeal eye perceives the natural world, the spiritual eye sees bodies that are absent from the natural world, and the highest level, intellectual vision, pursues the most complex contemplation of matters, that is, matters that cannot be imagined.⁴⁵ Honorius praises the strength of his audience's *uisum* (inner eye), which they have nurtured through the study of Scripture, and he attributes the weakness of their *oculum corporis* (corporeal eye) to a lack of educative books.⁴⁶ Imbibing Augustine's three levels of vision, Honorius regarded ignorance of the world as an obstacle to unification with the divine, and the *Imago mundi* is his attempt to rectify the issue. He endeavoured to assist his readers through a demonstration of "the arrangement of the whole world" as if "observed in a mirror."⁴⁷ At this early point in the text, it becomes clear that natural images held an important semiotic role within Honorius' thinking, and Christian's letter provided the impetus to commit his understanding to the page.

Within his response to the letter, Honorius adopts a confident yet defensive tone that gives his work urgency. This rhetoric reflects the political, ecclesiological, and theological issues that surrounded this kind of learning in the early twelfth century. Honorius alerts Christianus – and thus his wider audience – that he has many enemies who denounce the sharing of information on the natural world. These enemies condemn the belief that a sound understanding of the natural world underpins the reading of Scripture.⁴⁸ His clear agitation in

⁴⁵ Augustine, *The Literal Meaning of Genesis*, trans. John Hammond Taylor (New York: Newman Press, 1982), 2:186. Suzannah Biernoff succinctly summarises these levels. See Suzannah Biernoff, *Sight and Embodiment in the Middle Ages* (New York: Palgrave-MacMillan, 2002), 25.

⁴⁶ *Imago mundi*, 48.

⁴⁷ *Imago mundi*, ed. Flint, 49: "... dispositio totius orbis in eo quasi in speculo conspiciatur..."

⁴⁸ Honorius uses the image of a hairy goat to portray his detractors. *Imago mundi*, ed. Flint, 48.

the Prologue responds to the debates that occupied the late eleventh and early twelfth centuries. For example, in the late eleventh century, Manegold of Lautenbach (c. 1030-c. 1103), an Augustinian canon in south-west Germany, wrote against a Benedictine monk, Wolfelmus Abbot of Brauweiler (d. 1091), admonishing his close reading of the *Commentary on the Dream of Scipio* by Macrobius (395-436). Manegold was concerned with the parallels he saw others making between the paganistic concept of the *anima mundi* (world soul) and the Holy Spirit. He considered the consumption of classical texts as heretical and inherently incompatible with Christian theology.⁴⁹ Before him, reformers like Peter Damian (1007-1072) had campaigned for religious “renewal through purification” on ecclesiastical matters.⁵⁰ These debates occurred on the backdrop of the *contemptus mundi* trope, which had roots in the works of classical and Patristic authors. *Contemptus mundi* required Christians to reject all worldly materials and matters in favour of the spiritual and eternal life. It was a perpetual reminder that the biological world was impermanent and fleeting. The phrase *imago mundi* demonstrates Honorius’ disagreement with these intellectual trends and tropes, as can be seen in his wide-ranging use of classical sources, such as the *Commentary on the Dream of Scipio* by Macrobius.⁵¹ Instead, his urgency on the topic saw him become one of the earliest thinkers in

⁴⁹ Manegold of Lautenbach criticised authors who relied too heavily on the ancients, for fear that they would succumb to their pagan beliefs. Manegold’s concerns grew out of direct experience with the Investiture Controversy (1075-1122). For a discussion, see Tomas Zahora, *Nature, Virtue, and the boundaries of Encyclopaedic Knowledge*, 2. Robert Ziolkowski suggests that studying classical philosophy was a central component of the emerging scholastic tradition in France. The schools were politically tied to the patronising German emperors. To Manegold, this allegiance placed practitioners of classical philosophy in contest with the papacy and Christian faith. See Manegold of Lautenbach, *Liber contra Wolfelmum*, trans. Robert Ziolkowski (Louvain: Peeters Publishers, 2002), 1-9.

⁵⁰ Peter Damian and his followers stirred these debates in the eleventh century. The kind of purification that he called for led to violent clashes between ecclesiastics and laymen in Italy and beyond. See Kathleen G. Cushing, “Of Locustae and Dangerous Men: Peter Damian, the Vallombrosans, and Eleventh-century Reform,” *Church History* 74, no. 4 (2005): 742; Sanford, “Honorius, Presbyter,” 419; Horst Fuhrmann, *Germany in the High Middle Ages, c. 1050-1200* (Cambridge and New York: Cambridge University Press, 1986), 46.

⁵¹ Honorius directly quotes Macrobius in his explanation of: the four elements, fire, air water and earth; the five zones; and the planets and the moon. See *Imago mundi*, ed. Flint, 50, 51, 76.

the twelfth-century Rhineland to explore the world semiotically, and encourage readers to see the world as a medium of the divine, despite the risks to his livelihood that he perceived.

By the mid-twelfth century, a plethora of works called for careful study of the natural world, with Honorius' early work in this space appearing rudimentary by comparison. Hugh of Saint Victor, for example, recommended that readers engaged in a "special course of studies" that covered geography, history, doctrine, virtue, vice, and the operations of God in the universe before studying Scripture. In his work on creation and salvation, *De sacramentis christianae fidei* (*On the Sacraments of the Christian Faith*), he perceived the signs of the natural world as sacramental, alongside Scripture and doctrine.⁵² Within these writings, Hugh instructed readers in the skill of unpacking Scripture, including the three levels of meaning embedded within many of its narratives: the historical-literal, the allegorical, and the tropological or moral.⁵³ *On the Sacraments* exemplifies the twelfth-century grappling with the meaning of the natural world within religious thought, with its vast imagery overshadowing Honorius' efforts within this intellectual space.⁵⁴ Writing in 1110, before Hugh started teaching, Honorius used the *Imago mundi* to campaign for a new appreciation of worldly signs. He gave readers the tools, and perhaps more importantly, the permission, to extract meaning from the world and read Scripture in light of this learning.

⁵² Hugh of Saint Victor, *On the Sacraments of the Christian Faith (De Sacramentis)*, trans. Roy Deferrari (Cambridge, MA: Mediaeval Academy of America, 1951).

⁵³ Beverly Mayne Kienzle, *Cistercians, Heresy and Crusade in Occitania, 1145-1229* (Suffolk: Boydell & Brewer, 2012), 66.

⁵⁴ Rupert of Deutz also contributed notable works on the cultural and theological meaning of the world. See Rupert of Deutz, *De sancta trinitate et operibus eius: libri I-IX*, ed. Hraban Haacke (Turnhout: Brepols, 1971-1972).

The universe as a cosmic egg

Like the layered meanings of its title, the heterotopic ideas in the *Imago mundi* were enhanced by the reader's careful rumination and imaginative interpretations. The first chapter of the *Imago mundi* commences with the universe represented through the allegory of an egg. In the chapter titled "De forma mundi" (The form of the world), Honorius explains that the universe "is a round ball, but like an egg, with distinct elements."⁵⁵ As the chapter progresses, the components of the egg are delineated, including the shell, white, yolk, and "pinguedinis gutta" (drop of fat).⁵⁶ Each component of the egg has a parallel in the universe, and each required careful contemplation. Honorius explains that:

the world is surrounded by the heavens like a shell, the pure ether is enclosed like the egg-white by the heavens, the turbulent air, like the yolk by the ether, the earth like the drop of fat by the air.⁵⁷

This vivid image provided the reader with an organisational paradigm that centred upon a ubiquitous biological vessel. It had a tangibility that appealed to many, making it easy to contemplate, even observe physically if desired. Not only did the components of the egg enable it to serve as an effective tool for imagining the universe, its simplicity enabled readers to personally explore its potential symbolic meanings. For those without vast libraries to study, the image of the egg was vivid enough to create a sound mental map onto which they could build their understanding of the universe. The egg is the first image of the world that occurs within the *Imago mundi*, providing his readers with an opportunity to appreciate the form of the universe before elevating their contemplation to immaterial and divine matters.

⁵⁵ *Imago mundi*, ed. Flint, 4: "Mundus dicitur quasi undique motus. Est enim in perpetuo motu. Huius figura est in modum pilę rotunda, sed instar oui elementis distincta." The shape of the universe was contested, with some describing an oval, while others, a wheel. See Dronke, *Fabula*, 80.

⁵⁶ *Imago mundi*, ed. Flint, 49.

⁵⁷ *Imago mundi*, ed. Flint, 49: "Sic mundus undique caelo ut testa circumdatur, caelo uero purus ether ut albumen, etheri turbidus ac rut uitellum, aeri terra ut pinguidinis gutta includitur."

Unlike previous thinkers who employed the concept of a cosmic egg, including Basil and Macrobius, Honorius expanded its symbolic potential by using it to frame his encyclopaedic text.⁵⁸ The decision to open the *Imago mundi* with the image of the egg re-framed authoritative Christian teaching about the world and theology in a much more positive light than many existing religious texts. As explored in the Introduction, in the medieval Latin West, prominent doctrines of the Church Fathers often took an apathetic view of the natural world. For example, the explorations of Christian faith and spiritual practice within Augustine's *De ciuitate Dei* were rooted in concerns around human behaviour and the fraught relationship between body and soul.⁵⁹ While his psychological theology provided unparalleled insight into Christian faith, it also reflected his urban lifestyle and cultural background. Ultimately, Augustine's emphasis on unification with the divine through the person of Christ did not lend itself to a positive relationship with the sensory world, which was at best a distraction from the goals of Christian faith.⁶⁰ Honorius carefully chose which aspects from Augustine's theology to include in the *Imago mundi*, through the technique of "modification by selection and emphasis" that he learnt from Eriugena and others.⁶¹ During his lifetime, there was a proliferation of interest in Eriugena and Pseudo-Dionysius in the Rhineland, to which he responded actively. Recovering earlier systems of thought, such as the cosmic egg, and using

⁵⁸ Other influences include Boethius, Martinus Capella, Eriugena, and Remigius of Auxerre. See Appendix A, Dronke, *Fabula*, 154.

⁵⁹ Augustine, *The City of God against the Pagans*, trans. Robert W. Dyson (New York: Cambridge University Press, 1998). Augustine used the term *uiriditas*, that is, greenness, just once across his works. This was in reference to the fleeting nature of the physical world.

⁶⁰ Rik Van Nieuwenhove, *An Introduction to Medieval Theology* (Cambridge: Cambridge University Press, 2012), 35.

⁶¹ Crouse explains how Eriugena represented Augustinian thought. See Crouse, "Honorius Augustodunensis: De neocosmos," 132.

these paradigms as the framing concepts for this encyclopaedic text, was but one way that Honorius created an alternative lens that helped readers understand the natural world.⁶²

The zones of the world

As reflected in his reply to the opening letter, Honorius wrote about the natural world in response to the physical and intellectual needs of his audience. To assist his audience with reimagining their relationships with the environmental signs they experienced, he transitions quickly from the cosmic egg into an extended articulation of the zones of the earth and computation. Responding to the need for local knowledge, he elaborates on the “inner” habitable zones with considerable detail, while glossing over the “outer” inhospitable zones of the earth.⁶³ Chapters 23 and 24, which are concerned with Upper and Lower Germania, are particularly well-informed compared to the adjacent chapters. He explains that Upper Germania is bounded by important rivers, with the Danube River fed by sixty “precipuis fluuiis” (excellent rivers) before eventually flowing into the Pontic Sea.⁶⁴ He provides enough detail that local audiences can position themselves within the text, pinpointing where the Danube commences and where this is in relation to “Norica and Bavaria, in which is the city Regensburg.”⁶⁵ This reference to Regensburg adds a level of detail peculiar to this chapter on Germania, and reflects a heightened concern for the area. Unlike the subsequent chapters on Greece, Italy, Gaul, Spain and Britannia, the chapters on Upper and Lower Germania are

⁶² The “mystical theology” of Pseudo-Dionisius and Eriugena were central to the ninth-century interest in the natural world. See Schmidt, “La culture de l’imago,” 18.

⁶³ The *Commentary on the Dream of Scipio* by Macrobius (395–436) was particularly influential amongst Christian cosmographers including Bede and Honorius, who saw it as the most authoritative outline of the zones of the earth. See Irina Metzler, “Perceptions of Hot Climate in Medieval Cosmography and Literature,” *University of Reading* 23 (1997): 71, 72.

⁶⁴ *Imago mundi*, ed. Flint, 60.

⁶⁵ *Imago mundi*, 60: “Est in ea Noricus que et Bawaria, in qua est ciuitas Ratispona.”

devoid of political, mythological, and human-centred narratives.⁶⁶ Considering the localised knowledge of his audience, Honorius opts for more concrete information on the region. The majority of his audience did not require a summary of their region's politics, nor mythological images to help them imagine the river systems of the area, because they were exposed to these political and geographical realities.

The human as a microcosm of the universe

Once the reader has the tools to create their own mental image of the natural world, Honorius introduces the idea of the human as a microcosm of the universe. In the chapter, "De homine" (The human) at the end of Book One, the reader encounters a commentary, in which Honorius states that "the human microcosm is the minor world" (unde et homo microcosmus id est minor mundus dicitur).⁶⁷ In his formulation, the human body is like the cosmos, in that it is characterised by "seven modes": the four elements and the three strengths of the soul.⁶⁸ Both the human body and the universe could be divided into parts, with each part possessing a purpose and role to play within the whole. Likewise, both were comprised of the four elements: fire, air, water and earth. And of course, both were created by God. This Christianised microcosm/macrocosm concept grew out of the pagan faith system and medical practice of the ancients. In the classical world, it was acceptable for the human body to be considered "part of the rational creation."⁶⁹ It was difficult, though, to reconcile this view of a connected human universe with the Christian emphasis on humanity's separation from Creation. Irrespective of

⁶⁶ *Imago mundi*, 60-62.

⁶⁷ *Imago mundi*, 80.

⁶⁸ *Imago mundi*, 87.

⁶⁹ Fernando Salmon, "The Body Inferred: Knowing the Body through the Dissection of Texts," in *A Cultural History of the Human Body in the Medieval Age*, vol. 2, ed. Linda Kalof (New York: Bloomsbury Academic, 2010), 88.

this difficulty, the theory of the microcosm/macrocosm was adopted by medieval thinkers. Eriugena for example, suggested that “In man is contained the universal creature,” that is, the universe is contained within the human.⁷⁰

The most prominent message in Honorius’ articulation of the microcosm/macrocosm is the body and the universe’s yearning for balance. Here we are reminded of Uexküll’s *Umwelt* and the image of a human interacted with the signs of the universe as if in a symphony. The body, like the universe, could achieve harmony if the elements and humours were present and proportionate to one another.⁷¹ Honorius’ focus on these interconnections and harmonies informs his broader articulation of the universe. Book Two, Chapter 59, titled “De homine microcosmo” (Concerning the human microcosm) articulates how the qualities of the human body, including moisture and temperature, are the same as the qualities of the seasons.⁷² The body was composed of flesh, bone, and blood, which as Honorius lays out, were ultimately created by combining the four basic elements, earth, air, fire, and water. Like much of Honorius’ thinking, the influence of Eriugena can be seen here. In the *Periphyseon*, Eriugena suggests that “all visible and corporal things are the symbol of something incorporeal and intelligible.”⁷³ Honorius purported that the human and the universe shared in their temporal experience, in that both the human and the world experience four ages or seasons.

⁷⁰ Johannes Scotus Eriugena, *Periphyseon: The Division of Nature*, 793C, trans. I. P. Sheldon-Williams, rev. John O’Meara (Washington: Dumburton Oaks, 1987).

⁷¹ *Imago mundi*, ed. Flint, 87. As explained by Cizewski, “the human body, like the seasons, is tempered by the dominance or absence of one or another of the elements.” See Cizewski, “The Doctrine of Creation,” 159.

⁷² *Imago mundi*, ed. Flint, 106.

⁷³ Nieuwenhove, *An Introduction to Medieval Theology*, 66.

The ages of the world

By devoting the entirety of Book Two to time and computation, Honorius made himself vulnerable to criticism from those who condemned the calculation of the universe's age. The Prologue to Book Two states that "In the previous booklet we represented, to the bodily eyes, the globe of the whole world. In the following now we place before the eyes of the heart the time of which it is enclosed."⁷⁴ This opening line makes clear Honorius' belief that the information contained within Books One and Two is enough to understand the visible world. As such, he shifts to the contemplation of invisible, higher things. With the reference to the *oculis cordis*, Honorius' speaks to the contemporary medieval belief that the heart must be reserved for contemplating God, rather than the environmental signs of the natural world.

Honorius commences Book Two with an explanation of the three types of time that exist: *aeuum* (that is, God), *tempora aeterna* (the archetypal world and the angels), and the *tempus autem mundi* (the time of the world, which will end with the world). Once the three types of time are defined, Honorius explains the myriad measurements of time, including the *atomus*, *ostentum* and *momentum*.⁷⁵ He explains that the zodiac divides the world into eight circles, which originate from different zones of the universe.⁷⁶ Chapters that demarcate the days, weeks and months of the year lead into more complex computations concerning the lunar and solar months, the planetary and solar cycles, how the months were named, and the seasons that map onto the months.⁷⁷ He informs his readers of the weather conditions that can be

⁷⁴ *Imago mundi*, ed. Flint, 92: "Priori libello globum totius mundi oculis corporis representauimus, sequenti iam tempus in quo uoluitur oculis cordis anteponamus".

⁷⁵ *Imago mundi*, ed. Flint, 93.

⁷⁶ *Imago mundi*, 95-97.

⁷⁷ In Flint's edition, these chapters are numbered 31-48, 84-87, 52-56. See *Imago mundi*, ed. Flint, 100-103, 111-112, 104-105.

expected in each season, and the qualities of plants at these certain times. The descriptions of the seasons relate exclusively to Honorius' "part" of the world, and he makes clear that other regions, for example Egypt, experience different seasons. In different parts of the world, the signs associated with winter might thus include foliated trees and flowering fields, rather than defoliated branches and fallow lands.⁷⁸ His localised knowledge, in conjunction with the high number of manuscripts from the Rhine River region of Germany, confirms that Honorius aimed to provide readers with the computational skills to understand their localised world signs.

Conclusion

Honorius meticulously digested and laid out core knowledge on the signs of the world, up to and including the ideas of his contemporaries. When the prologues of each book of the *Imago mundi* are taken together, it becomes clear that Honorius consciously built his encyclopaedic text around two classical concepts: the cosmic egg from Macrobius; and the human as microcosm of the universe. Honorius' response to Christianus in the Prologue to Book One invites the reader into a text whose message is urgent and necessary to Christian faith. The universe as a cosmic egg, as depicted at the beginning of Book One and the opening to Book Two, immerses the reader in a text that centres the natural world. By choosing *res* as the structuring device, that is, things from the natural world, rather than abstract categories or the mysteries of language, Honorius disrupted the encyclopaedic model, as exemplified by Isidore and Hrabanus Maurus.

⁷⁸ *Imago mundi*, 105.

While Honorius did not explicitly present his own observations or experiences of environmental processes, he understood that the natural world was an integral part of the religious experience. Like Bede (c. 672-735) before him, who was accused of heresy for recalculating the age of the world, Honorius and contemporaries like Marianus Scotus of Mainz (1028-c. 1082) provided the tools for reading the world with accusations of heresy, or at least, negative social ramifications, in mind.⁷⁹ The degree to which Honorius risked his life to outline such knowledge is difficult to know. However, his decision move forward with the *Imago mundi* ultimately reflects his commitment to assisting others interpret their own observations of the world, and appreciate their revelatory capacity.

In the thirteenth century, a plethora of previously inaccessible scientific writings were translated into Latin from Arabic and Greek, causing Honorius' abundantly popular works to be superseded. Writers like Vincent of Beauvais (c. 1184-1264) and Alexander Neckam (1157-1217) drew upon Honorius' summaries and innovative encyclopaedic paradigms, but they allegorised further than he dared; elaborating on concepts like the four elements, and creating links between the human and the cosmos beyond Honorius' more conservative suggestions. Abelard evoked the image of a bird sitting on the cosmic egg to warm it with its own heat and hatch the chicken inside. Moving into a different interpretative realm, for Abelard, the egg had to hatch in order to become the universe.⁸⁰ As such, Honorius' contributions to knowledge and ideas have been almost entirely forgotten in the historiography of the period. Yet, in the generation immediately following Honorius, his influence would be significant, not least in

⁷⁹ Marina Smyth observed that many of Bede's Irish sources from the preceding century contained "an unexpected amount of interest in the physical world." See Smyth, "The Physical World," 205-206. See also, Fuhrmann, *Germany in the High Middle Ages*, 3.

⁸⁰ See Peter Abelard, *Expositio in Hexaemeron*, in App. A 4a. Dronke, *Fabula*, 96.

provoking Hildegard of Bingen to produce her own imagining of the cosmic egg and an image of the human being as a microcosm of the universe. In Chapter Two I explore the passage of ideas from the heterotopic *Imago mundi* to Hildegard's first visionary text, *Sciuias*.

Chapter Two: The seeds grow. The potential of the living world

It happened that, in the eleven hundred and forty-first year of the Incarnation of the Son of God, Jesus Christ, when I was forty-two years and seven months old, Heaven was opened and a fiery light of exceeding brilliance came and permeated my whole brain, and inflamed my whole heart and my whole breast, not like a burning but like a warming flame, as the sun warms anything its rays touch. And immediately I knew the meaning of the exposition of the Scriptures...¹

The first visionary treatise of Hildegard of Bingen (1098-1179), *Sciuias*, opens with an account of her 1141 vision. The vision that she describes, with its fiery divine source, gave her instantaneous understanding of the hidden meaning of Scripture, which she was expected to communicate. The most prominent feature of her visionary announcement is the exceeding brilliance of the Living Light and its sun-like quality. Hildegard's approach is strikingly different from the encyclopaedic articulation of the universe by Honorius. Where Honorius collects information from previous authors with an archivist's attentiveness and situates his work within the scholarly debates of his time, Hildegard makes clear that her insights are the fruit of divine inspiration. Writing within the context of the Hirsau Reforms, she takes as her starting place Honorius' conservative though optimistic engagement with the world's signs. In *Sciuias*, she harnesses the possibilities of this increasingly positive view of the world to plumb scriptural themes. However, her observable interest in environmental signs is subordinate to the primary purpose of the text, which is a behaviour-focussed reading of Scripture.

¹ *Sciuias* Protestificatio, ed. Führkötter-Carlevaris, 3-4: "Factum est in millesimo centesimo quadagesimo primo Filii Dei Iesu Christi incarnationis anno, cum quadraginta duorum annorum septemque mensium essem, maximae coruscationis igneum lumen aperto caelo ueniens totum cerebrum meum transfudit et totum cor totumque pectus meum uelut flamma non tamen ardens sed calens ita inflammauit, ut sol rem aliquam calefacit super quam radios suos ponit. Et repente intellectum expositionis librorum..."; trans. Hart-Bishop, 59.

This chapter is primarily concerned with Hildegard's developing ability to employ environmental signs to unpack scriptural themes in her first visionary treatise, *Sciuias*. As her first major composition and public announcement of her unique access to the Living Light, *Sciuias* consolidated her ideas for a public audience beyond the monastery. She also began establishing her voice as a visionary, which placed her beyond contemporary religious and philosophical debates. Written across a ten-year period, from 1143 until 1152, it is the product of her first decade as the *magistra* for the women's community at Disibodenberg. The central focus is moral behaviour, with the collected visions teaching against a range of human sins. It is organised into three parts, which examine creation, redemption and salvation. The connecting narrative across the three parts is the progression of salvation history, from creation to the final judgement.² Each of the three books contains several carefully described visions, which are followed by multilayered and often lengthy interpretations. In her Introduction to the English translation, Barbara Newman usefully describes the vision as the "organisational unit" of the text.³ After the description of the vision, Hildegard provides the meaning behind each phrase. Each vision is firstly interpreted through an allegorical reading, then in relation to specific doctrinal teachings and issues of morality.⁴ Within each vision, Hildegard also provides scriptural "proof texts" with allegorical interpretations that reaffirm the overarching messages.⁵ Many of the images explaining her interpretations of Scripture are derived from the world, which reflects her interest in the ecological. In *Sciuias*, though, these images are not always in service of her broader moral message, which exposes a tension between her wish to explore Scripture through the living world and her duty to the Church.

² Newman, "Introduction," *Sciuias*, 21.

³ *Sciuias*, 22.

⁴ *Sciuias*, 22.

⁵ *Sciuias*, 22.

Hildegard's ability to represent an interconnected Christian universe through images of the living world is also present in her second work, the *Liber subtilitatum diuersarum naturarum creaturarum* (*Book of the Intricacies of the Diverse Natures of Creatures*) (1151-1158). The *Book of the Intricacies* was likely divided into two books in the late twelfth century, with one text taking the title *Physica* and the other known as *Causae et curae*.⁶ In *Causae et curae*, Hildegard expounds upon human disorders, cures and preventions, and diagnostic tools, while testing the efficacy of communicating through ecological images.⁷ She completed the writings within *Causae et curae* just six years after bringing *Sciuias* to its final form. Due to *Causae et curae*'s focus on human health and the medicinal uses of plants, animals, and gems, it is highly probable that Hildegard began collating its content while serving as the physician for the women's community at Disibodenberg, and while writing *Sciuias*.⁸

The final section of this chapter examines selected environmental images from *Causae et curae*. I discuss the highly-developed articulation of the microcosm/macrocosm that Hildegard delivers, and argue that in *Causae et curae*, we see, for the first time, the degree to which the model of the microcosm/macrocosm informed her imagining of the universe, and the place of the human being within. With its priority position as an opening image of the text, the microcosm/macrocosm model does not only inspire Hildegard's thinking about the universe, it in fact gives it its specific shape, onto which human matters are mapped. It is very

⁶ *Physica* surveys biological specimens and provides a repository of scientific information. See *Hildegard von Bingen's Physica*, trans. Priscilla Throop (Rochester, VT: Healing Arts Press, 1998).

⁷ For an English translation see *Hildegard of Bingen On Natural Philosophy and Medicine: Selections from Cause et cure*, trans. Margret Berger (Cambridge: D.S. Brewer, 1999). The most recent Latin critical edition is *Cause et Cure*, ed. Laurence Moulinier (Berlin: Akademie Verlag, 2003). For an overview of the topics in *Causae et curae* see Berger, "Interpretative Essay," in *Hildegard of Bingen On Natural Philosophy*, 126.

⁸ Sweet, "Hildegard of Bingen and the Greening," 389.

likely that *Causae et curae* draws in information from several of Honorius' works, including the *Elucidarium*, *Clavis physicae*, and *Imago mundi*.⁹ As such, I also isolate several examples to determine this line of intellectual inheritance and how Hildegard transformed his *imago mundi*.

Sciuias and *Causae et curae* are not traditionally analysed alongside one another, yet several of their key images encourage critical comparison. Hildegard's three visionary treatises, *Sciuias*, *Liber uitae meritorum* and *Liber diuinorum operum*, are understood to come from a divine source, with Hildegard providing exegetical readings of her visions from the Living Light. Most importantly, her visionary treatises illuminate the meaning of Scripture. *Causae et curae* conversely, is encyclopaedic in nature and derived from worldly sources. This divide between the visionary and the medical has made it uncommon for researchers to compare Hildegard's use of images across the texts. However, the divide is not as pronounced as has been accepted in the past, with many images in *Causae et curae* expanding upon those presented in *Sciuias*.¹⁰ I bring together *Sciuias* and *Causae et curae* to explore how Hildegard's understanding of key images is expressed differently based on genre and the source of the information, namely divine or worldly. As they were written in close chronological proximity, I argue that she strategically selected which aspects of the allegories she used in each text, as opposed to capturing the full extent of her understanding in both. At this early stage in her public career, she ensures that her visionary persona is unblemished by worldly matters like health issues and medical interventions. An aspect of her mystical self-imaging is her continued avoidance of intellectual trends and refusal to acknowledge textual sources. She strictly

⁹ Berger, "Interpretative Essay," 129.

¹⁰ Maskulak, "Balancing Tensions," 38.

avoided referencing other authors and using popular terms that would weaken her visionary persona and the mystical splendour of her imagery. As shall be seen in Chapter Three, maintaining a strict division between the moral and the medicinal is a feature only early in her career, and did not necessarily extend beyond her first work. In her final visionary treatise, *LDO*, the cosmos is the key focus, and its divine workings unify her theological, ecological and therapeutic learning.

I argue in this chapter that the concept of the Living Light expresses Hildegard's understanding of God and serves as a unifying principle in *Sciuias*.¹¹ When read ecosemiotically, the Living Light can be understood as a preeminent sign that defines the human being's relationship with the Christian universe. Its power lies in the fact that it unites the Trinity with the living world and the human being, because it is fundamentally articulating the physiological processes of living. The Living Light imbues the environmental signs that Hildegard uses to articulate scriptural themes with divinity. In particular, it enlivens her explanations of the universe as an egg, the growth of wheat and grapes for the Eucharist, and the microcosm/macrocosm model. In her detailed explanations of the universe and its components, Hildegard reveals how the Living Light works in the world. This chapter explores the images that Hildegard's early works borrowed and expanded from Honorius; images grounded in the living world but not quite integrated with her understanding of the divine. The unification of the living world with the human and the divine receives its fullest representation in her last visionary treatise, *Liber diuinorum operum*.

¹¹ Barbara Newman, "Introduction," *Sciuias* ed. Hart-Bishop, 12.

The life and writings of Hildegard of Bingen

Hildegard's early perception of the world was moulded by her mentor, Jutta of Sponheim (1092-1136). Shortly prior to her eighth birthday, Hildegard's parents promised her to the monastic life, at which point she moved to an estate in Sponheim to live with another devout child of nobility, Jutta.¹² During this period before enclosure, Jutta and the devout widow, Uda of Göllheim instilled in Hildegard a strong Christian devotion. On 1 November 1112, in her fifteenth year, Hildegard was enclosed at the geographically-isolated though culturally-reformed monastery of Saint Disibod, with Jutta as the *magistra*.¹³ From 1112 until Jutta's death in 1136, Hildegard lived in the shadow of her mentor. Whilst Hildegard deeply respected her spiritual mentor, as evidenced by her involvement in the writing of the *Vita domnae Juttae inclusae* (*Life of Lady Jutta the anchoress*, hereafter *Life of Jutta*), Jutta's religious priorities diverged from hers.¹⁴ Jutta's practice was grounded in strict ascetic exile from the world, which included a regime of fasting and bodily chastisement.¹⁵ The authors of the *Life of Jutta* – very likely Hildegard and the monk, Volmar – inform us that Jutta:

chastised her body and subjected it to servitude (1 Cor. 9:27), crucifying it along with its vices and passions (Gal. 5:24). She immolated herself as a living sacrifice, a holy sacrifice (Rom. 12:1) in vigils, prayers and continual fasting, in cold and nakedness (2 Cor. 11:27).¹⁶

The *Life of Jutta* continues with descriptions of the “relentless torments” that she imposed upon her body; such was their extremity that her elders were required to observe and intervene to

¹² Anna M. Silvas, “The Life of Jutta: Introduction,” in *Jutta & Hildegard: The Biographical Sources* (Turnhout: Brepols, 1999), 54-55; Fiona Maddocks, *Hildegard of Bingen: The Woman of her Age* (New York: Doubleday, 2001), 19; Victoria Sweet, “Body as Plant: Doctor as Gardener: Premodern Medicine in Hildegard of Bingen's Causes and Cures,” (PhD thesis, University of California, 2003), 32; Franz J. Felten, “What Do We Know About the Life of Jutta and Hildegard at Disibodenberg and Rupertsberg?,” in *A Companion to Hildegard of Bingen*, ed. Beverly Mayne Kienzle et al. (Leiden: Brill, 2014), 17.

¹³ Silvas, “General Introduction,” in *Jutta & Hildegard*, xvii.

¹⁴ Silvas, “The Life of Jutta: Introduction,” in *Jutta & Hildegard*, 62; *The Life of Jutta* in *Jutta & Hildegard*, ed. Silvas, 71.

¹⁵ Silvas, “The Life of Jutta: Introduction,” 53-57.

¹⁶ *The Life of Jutta*, ed. Silvas, 70.

prevent severe injury or death.¹⁷ Hildegard did not subscribe to a version of holiness that required such bodily deprivation. She saw the human body as a tabernacle for the soul, which needed continuous spiritual, physical and nutritional work to avoid the Devil's persuasions.¹⁸ Hildegard's position on bodily health was undoubtedly defined by her work at Disibodenberg as a physician. Serving the women's community and possibly beyond, Hildegard cultivated and understood plants on a scale that covered the needs of an infirmary. With the living world literally giving the soul's home its vitality through its nurturing properties, mapping the world's components onto the needs of the body became part of her developing cosmology. Every component of the world was interconnected with the wellness of the body. With Jutta's premature passing in 1136, Hildegard succeeded her as the *magistra* of the women's community and gained new agency in determining how she interacted with the world. Emerging from Jutta's shadow, she was able to shift the guiding principles of her community towards a more balanced and conscious engagement with their bodies and the world.

At Disibodenberg, Hildegard became familiar with Scripture and a wide range of Church Fathers that enabled her to write cosmology and medical texts. Her broad learning was a product of Disibodenberg's enmeshment with the ideologies of William, Abbot of Hirsau (1026-1091), whose reforms shaped the customs of monasteries across the German lands, including Disibodenberg.¹⁹ Text-sharing was a key component of the Hirsau network, with

¹⁷ *The Life of Jutta*, 70.

¹⁸ *Sciuias* 1.4, ed. Führkötter-Carlevaris, 68; trans. Hart-Bishop, 113.

¹⁹ The Abbey of Hirsau influenced the monasticism of Disibodenberg, particularly its religious practices and doctrinal priorities. Hirsau and affiliated houses supported the political reforms of Pope Gregory in the south-west empire. See William of Hirsau, *Willehelmi abbatis Constitutiones Hirsaugienses*, ed. Pius Engelbert, 2 vols. (Siegburg: Schmitt, 2010); Elsanne Gilomen-Schenkel, "Double Monasteries in the South-West Empire (1100-1230)," in *Partners in Spirit: Women, Men, and Religious Life in Germany, 1100-1500*, eds. Fiona J. Griffiths and Julie Hotchin (Turnhout: Brepols, 2014), 51.

houses communicating regularly through textual and oral correspondence as well as transporting works between one another to make copies.²⁰ The Disibodenberg annals report that the men's library possessed a large collection of books. While monks did not enter the women's enclosure to impart information, the culture of openness fostered by the reforms enabled women to share in these texts.²¹ Copies of Honorius' works, including the *Imago mundi*, were likely counted within the Disibodenberg collection, as they were affordable, compact and popular in the region.²² The boundaries of the women's enclosure were porous to the transfer of ideas, which ensured that Hildegard could develop her knowledge and lead the spiritual wellbeing of her networks.²³

Hildegard's career came to a crescendo in 1147, when she brought her works to the attention of the most authoritative Church leaders of her time.²⁴ In a letter to Bernard of Clairvaux (1090-1153), she informed him of the nature of her visions and the associated

²⁰ Brotherly friendship between houses facilitated the textual communities of the Hirsau renewal. For a recent overview of the Hirsau reforms, see Shannon M. Turner Li, "Irimbert of Admont and his Scriptural Commentaries: Exegeting Salvation History in the Twelfth Century," (PhD thesis, Ohio State University, 2017), 15. The concept of "textual communities" can be found in Brian Stock, *The Implications of Literacy: Written Language and Models of Interpretation in the Eleventh and Twelfth Century* (New Jersey: University of Princeton Press, 1983). Giles Constable overviews the textual cultures in the twelfth century, see Giles Constable, *Letters and Letter-Collections* (Turnhout: Brepols, 1976).

²¹ *The Chronicles of Disibodenberg* in Jutta & Hildegard, ed. Silvas, 7-29.

²² In 2018, the translator of the *Liber diuinorum operum*, Nathaniel Campbell argued that Hildegard "must have" been informed by Honorius in this visionary cosmology. See Nathaniel M. Campbell, "Introduction," *Book of Divine Works*, trans. Nathaniel Campbell (Washington D.C.: Catholic University of America Press, 2018), 10-11.

²³ In studying religious women of the Low Countries, Therese de Hemptinne argues that the High Middle Ages was characterised by high levels of literacy amongst aristocratic women. Women used book-sharing and copying to connect and communicate. See Therese de Hemptinne, "Reading, Writing and Devotional Practices: Lay and Religious women and the Written Word in the Low Countries (1350-1550)," in *The Voice of Silence: Women's literacy in a Men's Church*, eds. Thérèse de Hemptinne and María Eugenia Góngora (Turnhout: Brepols, 2004), 111. Women thus devoted their time to contemplative prayer, meditating on religious texts and images, as explained by Barbara Newman. See Barbara Newman, "The Visionary Texts and Religious Worlds of Religious Women," in *Crown and Veil: Female Monasticism from the Fifth to the Fifteenth Centuries*, eds. Jeffrey F. Hamburger and Susan Marti, trans. Dietlinde Hamburger (New York: Columbia University Press, 2008), 154.

²⁴ Beverlee Sian Rapp, "A Woman Speaks: Language and Self-Representation in Hildegard's Letters," in *Hildegard of Bingen: A Book of Essays*, ed. Maud Burnett McInerney (New York and London: Garland Publishing Inc., 1998), 5.

physical and mental anguish. She implemented several tropes that became her signature character devices, including her lack of education and so-called womanly condition.²⁵ Bernard encouraged her to respond to her gift by writing what she saw and heard, and this encouragement served as her approval.²⁶ Within the same timeframe of this exchange, the Synod of Trier progressed, at which Pope Eugene III likely read extracts from *Sciuias* to the attendees.²⁷ These meetings dealt with matters of clerical life, theology and philosophy; providing a forum for writers to present their ideas to Church leadership.²⁸ The writings of masters like Gilbert of Poitiers came before the subsequent papal assembly at Reims, prompting a Parisian master, Odo of Soissons (d. 1170), to write to Hildegard about his teachings. The years 1147/48 brought Hildegard into close proximity with the explorative cosmologies of contemporary thinkers, which almost certainly opened up pathways of knowledge sharing.

Hildegard renegotiated her level of involvement with the natural and the social world when she established her own monastery on the foundations of a ruined Carolingian monastery near Bingen in 1150/1151.²⁹ From 1151, she wrote on Christine doctrine, ethics, cosmology, the natural world and medicine. Besides completing *Sciuias*, she created liturgical pieces, sermons, homilies, and created visual art during this time. Unlike Disibodenberg, which was located near a tributary of the Nahe River, Rupertsberg was situated on the Rhine; one of the

²⁵ Hildegard of Bingen, Letter 1, *The Letters of Hildegard of Bingen*, vol. 1, trans. Joseph L. Baird and Radd K. Ehrman (Oxford: Oxford University Press, 1994, 1998), 27. For an overview of this moment, see Maddocks, *Hildegard of Bingen: The Woman of her Age*, 76.

²⁶ Maddocks, *Hildegard of Bingen: The Woman of her Age*, 78.

²⁷ Sweet, "Hildegard of Bingen and the Greening," 383-384.

²⁸ Maddocks, *Hildegard of Bingen: The Woman of her Age*, 78.

²⁹ The move was a response to a vision in 1150, which is recorded in *The Life of Holy Hildegard*, composed between 1181 and 1187 by Theoderic of Echternach. See *The Life of Holy Hildegard* 2.5.2 in Jutta & Hildegard, ed. Silvas, 163; Newman, "Introduction," in *Sciuias*, 9.

most significant thoroughfares of the Holy Roman Empire.³⁰ This site provided a new interface with the political and religious activities of the empire and the Church and thus gave her a new impetus to write what she saw and heard.³¹ From 1158 until 1163 she wrote her second visionary treatise *Liber uitae meritorum* (*Book of the Rewards of Life*, hereafter *LVM*), which focuses on human psychology and intricately matches human sins with their “antithetical virtues”.³² On becoming *magistra* at Rupertsberg and continuing in the role of physician that she had previously held at Disibodenberg, Hildegard’s exposure to the semiotic systems of her immediate environment and the Rhine River region increased. She became an agent of change when transforming landscapes into productive spaces that not only met the food and medicinal needs of her community, but also reflected her aspirations for the world. We can catch glimmers of these landscapes in her *Lingua ignota*, songs of the Divine Office, epistles, the *Vita Ruperti*, and from the local species in *Causae et curae*.³³ Though it may not be as recognisable in her visionary treatises, the regeneration of the Rupertsberg site into life-sustaining lands undoubtedly inspired key concepts in *LVM* and *LDO* like *uiriditas* (greenness) and *temperantia* (balance).³⁴

Sciuias

³⁰ The Rupertsberg overlooked Bingen and was only a short distance from Mainz. See Berger, “Introduction,” in *Hildegard of Bingen: On Natural Philosophy*, 9; Mews, “Process Thought,” 7.

³¹ Maddocks, *Hildegard of Bingen: The Woman of her Age*, 221.

³² The *LVM* was inspired by a vision in 1158. See *Hildegard of Bingen: The Book of the Rewards of Life (Liber Vitae Meritorum)*, trans. Bruce W. Hozeski (New York: Garland Publishing Inc., 1994), xvii-xviii.

³³ A summary of Hildegard’s writing career can be found in Maddocks, *Hildegard of Bingen: The Woman of her Age*, 73-74.

³⁴ For a list of important terms in Hildegard’s works and particularly in *Causae et curae*, see Margaret Berger, “Interpretative Essay,” 128.

The ideas in *Sciuias* emerge from scriptural, philosophical and exegetical traditions that Hildegard absorbed from late antiquity to her own time.³⁵ By maintaining a strict practice of leaving sources unreferenced, Hildegard distanced herself from contemporary texts like Honorius' *Imago mundi* and Hugh of Saint Victor's *De sacramentis christianae fidei* (*On the Sacraments of the Christian Faith*). This practice extended to her use of popular philosophical concepts, which she never identified by name. Despite her efforts to extricate herself from her intellectual environ, scholars including Peter Dronke, Barbara Newman and Margaret Berger have convincingly demonstrated that she drew directly and indirectly from a broad range of texts. Dronke notes the presence within *Sciuias* of themes from the *Shepherd of Hermas*, Adso's *On the Antichrist*, Augustine's *Confessions* and the *City of God*, Jerome, Gregory the Great, and Bede.³⁶ Newman suggests that it is very likely she also accessed copies of the late antique and Carolingian writers Isidore of Seville, Hrabanus Maurus, Paschasius Radbertus and Notker of St Gall.³⁷ It is plausible that she knew Eriugena's *Periphyseon*, the *Book of Nimrod*, Macrobius' *Commentary on the Dream of Scipio*, Cicero's *On the Nature of the Gods*, Seneca, Boethius' *Consolation of Philosophy*, Calcidius' translation and commentary on Plato's *Timaeus*, and Manegold of Lautenbach's *Contra Wolfhelmum*.³⁸ Finally, she was most likely aware of contemporary reformist ideas including those from Honorius, Hugh of Saint Victor, Gerhoch of Reichersberg, Godfrey of Admont, and Bernard of Clairvaux.³⁹ Hildegard

³⁵ Berger discusses the markers of textual appropriation and use in "Interpretative Essay," 128-129.

³⁶ *The Shepherd of Hermas* informs *Sciuias* 3.8, whilst Adso's theories from *On the Antichrist* appear to inform *Sciuias*, 3.2. See Dronke, "Introduction," in Hildegard of Bingen, *Liber diuinorum operum*, eds. Albert Derolez and Peter Dronke, CCCM 92 (Turnhout: Brepols, 1996): xiii, xv.

³⁷ Barbara Newman, "Introduction," *Sciuias*, 44.

³⁸ Dronke, proposes Hildegard's knowledge of listed authors in "Introduction," *LDO*, xv, xiii, xiii, xxvi, xxvi. Liebeschütz suggests knowledge of the *Book of Nimrod*, See Hans Liebeschütz, *Das allegorische Weltbild der heiligen Hildegard von Bingen* (Leipzig-Berlin, 1930).

³⁹ Newman reminds the reader that these suggestions are "highly conjectural." For her discussion, see Newman, "Introduction," *Sciuias*, 44-45.

was undoubtedly well read and informed, but her goal was to write in new ways about shared themes. The universe and its components, particularly those that fulfilled sacramental roles, provided fruitful avenues for this. She builds on the positive possibilities of the world as sign modelled by Honorius in the *Imago mundi* and other works.

The Living Light

Within the Declaration quoted at the outset of this chapter, the Living Light emerges as the key concept underpinning Hildegard's visionary experience and worldview. The Living Light was infinitely bright and fiery, and filled her brain and core with warmth. These bright and warming qualities, combined with the fact that she could hear and see God, capture the physiological and sensory nature of her visionary gift. The Living Light could be seen, felt and heard. Its warmth entered the human body through the process of inhalation, so that it was inextricably and simultaneously part of the world and the human. While the physiological experience of respiration is common across humanity, Hildegard's visionary gift enabled the Living Light to enliven her body so that she could see beyond the *mundus sensibilis* (sensible world). For Hildegard, the Living Light is the notion that connects God to the whole universe. It provides the "greening life-energy" that gives creation its dynamism and fundamentally connects all aspects of the human experience with the cosmos and God.⁴⁰ The Living Light and its greening energy gave strength to many of the ecological images in *Sciuias*. When Hildegard explains how warmth and *humiditas* (moisture) work together to instil and support life on earth, the Living Light is their ultimate source.

⁴⁰ Miriam Schmitt, "Hildegard of Bingen: Viriditas, Web of Greening Life-Energy: I," *American Benedictine Review* 50, no. 3 (1999): 266.

Hildegard and the cosmic egg

Like Honorius before her, Hildegard uses her early work to explore the interpretative power of the cosmic egg. Scholars frequently express Hildegard's reliance on Honorius' image of the world in her works but despite the acknowledgement of shared ideas, their treatments of the cosmic egg have not been critically compared. The similarities and differences between their illustrations of the egg demonstrate their individual moments of creativity and reveal which aspects of the allegory were most important to their cosmological outlooks. Hildegard introduces the cosmic egg in Part One, Vision Three through a visual representation. The written form of the vision immediately follows, beginning with the announcement that:

... I saw a vast instrument, round and shadowed, in the shape of an egg, small at the top, large in the middle and narrowed at the bottom; outside it, surrounding its circumference, there was bright fire with, as it were, a shadowy zone under it...⁴¹

Here, Hildegard clearly diverges from Honorius' image, proposing that the cosmic egg is elongated in shape. Honorius had stipulated in the *Imago mundi* that the shape of an egg was not relevant to his description of the universe, and instead emphasised that the only aspect of the egg that served a symbolic purpose was its distinct components. As argued in Chapter One, these distinct components enabled him to use the egg as a framework for the information contained within the *Imago mundi*. The elongated shape of the egg was an obstacle to his interpretation, and he quickly dispelled any possibility that the universe was aspherical. For Hildegard though, the universe was "in the shape of an egg" and this detail was integral to her visual and allegorical representation of the universe; the shape of the egg represented human

⁴¹ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 40: "uidi maximum instrumentum rotundum et umbrosum secundum similitudinem oui, superius artum et in medio amplum ac inferius constrictum, in cuius exteriori parte per circuitum lucidus ignis fuit, quasi pellem umbrosam sub se habens..."; trans. Hart-Bishop, 93.

history.⁴² But it also enabled her to explain aspects of the universe, aspects of human behaviour, and aspects of the divine by ascribing meanings to its shell, membranes, whites, yolk, and even the protuberance in the yolk that today we would call the “latebra.” Unlike Honorius, who condensed his image of the cosmic egg into a few short lines and explicitly denied aspects of its anatomy to suit his literary purposes, through the egg, Hildegard articulates a comprehensive image of the divine universe and its relationship to humanity.

The egg as an allegory for the universe was common in the medieval period, but interpreting its myriad components as signs of divine meaning was an experiment distinctive to Hildegard.⁴³ The cosmographer Milo, likely a student of Bernard Silvestris, was interested in the sexual imagery of heaven impregnating earth within the egg.⁴⁴ Other patristic and medieval authors conceived the cosmic egg as a chicken egg, which could be easily understood by their audiences. For example, Basil and Abelard conceived it as a chicken egg and symbolised God through the image of a brooding hen.⁴⁵ The hen represented the Spirit of God imbuing humans and creatures with life by sitting on her egg. Hildegard, though, did not require such an image to explain the life-giving energy of God, because the Living Light sustained her universe through a fire that surrounded and permeated it.

Hildegard’s understanding of the living world can be seen in how she maps the components of the universe onto the egg. The vision moves from outside the egg to inside;

⁴² See Newman, “Introduction,” *Sciuias*, 28.

⁴³ Peter Dronke has examined ancient and medieval usage of the cosmic egg, focussing most heavily on twelfth-century examples. See Dronke, *Fabula*.

⁴⁴ Dronke, *Fabula*, 91. Dronke edits the previously unedited *De mundi philosophia* of Milo. See pages 160-61.

⁴⁵ Dronke, *Fabula*, 94-96. In *Hexameron*, Saint Basil creates this image in reference to the second verse of Genesis. Abelard takes up this notion in *Expositio in Hexameron*. For a discussion, see Dronke, *Fabula*, 94-96.

transitioning through the layers until we reach its innermost components. The first chapter presents the egg surrounded by a bright fire that contains the sun and three stars. Through her exegesis, we learn that this fire is God's vengeance, the sun is the Son, and the stars are the Holy Trinity.⁴⁶ She capitalises upon the porous nature of an egg's shell and outer membrane to assert that God's vengeance and the Trinity are external to the egg, whilst also existing fully within it. Like the semipermeable shell and membranes of the egg, which allow moisture and air to pass through, the universe is permeable to God. As such, she teaches that the egg "...faithfully shows Omnipotent God".⁴⁷ After expounding upon the fiery circumference and the Trinity, Hildegard traverses the shell to enter the egg.

The first component within the egg to receive exegetical examination is the albumen – the egg whites. She explains that the outer layer is the purest ether, and this layer contains several significant signs, including the moon, which is a sign of the Church, two torches that represent the Old and New Testaments, and the scattered bright stars that symbolise "many splendid works of piety."⁴⁸ Within the purest ether, there are also winds that spread throughout the instrument. These winds are emitted from three heads situated where the egg narrows at the base, and like all ecological phenomena in Hildegard's cosmology, they impacted the health of the human being and the environment. If these winds were not in balance, they dried the entire universe. If Hildegard studied a physical egg when creating her cosmic allegory, she would have seen an air pocket in the precise location of the powerful air-emitting heads.⁴⁹ This air

⁴⁶ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 42-43; trans. Hart-Bishop, 94-5.

⁴⁷ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 42: "...designat quod Deus"; trans. Hart-Bishop, 94.

⁴⁸ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 46: "plurima et splendida opera pietatis"; trans. Hart-Bishop, 96-97.

⁴⁹ The air cell forms when it cools after being laid. See an illustration of Hildegard's vision in *Sciuias* 1.3, trans. Hart-Bishop, 91.

pocket enlarges as an egg ages, due to the loss of moisture through the pores of the shell, rendering the egg arid and dry. The progressive drying of the universe due to age and waning spirituality is a frequent motif within *Sciuias* and Hildegard's broader works, with aridity being antithetical to Hildegard's fundamental worldview. She saw her own time as suffering from a dried and decaying state; the only remedy being humanity's renewed commitment to piety.⁵⁰ Only pious works would ensure the winds disseminated "a strong tradition of true and perfect statements" throughout the instrument.⁵¹ Irrespective of her anatomical understanding of the purpose of the air pocket, the placement of the winds in that zone reveals a meticulous commitment to observing the sensory world, and working through spiritual questions based on her findings. This contrasts Honorius' response to the physical reality of an egg, with its shape and the intricacies of its anatomy hampering his ability to use it as a neat structuring paradigm for his encyclopaedic text.

In Part One, Vision Three, Chapter 14, Hildegard articulates her early understanding of the living world, and how the energies of the world interact with the human being both physically and spiritually. She describes the watery air that exists beneath the purest ether and its role in the universe. If the purest ether is the outer egg white (the thin albumen), then the inner egg white (the thick albumen) is the "aquosum aerem uides album pellem sub se" (watery air with a white zone beneath it).⁵² Hildegard explains how the white zone diffuses *umorem* (moisture) through the whole universe; sometimes contracting suddenly and sending out great rains, and other times gently expanding to emit a "blandam pluuiam leni motu" (pleasant and

⁵⁰ For a discussion of the "interplay between viridity and aridity" in Hildegard's thought, see Schmitt, "Hildegard of Bingen: Viriditas," 260, 268.

⁵¹ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 47: "ueris et perfectis assertionibus"; trans. Hart-Bishop, 97.

⁵² *Sciuias* 1.3, ed. Führkötter-Carlevaris, 47; trans. Hart-Bishop, 97.

softly falling rain).⁵³ Perhaps drawing upon her knowledge as a gardener, she calls the process of rain falling to earth *irrigatione* (watering).⁵⁴ Across her descriptions of the moisture that falls from the white zone is a recurring emphasis on its gentleness and *suaui temperament* (sweet moderation).⁵⁵ Images of soft and pleasant rain emerge as Hildegard's preferred language for articulating perfect conditions on earth.

Within the short exegesis on the nature of the firmament's watery air, a core aspect of Hildegard's worldview becomes clear: the importance of moisture within the living world. *Uiriditas* is the term that Hildegard uses to capture the "generative energy" or "greening power" that the Living Light instils in the world through moisture.⁵⁶ Hildegard's commentary on the watery air and the white zone of the firmament captures precisely the relationship between God's generative energy, the living world, and human beings. *Uiriditas* comes to exist in the world through gentle and carefully-moderated watering, which originates in the watery air of the firmament. Humans take *uiriditas* into their bodies by consuming components of the world such as plants and animal products. Miriam Schmitt avers that, for Hildegard, *uiriditas* may in fact be the concept that connects "all levels of created life with each other and with God as Source".⁵⁷

⁵³ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 47; trans. Hart-Bishop, 97.

⁵⁴ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 48; trans. Hart-Bishop, 97.

⁵⁵ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 48; trans. Hart-Bishop, 97.

⁵⁶ Berger, "Interpretative Essay," *Causae et curae*, 128. Bruce Hozeski explains how *viriditas* moves through the universe according to Hildegard and others: "life from God was transmitted into plants, animals, and precious gems. People, in turn, eat plants and animals and acquire gems, thereby obtaining 'viriditas'." People then give out "viriditas" by practicing the virtues." See Hozeski, "Introduction," *Hildegard of Bingen: The Book of the Rewards*, xiii-xiv.

⁵⁷ Schmitt, "Hildegard of Bingen: Viriditas," 257.

But how does the human being propagate *uiriditas* once it has been ingested through food? In the same way that consuming a balanced diet carries forward humanity, baptism and preaching carry forward *uiriditas*. Hildegard explains that the *suau irrigatione* (gentle watering) emitted from the watery air allegorically represents baptism and the words of preachers. She employs the verb *attulit* (propagates itself) to describe the process through which preaching spreads *uiriditas*. Continuing with her allegory, *uiriditas*, when carried forward by the preacher and the listener, symbolises salvation.⁵⁸ Read semiotically, the preachers' words and images are a network of signs that accumulate in the listener. The wider the audience of listeners, the greater the impact. The listener can in turn enact change in the world, that is, spread *uiriditas*, by continuing the process of propagation through virtuous acts.

We can think of baptism and preaching as part of the same semiotic network as the rains that fall from the atmosphere. Softly falling rains nourish the world; enabling seeds within the soil to germinate and grow. Equally, preaching characterised by “sweet moderation” nourishes the human being in a targeted and moderated way, so that “it reaches the people for whom it is meant discreetly by a gentle watering.”⁵⁹ In the spiritual context, moderation ensures that the listener receives a gentle message, and their resulting actions are balanced.⁶⁰ Sudden “rains with great noise” can flood the whole world.⁶¹ So too, preaching can be delivered as a flood of words that “astonishes human beings”.⁶² Here, Hildegard perceives the risk of the believer being inundated with words that disrupt their stability and ability to carry forward the

⁵⁸ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 47; trans. Hart-Bishop, 97.

⁵⁹ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 48: “suau irrigatione cum discretionis adiutorio populis attactis propalatur.”; trans. Hart-Bishop, 97.

⁶⁰ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 48; trans. Hart-Bishop, 97.

⁶¹ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 47: “[R]epentinam pluuiam multo fragore”; trans. Hart-Bishop, 97.

⁶² *Sciuias* 1.3, ed. Führkötter-Carlevaris, 48: “attonitis hominibus”; trans. Hart-Bishop, 97.

message. In the environmental context, an appropriately nourished world is dense with life and thus sign exchanges. Excessive nourishment leads to decline and death. We can think of an old growth tree to understand what is meant by a dense semiotic environment. One ancient oak is an entire ecosystem; representing “deep historical ecology.”⁶³ It supports human communities via its myriad products, sustains fauna via its food sources, and harbours unique fungi networks that interact with all organisms in the system.⁶⁴ An oak demands ample light and moisture to become a site of intense *uiriditas*. Over or undernourishment, that is, a lack of moderation, will inevitably lead to the death of the tree and much of the life it supported through its ecosystem. Like the need for moderation in an oak tree’s environment, Hildegard espouses moderation in preaching, so that the audience receives the balanced messaging required for spreading salvation.

Hildegard provides a glimpse of the microcosmic connection that she saw between the world and the human being when she shifts from her treatment of the egg whites to the yolk. To Hildegard, the yolk represents a sandy globe. She explains that: “And in the midst of these elements is a sandy globe of great magnitude, which these elements have so surrounded that it cannot waver in any direction.”⁶⁵ The sandy globe that she describes is the earth. Like a yolk, it is surrounded by elements that protect it and hold it in place. Without referencing the philosophical concept, Hildegard reveals her knowledge of the microcosm/macrocosm at this point in her exegesis. The inclusion of analogies that use the microcosm/macrocosm model is

⁶³ Isabella Tree, *Wilding* (Croydon: Picador, 2018), 78.

⁶⁴ Tree, 25-28.

⁶⁵ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 48: “Et in medio istorum elementorum quidam arenosus globus plurimae magnitudinis est, quem praefata elementa ita circumdant quod nec hac nec illac labi potest.”; trans. Hart-Bishop, 98.

not unusual in explorations of the cosmic egg, with contemporaries like Milo similarly intimating at these ideas as part of their allegories.⁶⁶ Hildegard asserts that the earth represents the human being, who is “... made in a wondrous way with great glory from the dust of the earth and so entangled with the strengths of the rest of creation that he can never be separated from them.”⁶⁷ Like the dust of the earth, the human body is made from dust and enlivened by the breath of the Living Light and moisture. Also like the world, the human contains the four elements and as such, feels the impacts of the whirlwinds sent by God. This is not the only discussion of the interconnection between the human and the components of the living world. She expands upon the idea in Part Two, Vision One, as shall be seen.

In addition to seeing the human in the sandy globe via the microcosm/macrocosm, although she never uses these terms, Hildegard presents a great mountain emerging from the lateral flank of the egg. The peak of the mountain divides the egg into North and East, with the North displaying a shadow that represents the works of darkness and the East featuring lights that symbolise works of goodness.⁶⁸ Even the great mountain can be mapped onto the physical structure of the egg. When an egg is examined closely, a white protrusion can be seen inside the yolk, stretching from the outer membrane to the centre. This white protuberance appears to be the inspiration for Hildegard’s great mountain, which symbolises the human being’s choice between “*diabolicam impietatem et diuinam bonitatem*” (devilish impiety and divine

⁶⁶ Dronke, *Fabula*, 92.

⁶⁷ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 48: “... *de limo terrae mirabili modo multae gloriae factum degentem, et uirtute earundem creaturarum ita obuolutum quod ab eis nullo modo separari ualet.*”; trans. Hart-Bishop, 98.

⁶⁸ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 49-50; trans. Hart-Bishop, 99.

goodness).⁶⁹ It divides the yolk into North and East; hating and loving God; deception and sincerity. The East also symbolises Jerusalem, the centre of the world and Christ's patrimony.

The great mountain is the final component of the cosmic egg and includes substantial condemnation of individuals who read the world for signs of future events. She emphasises that every aspect of the universe, including the sun, moon, stars, winds and rains "... do the bidding of their Creator".⁷⁰ As such "... neither stars nor fire nor birds nor any other creatures of this kind can either harm or help you by examining them."⁷¹ The moralising, which comprises a significant proportion of the exegesis, serves a number of purposes. It teaches against cultural practices and beliefs that were considered pagan, including "astrology, magic and divination."⁷² This created a clear divide between her teachings and the behaviours of unorthodox Christians that were developing in other parts of the German lands.⁷³ Amidst a vision that is deeply cosmological and interested in the living world, her moralising also buttressed against allegations of unorthodoxy. Such balancing of themes ensured the establishment of her reputation as a mouthpiece of God, whose message prioritised moral behaviour, whilst also unveiling the interconnections between the universe, the human and the divine.

Imagery of the cosmic egg does not return after Part One, Vision Three, making the

⁶⁹ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 49; trans. Hart-Bishop, 99.

⁷⁰ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 57: "creatori suo secundum iussionem ipsius oboediunt"; trans. Hart-Bishop, 104.

⁷¹ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 52: "Sic etiam nec stellae nec ignis nec aues nec alia huiusmodi creatura in signis scrutationis tuae quidquam te laedere uel iuuare possunt."; trans. Hart-Bishop, 100.

⁷² Barbara Newman, "Introduction," *Sciuias*, 28.

⁷³ Deploige, "Priests, Prophets, and Magicians: Max Weber and Pierre Bourdieu vs Hildegard of Bingen," in *The Voice of Silence: Women's Literacy in a Men's Church*, eds. Thérèse de Hemptinne and María E. Góngora (Turnhout: Brepols, 2002), 16.

grandeur and intricacy of its treatment stand out as unusual against the treatise as a whole. The egg returns briefly to explain how bread and wine can be the body of Christ, with a bird urgently sitting on an egg until the chick emerges representing how the Lord can turn the bread and wine into the body and blood of Christ and return to heaven.⁷⁴ This image does not depend on the earlier exploration of the cosmic egg, although aspects of the cosmic egg, like the positioning of the Lord around its circumference and the warmth that creates life, expands the meaning of the chicken and egg allegory. *Sciuias* is replete with analogies from the natural world, like the egg. However, the predominant imagery centres around the human being and architectural images like pillars, towers, and stone walls.⁷⁵ The vast egg allegory is conspicuous amongst the architectural imagery, which raises questions about its relevance to the text and the purpose of its inclusion. The ecological thread that runs throughout the treatise, particularly visible through the cosmic egg, is almost minimised by the physical structures of the Church that express her moral messages in concrete terms.

Environmental signs and the Sacraments

Hildegard also invigorated traditional teachings on the sacraments through images of life and biological themes. Part Two, Vision Six presents the sacred rite of the Eucharist, in which the priest opens Heaven so that a fiery and “*inaestimabilis claritatis*” (inestimable brilliance) shrouds the offering of bread and wine, and turns them into the body and blood of Christ.⁷⁶ The predominant imagery of her commentary on the sacraments is that of life-giving and

⁷⁴ *Sciuias* 2.6, ed. Führkötter-Carlevaris, 244 and 264; trans. Hart-Bishop, 246 and 260.

⁷⁵ Margot E. Fassler, “Allegorical Architecture in *Sciuias*: Hildegard’s Setting for the Ordo Virtutum,” *Journal of the American Musicological Society* 67, no. 2 (2014): 317–378.

⁷⁶ *Sciuias* 2.6, ed. Führkötter-Carlevaris, 230; trans. Hart-Bishop, 237–238.

nourishment. Her images of bodily and spiritual refreshment are underpinned by the Christological principle that Jesus died and was restored to life through His Passion.⁷⁷ His restoration represents the renewal of humanity and within Hildegard's life-oriented outlook, this is a most profound miracle. Human beings are sustained through the continued practice of the Eucharist, the ritual through which bread and wine become the body and blood of Christ. Jesus is referred to as "panem uitae" (the bread of life) and "... Filius Dei panis uiuus" (... the Son of God who is the Living Bread).⁷⁸ Here we see Hildegard drawing the energy of the living world into her image of Jesus. Considering the importance of this ritual, Hildegard pinned substantial importance on the kind of grain used for the bread. She explains that the grain had to be wheat, due to its unparalleled strength and dryness.⁷⁹ This strength and dryness could be attributed to wheat's lack of pith or sap. When milled, the grains yielded a dry flour that reflected the unpolluted flesh of Jesus.⁸⁰ For Hildegard, wheat was unlike trees and other crops; the qualities of which made it inappropriate to connect them semiotically to Christ. Hildegard's pronunciations on the bread and wine are paired with extensive reference to eating, drinking and nourishment. When the bread of the Eucharist was consumed, people were nourished bodily and spiritually, so that they were "tanta dulcedine uiuificentur" (so sweetly enlivened).⁸¹

For nourishment to take place, fertile lands were needed to grow wheat and grapes. Images of human labour and the ephemerality of foodstuffs contrast with her depiction of Jesus, who "ex inarato agro talis" (... arose in an unplowed field) and "in plenitudine uiriditatis suae

⁷⁷ *Sciuias* 2.6, ed. Führkötter-Carlevaris, 241-2; trans. Hart-Bishop, 244.

⁷⁸ *Sciuias* 2.6, ed. Führkötter-Carlevaris, 252 and 261; trans. Hart-Bishop, 251 and 258.

⁷⁹ *Sciuias* 2.6, ed. Führkötter-Carlevaris, 255; trans. Hart-Bishop, 253.

⁸⁰ *Sciuias* 2.6, ed. Führkötter-Carlevaris, 255; trans. Hart-Bishop, 253.

⁸¹ *Sciuias* 2.6, ed. Führkötter-Carlevaris, 263; trans. Hart-Bishop, 259.

semper durabit” (in full freshness will last forever).⁸² Unlike Jesus, the crops that nourish humans also suffer from pests. Pests are environmental signs that gardeners like Hildegard are acutely aware of, and their threat requires swift interpretation and action. Her knowledge of crop pests enables her to expand upon the words of Joel. She explains how the creatures he lists – the canker-worm, locust and caterpillar – symbolise harmful acts including unbelief, negligence and slothfulness.⁸³ The canker-worm, locust and caterpillar thrive through the consumption of all that is green in the world; stripping its vitality. For Hildegard, sinful acts strip the human being of its vitality in the same way. While the purpose of these analogies is to teach on the sacraments, they reveal Hildegard’s ability to illuminate Scripture through experiences of the living world. This use of experiences in the fields to explicate the sacraments reflects the teachings of her contemporary, Hugh of Saint Victor. Hildegard likely read Hugh’s major theological work, *De sacramentis christianae fidei*, in which he theorises that “all theological doctrine” is sacrament.⁸⁴ He argues that all Scripture is allegorical and every component – natural or divine, word, deed, or person – is a sign.⁸⁵ Hugh’s attitude toward sacred knowledge and matter was borne out of a similar textual culture to Hildegard’s, and she may have shared in the idea that the sacraments went beyond bread and wine. The images of food production, nourishment and unwavering conception of a “living” God in the sixth vision of Part Two capture Hildegard’s sustained desire to express divine mysteries through environmental signs.

⁸² *Sciuias* 2.6, ed. Führkötter-Carlevaris, 253; trans. Hart-Bishop, 252.

⁸³ Joel 1:4 and 2:25. *Sciuias* 2.6, ed. Führkötter-Carlevaris, 237-238; trans. Hart-Bishop, 242.

⁸⁴ John Froula, “Hugh of St Victor: On Sacraments of the Christian Faith II:1.1-13,” in *Victorina Christology*, ed. Christopher P. Evans (Turnhout: Brepols, 2018), 113.

⁸⁵ See Froula, “Hugh of St Victor: On Sacraments,” 114.

The microcosm and macrocosm in Sciuias

The concept of the *microcosmus* (microcosm) and the *megacosmus* (macrocosm) that features in Hildegard's exegesis of the cosmic egg, without ever using these terms, receives its fullest articulation in Part Two, Vision Six. The microcosm/macrocosm model sees the human as a minor version of the macrocosmic universe. In Latin, this relationship was termed the *minor* and *major mundi* (lesser and greater worlds). At its core, this model taught that the human being contained the entire world on a minor scale.⁸⁶ This semiotic system was highly speculative in nature, requiring thinkers to grapple with the relationship between the human, the universe, and God.⁸⁷ Importantly, within this system, the world was not significant in and of itself, but rather, it gained significance when viewed as a sign within the salvation narrative. In his introduction to the English translation of the *Book of Divine Works*, Nathaniel Campbell refers to the microcosm/macrocosm model as the neo-Platonic cycle of emanation, in which the most "abstracted orders of theological reality" are connected.⁸⁸ In 1147, the Pope and prelates were likely exposed to the elaborate dramatisation of the *microcosmus* and *megacosmus* in Bernard Silvestris' *Cosmographia*. In two parts, Bernard's work captured the ordering of the universe and creation of the human being, by drawing in the cosmology of Plato's *Timaeus*.⁸⁹ The religious leaders were also presented with an excerpt from *Sciuias* at this time. This forum enabled the sharing of images of the universe, indicating to writers like Hildegard the degree to which they could explore cosmological ideas with ancient roots.

⁸⁶ Allers, "Microcosmus: From Anaximandros to Paracelsus," 322.

⁸⁷ Allers, 338-339.

⁸⁸ Campbell, "Introduction," *Book of Divine Works*, 11. For an overview of twelfth-century neo-Platonism, see Wetherbee, "Introduction," *The Cosmographia of Bernard Silvestris*, 15.

⁸⁹ Bernard Silvestris, *Cosmographia*, trans. Wetherbee.

Hildegard and her contemporaries inherited the microcosm/macrocosm model from an array of medieval and ancient Greek philosophers.⁹⁰ The ancient philosophers proposed that the human being was a microcosm of society, that society was a microcosm of the universe, and that the universe functioned in accordance with the harmonies of the spheres.⁹¹ They also relied upon Macrobius, Calcidius' commentary and translation of Plato's *Timeaus* (in particular 34b), Isidore's *Etymologies*, Lactantius, Eriugena and Hrabanus Maurus for their understanding of the concept.⁹² Saint Basil's exegesis on Creation also provided a vivid exploration of the human experience of the universe and the Word of God within.⁹³ Applying an ecosemiotic lens to Saint Basil's writing demonstrates his understanding of the world's signs, which had the power to unite the human with "the energy networks of Creation" and the "hidden yet appearing divine".⁹⁴ Medieval authors, like modern semioticians, were interested in the signs of the world and how they were to be interpreted. Ecosemiotics encourages us to read this history of ideas with another principle in mind: that these authors existed within very specific "biological semiotic processes" as well.⁹⁵ When this lens is applied, it is possible to see that their representations of the ecological signs were informed by their experiences, and these are inherited by the following generations.

⁹⁰ These authors were likely influenced by thinkers from Asia. See Allers, "Microcosmus: From Anaximandros to Paracelsus," 338-339.

⁹¹ Dennis Doyle, "Vision Two of Hildegard of Bingen's Divine Works - A Medieval Map for a Cosmic Journey," *Pacifica: Journal of the Melbourne College of Divinity* (June 2007): 146.

⁹² *Timeaus* presents the creation of the universe with especial focus on the connections between the human being and the universe. See Allers, "Microcosmus: From Anaximandros to Paracelsus," 321; David I. Shyovitz, *A Remembrance of His Wonders: Nature and the Supernatural in Medieval Ashkenaz* (Philadelphia: University of Pennsylvania Press, 2017), 101-3; and Campbell, "Introduction," *The Book of Divine Works*, 10.

⁹³ Basil of Caesarea, "The Hexameron," in *Basil of Caesarea, Letters and Select Words, Nicene and Post-Nicene Father*, series 2, vol. 8, trans. Blomfield Jackson (Cambridge, MA: Hendrickson Publishers, 1999), 52-107.

⁹⁴ Siewers, "The Ecopoetics of Creation," 61-62.

⁹⁵ Maran and Kull, "Ecosemiotics: Main Principles," 44-46.

In *Sciuias*, examples of Hildegard’s microcosmic/macrocosmic thinking feature in their germinal form alongside her moral messaging, despite her core focus on moral behaviour. As mentioned in the close reading of the cosmic egg, Hildegard alludes to the idea that the human is “... so entangled with the strengths of the rest of creation that he can never be separated from them...”⁹⁶ She speaks to the idea that the human being contains the elements of the world and exists within their midst. However, she expands no further in Part One, Vision Six. Her commentary on Vision One in Part Two depicts the human being in relation to the universe, stating that:

Hence Man contains in himself the likeness of heaven and earth. In what way? He has a circle, which contains his clarity, breath and reason, as the sky has its lights, air and birds; and he has a receptacle containing humidity, germination and birth, as the earth contains fertility, fruition and animals. What is this? O human, you are wholly in every creature...⁹⁷

This chapter is the closest she comes to explicitly communicating the principles of the microcosm/macrocosm in *Sciuias*. It is highly likely that Hildegard was aware of the terms when writing *Sciuias* and *Causae et curae*, considering the rich knowledge-sharing practices of the German monastic network. However, she maintains distance from these and other philosophical trends, instead grappling with the body’s place in the universe through signs observable in the physical world. For example, the concept of the Living Light had such elasticity and depth that it enabled her to explore the living world and its dynamic energy flows without relying on popular personifications of cosmic power, like Natura. While many of Hildegard’s contemporaries explored the creation and sustainment of the universe through

⁹⁶ *Sciuias* 1.3, ed. Führkötter-Carlevaris, 48: “... et uirtute earundem creaturarum ita obuolutum quod ab eis nullo modo separari ualet...”; trans. Hart-Bishop, 98.

⁹⁷ *Sciuias* 2.1, ed. Führkötter-Carlevaris, 113: “Unde etiam homo similitudinem caeli et terrae continet in se. Quomodo? Ipse habet circulum in quo apparet perspicuitas, spiraculum et rationalitas, uelut in caelo notantur luminaria, aer et uolatilia, habens etiam receptaculum in quo notatur umiditas, germinatio ac parturitio, sicut in terra apparet uiriditas, fructuatio et animalia.”; trans. Hart-Bishop, 151.

natura, Hildegard unified her images of the world, the human and divinity through the Living Light. The Living Light permitted her to delve into subjects like the spherical shape of the human head, and make connections between it and the world. Similarly expressing her interest in spherical shapes, she connects the human abdomen with the earth; engaging with ideas of fertility and germination in both the human and the living world. I suggest that for Hildegard, terms such as microcosm/macrocosm obscured her visionary images. Such terms were unnecessary to her writing, due to the fact that the allegories she was able to create through environmental signs expressed precisely the divine message that she had received.

Causae et curae

Though Hildegard maintained distance from intellectually fashionable terms relating to the universe, her indebtedness to earlier writers emerges in her medico-botanical text, the *Liber subtilitatum diuersarum naturarum creaturarum* (*Book of the Intricacies of the Diverse Natures of Creatures*). Within a year of completing *Sciuias* and moving the Disibodenberg nuns to the new monastery, Rupertsberg, Hildegard commenced writing *Liber subtilitatum*. Completed in 1158, just six years after finishing *Sciuias*, it is likely that Hildegard begun collating the content for *Causae et curae* while living at Disibodenberg and fulfilling the role of *magistra* and physician.⁹⁸ As such, she was certainly collecting the information and planning the text while writing *Sciuias*. The *Liber subtilitatum* was redacted by scribes later in the twelfth century, with the manuscript dedicated to human health titled *Causae et curae*.⁹⁹ *Causae et curae* can be considered an encyclopaedic text, and follows conventions associated

⁹⁸ Sweet, "Hildegard of Bingen and the Greening," 389.

⁹⁹ Berger, "Preface," *Causae et curae*, xi.

with the genre.¹⁰⁰ It commences with an account of God’s creation of the universe, then transitions to an image of the human as a minor universe. It concludes with information on human conditions and their remedies. The focus in parts three and four is diagnosing, preventing, and curing human illnesses.¹⁰¹ As for many medieval physicians trained in the Galenic tradition, disease represented imbalance in the body that was caused by imbalances in the environment.¹⁰² Imbalances in the environment were themselves caused by human wrongdoings, such that all health and environmental outcomes were considered intricately interwoven.¹⁰³

In *Causae et curae*, Hildegard presents the human being as enmeshed with the universe, utilising images from the microcosm/macrocasm model that she inherited from authoritative writers. This enables her to teach her audience how to remedy ailments through careful reading of symptoms and the person’s environment. When conceiving *Causae et curae*, she almost certainly drew images from Honorius. As explored in Chapter One, the nature of encyclopaedic writing in the medieval period was such that it involved continuous “re-creation” at the hands of authors and scribes who compiled, adjusted and innovated.¹⁰⁴ Hildegard’s intellectual inheritance is clearer in *Causae et curae* than in her visionary treatises, which enables freer comparison of Hildegard and Honorius’ respective approaches to understanding the universe. For example, Book One, Chapter One of the *Imago mundi* opens with the image of the cosmic

¹⁰⁰ Berger, xiii.

¹⁰¹ Berger, “Interpretative Essay,” *Causae et curae*, 126.

¹⁰² Anton Sukhoverkhov, “Natural Signs and the Origin of Language,” *Biosemiotics* 5 (2021): 156; Elma Brenner, “The Medical Role of Monasteries in the Latin West, c. 1050– 1300,” in *The Cambridge History of Medieval Monasticism in the Latin West*, eds. Alison I. Beach and Isabelle Cochelin (Cambridge: Cambridge University Press, 2020), 865-6.

¹⁰³ *Causae et curae*, ed. Kaiser; trans. Berger, 25.

¹⁰⁴ Berger, “Preface,” *Causae et curae*, xi; “Introduction,” *Causae et curae*, 11.

egg.¹⁰⁵ This opening image, as argued in Chapter One, diverged from the typical encyclopaedic model, which prioritised abstract concepts over the natural world. Similarly, *Causae et curae* opens with several chapters that describe the universe, including the shape and composition of the universe, the involvement of the divine in the universe, the destructive role of Lucifer, and the operations of the elements within the human being.¹⁰⁶ Like Honorius, she instructs that the world is a globe, and God is like a wheel that is full.¹⁰⁷ This information forms the essential background to Hildegard's remedies for ill health, especially as it transitions into descriptions of how localised climatic events like storms and winds impact the human being.¹⁰⁸ These themes are highly familiar to the reader of *Sciuias*, which is in part concerned with the connections between the components of the universe, human health. Though where *Sciuias* remains cosmic in the scale of its semiotic relations, *Causae et curae* can be used to respond to localised environmental and bodily conditions.

The microcosm and macrocosm in Causae et curae

The microcosm/macrocosm model guides the reading of *Causae et curae*, even though she never employs the terms explicitly. Hildegard's use of the microcosm/macrocosm as an opening image mirrors the example set by Honorius. Berger proffers that Hildegard's image of the human as a minor universe was inspired by the *Clavis physicae* by Honorius.¹⁰⁹ Considering the encyclopaedic nature of both *Causae et curae* and the *Imago mundi*, I suggest

¹⁰⁵ *Imago mundi*, ed. Flint, 49.

¹⁰⁶ *Causae et curae*, ed. Kaiser; trans. Berger, 24-37.

¹⁰⁷ *Causae et curae*, ed. Kaiser; trans. Berger, 24.

¹⁰⁸ *Causae et curae*, ed. Kaiser; trans. Berger, 25-6.

¹⁰⁹ Honorius Augustodunensis, *Clavis physicae*, ed. Paulo Lucentini (Rome: Edizioni di storia e letteratura, 1974). *Clavis physicae* is a summary of and commentary on Eriugena's *Periphyseon*. See Berger, "Interpretative Essay," *Causae et curae*, 129.

that Hildegard's authorial choices are in part indebted to the *Imago mundi*. In Book One, Chapter 87, Honorius informs the reader that "the human being is a microcosm, that is a minor world".¹¹⁰ In Book Two, Chapter 59, he asserts in unadorned language that "Those tempering qualities of the human body, whence the microcosm, that is also called the minor world."¹¹¹ Where Honorius provides a concise image of the microcosm and the macrocosm, Hildegard delivers a detailed articulation in the opening paragraph of *Causae et curae*. Rich with ecological signs that are connected to the human being, she exalts:

Oh human, look at the human being! For human beings hold together within themselves heaven and earth and other things created, and are one form; and within them everything is concealed.¹¹²

As in *Sciuias*, she distances herself from the philosophical concept of the microcosm/macrocosm by eschewing the common terminology. However, the excerpt above highlights that she was certainly aware of the model, and it had an important position within her conception of human health. Hildegard's omission of the terms microcosm/macrocosm enabled her to avoid the problematic endpoint of the ancient model, in which the universe, like the human being, has a soul. The concept of the *anima mundi* (world soul) was integral to the ancient Greek philosophy of the microcosm/macrocosm, but Christian philosophers could not indulge such thinking, as it imbued the universe with a divinity that was not supported by Scripture. Rather than aligning herself with the concept and the fraught ancient tradition, she explored its imaginative potential as if it was communicated to her directly by God. The exactness and confidence of this summary suggests that she refrained from revealing a fuller

¹¹⁰ *Imago mundi*, ed. Flint, 80: "...et homo microcosmus, id est minor mundus..."

¹¹¹ *Imago mundi*, 106: "Hisdem qualitalibus est humanum corpus temperatum, unde et microcosmus, id est minor mundus, appellatur."

¹¹² *Causae et curae*, ed. Kaiser: "O homo, aspice hominem! Homo enim caelum et terram atque alias facturas in se habet et forma una est, et in ipso omnia latent."; trans. Berger, 24.

understanding of the microcosm/macrocsm model in *Sciuias*. Considering how soon after writing *Sciuias* she completed *Causae et curae*, it seems that she deliberately omitted from her visionary treatise her deep knowledge of the human body and how components of the living world are used to nourish and heal.

Conclusion

Hildegard existed in an intellectual environment in which authors were anxious in their explorations of the world as a sign of the divine. Honorius, writing just a few decades earlier, feared the ramifications of focussing on worldly signs, but nevertheless considered it urgent and important to communicate their signifying capacities. Hildegard avoided this potentially fraught area by using her status as a visionary to engage with the possibilities of environmental signs. She first communicated her understanding of the living world in the visionary treatise, *Sciuias* and the medical text, *Causae et curae*. Despite their different genres and purposes, her interest in the world's physiological processes emerges as a sustained undercurrent in both texts. In *Sciuias*, amidst her teachings on behaviour and the Church, she conjures elaborate environmental sign systems; demonstrating how processes like the growth of wheat and formation of rain signify the Living Light's power and presence in the world. These processes provided Hildegard with the images and language to express her visions. They also enabled her to communicate abstract scriptural themes through easily recognisable and comprehensible examples from the world. Although the enmeshment of the human being and the processes of the universe emerges as a theme in *Sciuias*, the interconnections of the living world are not fully integrated with the treatise's core moral messages. Instead, she ensured that her more practical engagement with components of the world and bodily health was segmented away from her visionary message. Her medical application of certain plants for certain diseases is

thus located in the scientific *Causae et curae*, which more fully explores the implications of the intricate connections between the human and the universe made possible by the microcosm/macrocosm model, despite avoiding the specific terminology of the concept. Hildegard took up Honorius' message that the world is a site of divinity and explained how this worked cosmologically and theologically. It becomes clear that synthesising her cosmological and medical knowledge was important to Hildegard at this early stage in her career. However, she does not fulfil this until she had firmly established her position within her intellectual milieu.

Chapter Three: The ripened fruits. Hildegard's mature image of the living world

... When I was sixty-five years old, I saw a vision of such mystery and power that I trembled through and through and then fell ill because of the weakness of my body. After seven years, I have brought this vision almost to completion by writing it down.¹

In 1163, Hildegard had a vision that was so profound that it made her body “tremble through and through”, and rendered her ill.² This vision, and a second, less debilitating vision in 1167, instilled in her the meaning of Genesis 1 and John 1.³ The impact of these visions on her ailing body only eased when she wrote what she saw and heard in her third and final visionary treatise, *Liber diuinorum operum* (*Book of Divine Works*, hereafter *LDO*) (1160-1170). The Prologue, which is excerpted above, reveals the nature of Hildegard's visionary experience and her priorities in representing it in the later years of her career. She reminds her audience of her “poor and feeble form worn down by many infirmities”.⁴ She also restates the nature of her visions, which are perceived with her “interioribus oculis” (inner eyes) and “interioribus auribus” (inner ears).⁵ In the Declaration that introduces *Sciuias*, the most prominent component is the nature of the Living Light, which is “a fiery light of exceeding brilliance” that warmed Hildegard's heart.⁶ By comparison, the Prologue to *LDO* focusses on the physical

¹ *LDO* Prologue, ed. Derolez, 45: “Et factum est... cum sexaginta quinque annorum essem, tanti misterii et fortitudinis uisionem uidi, ut tota contremiscerem et pre fragilitate corporis mei inde egrotare inciperem”; trans. Campbell, 29-31.

² *LDO* Prologue, ed. Derolez, 45: “ut tota contremiscerem”; trans. Campbell, 29.

³ Kienzle, “Introduction,” *Hildegard of Bingen: Homilies on the Gospels*, 4.

⁴ *LDO* Prologue, ed. Derolez, 46: “Ego igitur pauperula et inbecillis forma testificante homine illo.”; trans. Campbell, 30.

⁵ *LDO* Prologue, ed. Derolez, 28; trans. Campbell, 30.

⁶ *Sciuias* Declaration, ed. Führkötter-Carlevaris, 3-4: “maximae coruscationis igneum lumen”; trans. Hart, 59.

condition of Hildegard's body and the worldly things on which humans rely for their existence.⁷

Hildegard's most mature understanding of the living universe and its signs is portrayed in *LDO*. She commenced writing *LDO* at the age of 65, and it took at least seven years to draw it near to completion.⁸ It was not until eleven years later, in 1174, that the small revisions by Abbot Ludwig of Trier and Hildegard's nephew, Wezelin, provost of St Andreas, were concluded.⁹ *LDO* is a synthesis of the images and ideas that Hildegard had explored across her life's works. It is the culmination of her cosmological, spiritual and scientific knowledge; demonstrating a total integration of ecological images and her interpretations of key scriptural narratives. The centrepiece of *LDO* is her commentary on the Prologue to the Gospel of John, which opens the final chapter of Part One, Vision Four.¹⁰ The visions leading up to this hinge-point immerse the reader in Hildegard's understanding of the universe and its macrocosmic relationship with the microcosmic human being. The visions that follow the commentary on John chart the battles between vices and virtues, and the history of the Church laid upon the universe as a wheel.¹¹

In this chapter, I argue that Hildegard prioritises the living world in *LDO*, utilising its mechanisms, patterns and cycles to illuminate her understanding of key scriptural narrative. Selected textual samples demonstrate how environmental signs enabled Hildegard to represent

⁷ *LDO* Prologue, ed. Derolez, 28; trans. Campbell, 29-31.

⁸ Peter Dronke proposes an alternative dating, arguing that it took her until 1173 to complete the work, finishing it only after mourning the death of her dear friend and secretary, Volmar. See Dronke, "Introduction," *LDO*, xi.

⁹ Dronke, "Introduction," *LDO*, xii.

¹⁰ *LDO* 1.4.105, ed. Derolez, 248; trans. Campbell, 243.

¹¹ Campbell, "Introduction," *LDO*, 6-7.

an interconnected universe that impacts the human relationship with the divine. Firstly, I examine the points of difference between her earlier use of the cosmic egg in *Sciuias*, and her new appreciation of its shape in *LDO*. In *LDO*, she modifies and expands the egg so that it serves her wider exploration of God's divine works. I show how her re-assessment of the egg reflects her enhanced insight into the role of environmental signs in revealing the divine. It also unlocks the interpretative potential of the concept of microcosm/macrocosm. The microcosm/macrocosm as a philosophical paradigm underpins *LDO*. However, and in keeping with her earlier writing style, she does not identify the concept by its technical names: microcosm/macrocosm or *minor/major mundus*. The terminology used by her contemporaries to name and explain philosophical concepts, like the cosmic wheel, microcosm/macrocosm, or *natura* remain totally absent from Hildegard's works. This choice is significant in understanding Hildegard's use the concept and how she situates herself in her intellectual environment. In avoiding the terms, she maintains distance from contemporary debates and learned cultures. I suggest this gives her allegories the space needed to illuminate the meaning of Scripture in a way that amplified her environmental awareness. In particular, leaving the concepts nameless enables two of the most important substances within her system, moisture and warmth, to operate as key signs in the world. In *LDO*, we can see the influence of Honorius' reframing of the natural world's signs, with Hildegard freshly exploring philosophical and cosmological ideas hitherto approached with caution by twelfth-century thinkers.

The structure of *LDO* also reveals Hildegard's expertise in reading the universe. I argue that she couches her career-defining commentary on the Prologue to the Gospel of John in ecological images that emphasise the signifying capacity of the living world. Part One, Vision Four, which is traditionally viewed in scholarship as a lengthy and even wearisome inclusion,

is a highly-detailed exploration of the microcosm/macrocosm. It provides the audience with the framework they need to understand her interpretation of the Prologue to the Gospel of John. Vision Four is highly valuable to the overall treatise, as it anchors Hildegard's interpretation of Creation, Jesus as *logos*, and the final revelation of God. At its core, the symbolic machinery of Vision Four is derived from the ecological world. I show that the concluding lines of *LDO*, in which Hildegard explains the role of the Book of Life in salvation history, cannot be fully appreciated without working through the intricate connections between the human and the universe as they are presented in Part One, Vision Four.

After nurturing the ideas of the universe as a wheel and the microcosm/macrocosm for at least two decades, Hildegard presents her most mature understanding in Part One, Vision Four. Due in part to Honorius' work in the *Imago mundi*, Hildegard and the intellectual communities of the Rhine River region had the foundational concepts of environmental signs and permission to experiment with them. Hildegard's testing commenced in *Sciuias*, in which she presented the universe alongside her moralising messages. In *Sciuias*, though, her vast allegories of the universe sit almost uncomfortably alongside the moral lessons, forming an extraordinary though disconnected background image. This uncomfortable experiment with the world as sign mirrors Honorius' own struggles to express the signifying capacity of the world within the boundaries of an encyclopaedic text. Hildegard's early work grasped the possibilities of world-as-sign more wholeheartedly than Honorius' early attempt, but still encountered similar difficulties in fully integrating environmental signs with moralising messages. In *LDO* she resolves these tensions, and is able to express a complete realisation of this relationship. After moving to Rupertsberg and spending the interceding years developing her understanding of the world and Scripture, she presents a living world in *LDO* that infuses

her reading of key scriptural narratives. She enmeshes the knowledge that she developed in her various monastic roles and from thinkers like Honorius, to portray a living world that is the universe, but also the interconnections between its components and cycles, the form and actions of the human being. Together, these physical and spiritual signs form a dynamic web that impact the outcomes of God's final Judgment.

Perspectives on Liber diuinorum operum

The lack of a critical edition of *LDO* until 1996 hampered scholarly understanding of how the text impacted twelfth-century imaginings of the world. In particular, there are few close examinations of how *LDO* built upon Hildegard's earlier visionary works and how it related to the influential works of her intellectual network, like Honorius' *Imago mundi*. Until 2018, English-speaking audiences had access to *LDO* only via a translation of an incomplete German translation by Matthew Fox and Robert Cunningham. Fox and Cunningham's translation of Heinrich Schipperges' German translation is arranged into ten visions, which removes the tripartite structure so essential to Hildegard's central message. The many layers of restructuring and translation obscure Hildegard's original word use, syntax and symbolisms, while significant portions are omitted based upon translators' judgments of "significance" and repetitiveness.¹² Finally, Fox and Cunningham's translation is framed by introductory material that overlays modern issues like environmental collapse onto Hildegard's ideas, and positions *LDO* as a remedy.¹³ These authorial liberties make this translation an inappropriate source for scholarship, and require scholars interested in *LDO* to work with Hildegard's complex Latin.

¹² Fox, "Introduction," *Hildegard of Bingen's Book of Divine Works with Letters and Songs*, xxi.

¹³ Fox, xi.

A Latin critical edition of *LDO* was published in the *Corpus Christianorum Continuatio Medieualis* in 1996 by Dronke and Derolez, which restores the three-part structure and numbering system of the visions. Their edition provides researchers with access to codicological information, the etymology of key terms, and the intellectual influences that can be distilled from her central images.¹⁴

Prior to the publication of Nathaniel Campbell's English translation of *LDO* published in 2018, a small number of scholars had evaluated the development of Hildegard's ideas in *LDO*. Sabina Flanagan proposed that in *LDO*, Hildegard sewed together her "theological beliefs, her physiological understanding, her speculations on the working of the human mind and of the structure of the universe, into a unified whole."¹⁵ In line with this summation, Constant Mews observed that *LDO* synthesises "creation as a whole" and the human being within it.¹⁶ David Shyovitz similarly noted that Hildegard "was a keen observer of her natural surroundings and incorporated her own empirical findings into her works, using them as a spur toward further, novel linkages between the human body and the broader cosmos."¹⁷ In her biography of Hildegard, Fiona Maddocks affirmed that "her entire theology is based on the harmony of the created world and its relation to God".¹⁸ These insights and assessments capture the scholarly position that *LDO* is primarily concerned with divinity and cosmology. Across their scholarly writings, these scholars imply that Hildegard's priorities have demonstrably shifted from those of her earlier treatises. Earlier in her career, she focussed on moral behaviour

¹⁴ Hildegard of Bingen, *LDO*, ed. Dronke-Derolez.

¹⁵ Flanagan, *Hildegard of Bingen, 1098-1179*, 142.

¹⁶ Constant Mews, "From Scivias to the Liber Divinorum Operum - Hildegard's Apocalyptic Imagination and the Call to Reform," 53.

¹⁷ Shyovitz, *A Remembrance of his Wonders*, 105.

¹⁸ For example, see Maddocks, *Hildegard of Bingen: The Woman of her Age*. Maddocks suggests that "her entire theology is based on the harmony of the created world and its relation to God," 45.

and psychology. She transitions in her final text to an integrated worldview in which the components and cycles of the universe are bound to spiritual wellbeing.

Readers could not access Part One, Vision Four on the human being and its relationship with the universe in English until the publication of Campbell's translation. In his introduction to the Latin edition, Dronke suggests that the vision's commentary is exaggeratedly lengthy. This lengthiness is made more obvious by the relative succinctness of the description that Hildegard provides of the visual representation.¹⁹ Dronke's judgment is representative of the scholarly view, which Campbell captures in his introduction. Campbell reports that scholars commonly regard this section as "repetitious" and even "the work's single largest fault".²⁰ He does not agree with these sentiments, advocating for its importance in Hildegard's explication of how the intricacies of the body and universe create a whole.²¹ The repeated dismissal of Part One, Vision Four in scholarship not only silences one of Hildegard's most profound reckonings with ecological signs, but also the concluding message of the treatise.

In 2018, a wider audience gained access to Hildegard's most advanced visionary treatise when Nathaniel Campbell published an English translation of Dronke and Derolez's Latin critical edition. Compared to the Dronke and Derolez edition, Campbell provides a relatively short introduction to this vast visionary work. The opening matter summarises Hildegard's life and the text's structure and core themes. It also provides manuscript and notes that justify the careful translation of terms that are central to Hildegard's worldview. Two of

¹⁹ Dronke, "Introduction," *LDO*, xlix.

²⁰ Campbell, "Introduction," *LDO*, 11.

²¹ Campbell, *LDO*, 11.

the most significant contributions that Campbell makes to scholarship with his translation are his adhesion to the original structure and numbering of visions, and sensitive translation of key terms such as *homo* (human) and *uiriditas* (viridity).²² Unlike the earlier Fox and Cunningham translation, Campbell does not advance a particular lens for viewing the text in the introduction, which enables the reader to interpret freely. His provision of biographical information and overarching themes in the introduction continues the trend in scholarship, which avoids interrogating the intricacies of the text. Therefore, while this translation enables new access to Hildegard's ideas, the task of unpacking how they developed over her career remains.

Structure and purpose

When read in conjunction with the ecosemiosis of Hildegard's earlier works, it is clear that the structure of *LDO* is strategic and symbolic; revealing her cosmological and theological priorities. The three parts of *LDO* are divided into visions that are firstly represented visually through an illumination, followed by a description and complementary commentary. These commentaries explain the vision phrase-by-phrase, oftentimes drawing on Scripture as proof-texts. The visions of Part One depict the relationship between God and his work of Creation, with the images ultimately serving her exegesis of the Prologue to the Gospel of John that concludes Part One. The entirety of Part Two is devoted to a vision that divides the earth into five zones, and progresses to an exegesis of each day of creation. Part Two takes Genesis as its key and guiding scriptural text. The five visions of Part Three articulate the five ages of the life

²² Campbell, *LDO*, 21.

of the Church, taking in Hildegard's own time, and the triumph of the angels over Lucifer.²³ In its apocalyptic images and explanation of history, Part Three is influenced by the Book of Revelation. The final vision draws upon the familiar notions of the world as a wheel, to provide the stage for the history of the world, which commences with its creation and progresses to the time of judgement.

LDO expresses Hildegard's image of the world, using a symbolic structure that echoes Honorius' choices in the *Imago mundi*. Hildegard uses Honorius' structure as a template for her vast exploration of the living world. Honorius divided the three books of the *Imago mundi* in accordance with the kind of contemplation required for the content. He opens Book Two with "The previous little book represents the world seen with the eyes of the body, the next one turns to the eyes of the heart."²⁴ Book Three capitalises upon the reader's knowledge of the corporeal and incorporeal worlds by providing the history of the world.²⁵ In *LDO*, Part One contains four visions, Part Two contains one vision, and Part Three presents the combined total of Parts One and Two with its five visions. The structural organisation signals the importance of reading *LDO* as a whole. Parts One and Two work together to build the reader's understanding of the universe, its relationship to the human being, and the presence of the divine throughout. Only once the audience has consolidated the knowledge provided in parts One and Two should they move into their reading of salvation history in Part Three. A tripartite structure of this kind was unusual for texts that focussed on the natural world, which were often

²³ The apocalyptic imagery of this last section is renowned for its representation of purgatory. Mews suggests that Hildegard is more "explicit" about "distinct historical phases" in the final vision of *LDO* than in *Scivias*. See Mews, "From Scivias to the Liber Divinorum Operum," 54.

²⁴ *Imago mundi*, ed. Flint, 92: "Priori libello globum totius mundi oculis corporis representauimus, sequenti iam tempus in quo uoluitur oculis cordis anteponamus."

²⁵ *Imago mundi*, 123: "quo lector cuncta transacti mundi tempora queat uno intuitu agnoscere."

presented in hexameron form. However, this structure enabled writers such as Honorius and Hildegard to move beyond the creation of the world, to instead focus on the its components and their interaction with human life.

Reshaping the universe

In *LDO*, Hildegard revises her position on the shape of the universe, which has significant implications for her cosmological outlook. Unlike in *Sciuvas*, in which she asserts that the egg and thus the universe are elongated in shape, she asserts that the universe is represented by a wheel. She elaborates upon her new understanding of the wheel in Part One, Vision Two, stating that:

This wheel was nearly like that instrument that I had seen twenty-eight years before, signified in the shape of an egg, as shown in the third vision of the book *Sciuvas*.²⁶

This transition from the cosmic egg to the cosmic wheel unlocked Hildegard's ability to express the wholeness of the universe and divinity's presence throughout.²⁷ She reports that the only likeness between the universe and the egg is the division of the universe into layers or constituent parts.²⁸ This revision brings Hildegard's cosmic egg in line with the earlier image of the world provided by Honorius and other thinkers, who also saw the merit of mapping the universe onto the separate though connected components of the egg. In *Sciuvas*, Hildegard poured vast energy into her image of the egg; intricately utilising its anatomical components to explain the composition of the universe. As argued in Chapter Two, the egg whites represented

²⁶ *LDO* 1.1.2, ed. Derolez, 59: "Deinde in pectore prefatę imaginis, quam uelut in medio australis aeris conspexeram, ut predictum est, rota mirificę uisionis apparuit cum signis suis, huius fere similitudinis ut instrumentum illud, quod ante uiginti octo annos uelut in figura oui significatiue uideram, quomodo in tercia uisione libri *Sciuvas* ostenditur"; trans. Campbell, 46.

²⁷ Siewers, "The Ecopoetics of Creation," 61.

²⁸ *LDO* 1.2.2, ed. Derolez, 59; trans. Campbell, 46.

the ether, while the yolk signified the sandy globe of the earth. Even the great mountain in the centre of the egg seemed to be signified by an egg's latebra. In both *Sciuias* and *LDO*, The Lord is signified by fire that surrounds the circumference of the egg. However, in *Sciuias*, this erroneously necessitated that divinity took on an elongated shape. Though vast and detailed, the egg-shape that she evoked did not effectively capture her understanding of divinity, it in fact spoilt the wholeness and perfectness of divinity.

The elongated egg of *Sciuias* was an impediment to representing the whole and perfect nature of the divine, which was Hildegard's priority in *LDO*. Hildegard understood the importance of wholeness and health from the earliest stages in her writing career, as evinced by her observations on Jutta's asceticism and rapid provision of a medical treatise for her nuns. Yet, the egg that she used to represent the universe was not perfect, in that it could topple over. The issues that the egg-shape introduced to her cosmological and religious outlook are rectified in *LDO* through the wheel. With the cosmos as a wheel, the Lord could be portrayed as concentric circles of fire.²⁹ The spherical wheel captured more appropriately the wholeness and dynamism that Hildegard saw in the universe. It also emulated the balance that she considered essential to physical and spiritual health. In his introduction to the Latin critical edition, Dronke situates Hildegard's perception of a balanced universe within mid-twelfth-century discussions. While Gilbert of Poitiers wrote on the shape of the universe in his commentary on Boethius (d. 1148), Hildegard affirmed that the earth could not be angular, as any corners would disrupt its balance.³⁰ She also reminds that truly, neither the image of an egg nor a wheel represent the

²⁹ *LDO* 1.1.2, ed. Derolez, 59; trans. Campbell, 46.

³⁰ Dronke draws the comparison in his introduction to *LDO*. See Dronke, "Introduction," *LDO*, xxvi.

universe, as the universe is a *globus* (globe) that is exceedingly “whole, round, and whirling”.³¹ These clarifications created new imaginative possibilities for Hildegard. The wheel could simultaneously signify the universe and the divine. It could also correspond more neatly with her microcosmic/macrocosmic understanding of the human form. By rectifying the shape of the universe as early in the treatise as Part One, Vision Two, Hildegard’s priority is clear. She aimed to capture her most refined image of the universe, so that it could effectively illuminate her readings of Scripture.

³¹ *LDO* 1.2.3, ed. Derolez, 66: “integra, rotunda et uolubilis”; trans. Campbell, 55. As explained by Giles Constable, “For Hildegard, the wheel stood for the power of God.” See Constable, “Hildegard’s explanation of the Rule of St Benedict,” 174.



Figure 1. LDO, Plate 1.4.

The human in the world

With the shape of the universe established, Part One, Vision Four is concerned with how human beings exist within the cyclical processes of the living world. Figure 1 is the illumination that accompanies Vision Four. It depicts several wheels, with the innermost wheel divided into quadrants through simple lines and colours. The next wheel in this concentric system portrays human figures working within treed lands. This wheel is also divided into four although, lines and colours are not used to indicate the division, as in the centre circle. Instead, the state of the trees and the activities of the labouring individuals divide the wheel into four environmental settings. These settings represent the four seasons, with natural signs indicating the changes in the season. The labouring humans can be seen responding to the environmental signs in which they are embedded. The first quadrant, appearing in the top left position, depicts trees in leafless dormancy and human figures resting at this time. Moving clockwise to the second quadrant, the trees are covered with leaves and the humans toil the rich brown soil beneath. In the third quadrant, the land dries to a golden hue, while the human and animal rest in the heat. Finally, the fourth quadrant portrays a tree with dense green leaves and fruit. This tree is partly obscured by streaks of rain, which indicate the changeable weather of this season. The labouring humans use sickle and scythe to harvest around the tree, before returning once more to the first quadrant, in which they rest through the cold months. Within this wheel, the humans are at the mercy of the seasonal conditions; responding to the signs they read in their environment with suitable labours. The wheel containing the human form is bound by a solid line, though swirls of varying colours and shapes traverse the solid line from heads situated in the outer wheel. The heads blow winds into the sphere of the living world. Blue coils of wind shroud the humans and trees in spring, and brown coils fill the air in summer. These scenes are surrounded by the wheel of

fiery Living Light that represents God. These images capture a human community and universe that is characterised by perpetual and interconnected interaction.

The reader must study the written explanation of the vision and the complementary commentary to understand the extent of the reciprocal connections. In just three short paragraphs, Hildegard explains what she saw. She proclaims:

And I saw that the firmament, together with everything attached to it, had as great a density from its top to the top of the earth as the earth had from pole to pole. I saw also that the firmament's upper fire was sometimes moved to emit from itself ember-like scales upon the earth that caused pockmarks and ulcers in humans, animals, and the fruits of the earth. I saw also that from the black fire, a certain mist sometimes descended to the earth to wither the earth's viridity and suck dry the moisture of its fields; but the pure ether resisted both those scales and this mist, lest they inflict their blows beyond measure upon the aforementioned creatures.

And I also saw that from the strong, bright white air, another mist sometimes stretched down to earth, casting a great pestilence upon humans and beasts, so that many were then exposed to various infirmities, and many met with death. Yet, the watery air opposed this mist, tempering it lest it inflict undue harm upon creation.

I saw also that from the thin air, moisture bubbling forth upon the earth roused the earth's viridity and made all the fruits to sprout and grow. It also bore certain clouds above that sustained all the things above and were strengthened by all those things above. In that air I also saw a certain cloud of brilliant white that was as if fixed at either end to the other clouds of the firmament, and whose middle stretched up like a curved bow to remain in the aforesaid air.³²

Hildegard frames her 14-chapter commentary on this vision by explaining that all things above the earth “strengthen and cleanse” all things on earth. All things on earth, in turn, interact with

³² *LDO* 1.4.1, ed. Derolez, 136-137: “Et uidi firmamentum cum omnibus sibi adherentibus tantam spissitudinem a summo usque ad summum super terram habere, quantam terra a summo usque ad summum habebat. Uidi quoque quod superior ignis firmamenti interdum conmotus quasdam squamas uelut fauillas ex se in terram emittebat, quę stigmata et ulcera hominibus et animalibus et fructibus terrę inferebant. Uidi etiam quod de nigro igne quedam nebula aliquando ad terras descendens uiriditatem terrę arefaciebat et humiditatem agrorum exsiccabat; sed purus ether et squamis istis et nebulę huic resistebat, ne supra modum predictis creaturis plagas inferrent. Et etiam uidi quod de forti et albo lucidoque aere alia quedam nebula ad terras se interdum extendebat, magnam pestilentiam hominibus et pecoribus incutiens, ita ut exinde multi diuersis infirmitatibus subiacerent, quamplurimi quoque mortem incurrerent; cui tamen nebulę aquosus aer se opponebat, eandem nebulam temperans ne creaturis ultra modum lesionem inferret. Uidi quoque quod de tenui aere humor super terram ebulliens uiriditatem terrę suscitabat omnesque fructus germinando procedere faciebat, et qui etiam quasdam nubes superius ferebat, quę omnia superiora sustentabant et ab omnibus superioribus confortabantur. In eodem quoque aere quandam nubem candidi coloris uidebam, quę in utraque parte sui ubi finem habebat hinc et hinc aliis nubibus firmamenti uelut infixata erat, et cuius medietas ut arcus incuruata manens in predictum aerem extendebatur.”; trans. Campbell, 130.

the human form. Although her language is obscure, the interconnections that she describes are those of the macrocosmic universe and the microcosmic human form. While it is not immediately recognisable from the illumination, this vision is predominately an exercise in microcosmic/macrocosmic thinking. The multitude of humans in the illumination indicate that she is interested not only in an isolated microcosmic human form, but also the interactions of human microcosms as they cooperate in the world. This provides a different conceptual angle from her earlier image of the microcosm/macrocosm in Part One, Vision Two, which shows a single *imago hominis*, motionlessly mapped over the entire wheel of the universe.³³ The humans of this vision are communal in their work, such that each microcosm contributes to the health of the community. This work benefits the earth, which is kept abundant through its cycles of growth and decay. The humans in the illumination are also depicted in movement. The living world, as Hildegard suggests across much of her visionary and medical work, is perpetually changing with the seasons, and the transformative cosmic winds. In this vision, the human is embedded in these processes; their boundedness represented by movements including scything, ploughing or observing the animals.³⁴

In Hildegard's vision of the universe, human behaviour directly impacts the steadiness of the firmament. The inseparability of human behaviour and the living world underpins the 14-chapter explanation of the firmament and its winds that follows. She explains that God fills the firmament with waters, light, and wind, which work together in steadiness.³⁵ Water and light are the fundamental substances that enable life on earth. Wind – the four principal winds

³³ Dronke, "Introduction," *LDO*, xlic.

³⁴ Later in the vision Hildegard asserts that all creatures are signified within humankind. See *LDO* 1.4.14, ed. Derolez, 145: "omnes creaturas in homine signavit"; trans. Campbell, 139.

³⁵ *LDO* 1.4, ed. Derolez, 137; trans. Campbell, 130.

and the side-winds – delivers moisture and positive conditions to earth. It keeps the clouds in place, which provide a steady environment for growing the crops that sustain and preserve humans.³⁶ A retributive God punishes sin by sending noxious winds to earth; causing unfavourable weather events like hail, winds and mists.³⁷ These chapters are characterised by images of hail, smoky winds, noxious mists, and floods. The environmental signs that Hildegard enlists are not chosen at random. They represent imbalances in the world's systems that are disastrous to the growth of human foods and medicines. For example, the mist that results from immoderate behaviour causes unpredictable environmental conditions, at times bringing “*inquieta ardore*” (restless heat) and at others bringing “*pessimo frigore*” (the worst sort of cold).³⁸ The significant role that she gives variable weather reflects how she prioritises environmental signs in her later cosmology. Environmental disasters are the greatest punishment for human sin. The human's semiotic environment and the resources to which they have access are therefore representative – or even symptomatic of – good or bad behaviour.

Which behaviours most concerned Hildegard? “[I]ndiscreta secundum corpus hominis” (indiscretions of the human body) and immoderation emerge as the most harmful.³⁹ Throughout her career, the extreme behaviours of others disturbed Hildegard; from the physical punishments Jutta inflicted on her body, to the unbalanced beliefs of nearby Cathar communities, to the imprudence of clergymen. While indiscretions like immoderation went against the Rule of St Benedict and Church teachings, they also disrupted the relationships

³⁶ *LDO* 1.4.2, ed. Derolez, 137; trans. Campbell, 132. For an overview see Dronke, “Introduction,” *LDO*, xxxiii – xxxiv.

³⁷ *LDO* 1.4.3, ed. Derolez, 138; trans. Campbell, 132-133.

³⁸ *LDO* 1.4.6, ed. Derolez, 139; trans. Campbell, 134.

³⁹ *LDO* 1.4.6, ed. Derolez; trans. Campbell, 134.

between the human microcosm, and the physiological processes of the living world. To Hildegard, “peruersis actibus hominum” (depraved actions of humans) such as immoderation prompt God to send fiery and watery scales into the air that cause pockmarks on humans, plants, and animals alike.⁴⁰ As such, she uses the early chapters of this commentary to implore moderation, “For discretion tempers all things that are useful both for body and for soul”.⁴¹ For Hildegard, immoderation was more than an unfortunate display of unchristian behaviour, it jeopardised the availability of “all things that are useful” in the world, and the salvation of souls.

Amidst her portrayals of the disastrous ecological and spiritual impacts of immoral behaviour, Hildegard describes the ecological and spiritual possibilities of moral actions. In the thin air that surrounds the earth, she saw that “moisture bubbling forth upon the earth rouses the earth’s viridity and makes all the fruits to sprout and grow.”⁴² This moisture falls to earth as “suauem pluuiam” (sweet rain), “niuem” (snow) and “rorem” (dew).⁴³ These kinds of moisture are gentle and pleasant, and serve to cleanse the earth of any “squalido” (rotting stench) caused by storms.⁴⁴ As we know from this vision, storms are the product of immoral behaviours. As such, gentle weather and the amount of moisture that falls to earth is determined by good human desires and actions. Hildegard explains that “recto desiderio” (right desire) leads to good thoughts, which can be transformed into good works. In good works lies a

⁴⁰ *LDO* 1.4.3, ed. Derolez, 133; trans. Campbell, 133.

⁴¹ *LDO* 1.4.6, ed. Derolez, 140: “Discretio enim omnia quę tam corpori quam animę utilia sunt temperat.”; trans. Campbell, 134.

⁴² Italics used by Derolez and Campbell to indicate that this text is from the vision description, as opposed to her commentary. See *LDO* 1.4.7, ed. Derolez, 140: “de tenui aere humor super terram ebulliens uiriditatem terre suscitāt omnesque fructus germinando procedere facit”; trans. Campbell, 134.

⁴³ *LDO* 1.4.7, ed. Derolez, 140; trans. Campbell, 134-35.

⁴⁴ *LDO* 1.4.7, ed. Derolez, 140; trans. Campbell, 135.

person's viridity, which produces "multiplices fructus sanctitatis" (the many fruits of holiness).⁴⁵ The many fruits that she refers to are not restricted to the spiritual world. She goes on to clarify that *recto desiderio* and actions bear fruit in the secular world, such that humans will see the "mercedem finis operum suorum" (final reward for their works) on earth in the form of "uiriditatem aut semina aut flores aut pulcritudinem" (... viridity or seeds or flowers or beauty).⁴⁶

These chapters, which immediately precede a description of God's battle against Lucifer and Hildegard's mapping of the microcosm and macrocosm, display a deep appreciation for the fertility of the world. Her language and analogies, as can be seen above, are lush; giving much attention to the kinds of moisture that beget life in the world. For example, she describes "rorem super terram cadentem in similitudine faui mellis exsudat" (... moisture falling over the earth like honey from the comb) and rains that "pluuia in terram mittunt, quemadmodum de mammis lac extrahitur" (pour upon the earth, like milk drawn from the breasts).⁴⁷ Such analogies enable us to see how scholars like Joseph Baird can describe Hildegard's world as a "moisture-filled, fertile world" of *uiriditas*.⁴⁸ By invoking honey to describe the moisture that falls to earth once the sun has warmed it, Hildegard draws upon one environmental sign to articulate another. Centuries of symbolic meaning overlaid the substances of honey and milk. Honey was a favourite metaphor within Judeo-Christian narratives, and Greek and Roman mythology.⁴⁹ Ambrose associated the bee with fecundity and

⁴⁵ *LDO* 1.4.8, ed. Derolez, 141; trans. Campbell, 135.

⁴⁶ *LDO* 1.4.8-11, ed. Derolez, 142-143; trans. Campbell, 136-137.

⁴⁷ *LDO* 1.4.7-8, ed. Derolez, 140-1; trans. Campbell, 134-5.

⁴⁸ Hildegard of Bingen, Letter 39r, *The Letters of Hildegard of Bingen*, vol. 1, trans. Joseph L. Baird and Radd K. Ehrman, 107-108.

⁴⁹ In the Greek and Roman context, honey related to the birth of Gods and the arrival of spring. See Ransome, *The Sacred Bee*, 91.

thus the Virgin Mary, while Augustine symbolised Christ and the Church through the bee and its honey.⁵⁰ In the medieval period, honey was utilised for its medicinal qualities and known as a highly nourishing substance.⁵¹ In the same way, milk from the breast of any mammal grows and sustains the infantile form. In light of the liquidity and fecundity of these two substances, moisture emerges in this vision as fulfilling the essential role of fusing the macrocosm and the microcosm with life, and providing ongoing nourishment.

Laying out the microcosm and macrocosm

Hildegard's most detailed examination of the connections between the microcosm and macrocosm model occurs from chapters 15 to 105 in the fourth vision. In these chapters, she communicates the material makeup of the microcosmic human form, and how every aspect of the body relates to the macrocosmic universe. From chapter 98 to 105, she explores how the seasons of the year are ordained within the human being. She is not only interested in which part of the body relates to which part of the universe, but also how their respective functions result in ecological conditions that prevail on earth. Sabina Flanagan suggests that the macrocosm/microcosm was *LDO's* overarching allegory; pulling together the elements of the universe and the human being within it.⁵² This can be seen in these chapters, which intricately delineate the relationships between human and universe. As shall be seen, the analogical work that she performs frames and supports her commentary on the Prologue to the Gospel of John, which commences immediately after. In laying out the microcosm and macrocosm, Hildegard begins with the human head and moves down the body. Her exploration of the head is lengthy,

⁵⁰ Woolfson, "The Renaissance of Bees," 284.

⁵¹ Woolfson, 286, 288.

⁵² Flanagan, *Hildegard of Bingen, 1098-1179*, 142.

commencing with its shape, then moving through features including the crown, brain, forehead, brow, eyes, nose, chin, mouth, tongue, teeth, throat, neck, and hair. She then continues down the body, concluding the intricate matching of components at the big toe. The soul features throughout her mapping of the microcosm/macrocosm, with its operations fully entwined with the physiology and deeds of the body.

A number of examples demonstrate the rich level of interconnection that Hildegard perceived between the living world and the living human. In commencing her exploration of the head and its features, Hildegard re-introduces the now familiar image of the “in circunte rota” (circling wheel). She explains that the crown of the head, where the brain sits, is the circling wheel.⁵³ The “rotunditate capitis hominis” (roundness of the human head) signifies the roundness of the firmament and, just like the firmament, the human head possesses perfect dimensions.⁵⁴ The nature of the firmament, with its perfect shape and measurements, was of course familiar to Hildegard’s audience, from her earlier exploration of the cosmic egg and the wheel in *Sciuias* and *LDO*. She explains that the roundness and evenness of the human head signify the upper elements of the firmament. The upper elements that she saw in this vision, namely, the bright fire, the black fire, the pure ether, the watery air, and the bright white air are mapped onto each part of the head. The bright and black fires relate to the area between the skull and the forehead; the pure ether relates to the area from the forehead to the tip of the nose; and the watery air corresponds to the nose and down to the throat.⁵⁵ When articulating the

⁵³ *LDO* 1.4.14, ed. Derolez, 145; trans. Campbell, 140.

⁵⁴ *LDO* 1.4.16, ed. Derolez, 147: “Sic etiam rotunditas et equalitas capitis hominis designat quoniam anima secundum uoluntatem carnis operatur in peccatis, et iterum in suspiriis eadem anima ad iusticiam se reparat.”; trans. Campbell, 141.

⁵⁵ *LDO* 1.4.17, ed. Derolez, 148; trans. Campbell, 142.

connections between the head and the firmament, Hildegard is most concerned with measurements and dimensions. These dimensions enable stability in the body and the firmament, which becomes a key feature of her allegory. Stability keeps all things in equal measure, which leads to “ubi nulla tortitudo est” (that balance where there is no deformity).⁵⁶ As the commentary on the head continues, analogies that emphasise balance and correct dimensions recur. For example, the connection between the equal proportions of the head’s features and the spacing between celestial bodies.⁵⁷

In her study of the human head, the nature and functions of the soul are explained through images from the living world, and in particular, moisture. Drawing upon the earlier established importance of moisture and viridity, she explains that the soul is “uiriditas carnis” (the viridity of the flesh) and the “humiditas corporis” (moisture of the body).⁵⁸ The soul, she elaborates, bring the body to life and enables it to grow and flourish.⁵⁹ Later, in chapter 98, she explains that the soul is “uiuens et prudens spiraculum a Deo facta” (a living and prudent breath made by God) that courses through the body, via the veins and marrow.⁶⁰ To explain the functions of the soul, she once again returns to the living world. She suggests that in the same way that the earth is made fruitful through moisture, the body is made fruitful through the soul, such that “ne arescat, sicut imber terram infundit” (like rain pouring upon the earth, lest it dry out), the soul moistens the body, so that it doesn’t dry out).⁶¹ The drying out of the body and the earth is the collapse of Hildegard’s semiotic world. Where there is no soul, there is no

⁵⁶ *LDO* 1.4.18, ed. Derolez, 150; trans. Campbell, 144.

⁵⁷ *LDO* 1.4.22, ed. Derolez, 154; trans. Campbell, 147.

⁵⁸ *LDO* 1.4.21, ed. Derolez, 152; trans. Campbell, 146.

⁵⁹ *LDO* 1.4.21, ed. Derolez, 152; trans. Campbell, 146.

⁶⁰ *LDO* 1.4.98, ed. Derolez, 240; trans. Campbell, 235, 236.

⁶¹ *LDO* 1.4.21, ed. Derolez, 152; trans. Campbell, 146.

moisture or life. Similarly, where there is no rain, there is aridity and ultimately death on earth. On the opposite end of the spectrum, she notes that inordinate amounts of rain drown the land and render it infertile.⁶² The body, like the earth, requires measured amounts of moisture to *germinare* (sprout).⁶³ From these analogies, Hildegard's preference for moist and tempered conditions emerges once more. This preference recurs throughout the vision and the wider treatise, for example, in her later assertions that "homo in medio iuventutis sue similis est arbori, quę prius grossus et postea fructus suos emittit" (the human person is like a tree that once was immature but later produces its fruits).⁶⁴ and "anima in homine uelut sucus in arbore est" (the soul in a person is like the sap in a tree).⁶⁵ The optimal state for the body, as for trees and the world alike, is one of moistness. That she dedicates the very beginning of her microcosm/macrocosm mapping to the importance of moisture, alongside her examination of the head, reflects the high priority that it receives in her imagining of the universe.

Due to its considerable moisture content and important role in the human body, the brain receives significant attention in this microcosm/macrocosmic reading. Like the soul, the brain provides the whole body with viridity.⁶⁶ In the macrocosm, the brain is signified by the sun, which grants the earth viridity.⁶⁷ Also like the sun, which is secured and strengthened by "solis ardore superioris" (the heat of the upper bright fire) the brain is kept safe and strong by the skull.⁶⁸ The brain is "humidum est et lene frigus" (moist and pleasantly cool) which enables

⁶² *LDO* 1.4.21, ed. Derolez, 152; trans. Campbell, 146.

⁶³ *LDO* 1.4.21, ed. Derolez, 152; trans. Campbell, 146.

⁶⁴ *LDO* 1.4.98, ed. Derolez, 233; trans. Campbell, 227.

⁶⁵ *LDO* 1.4.98, ed. Derolez, 232; trans. Campbell, 226.

⁶⁶ *LDO* 1.4.23, ed. Derolez, 155; trans. Campbell, 148.

⁶⁷ *LDO* 1.4.23, ed. Derolez, 155; trans. Campbell, 148-9.

⁶⁸ *LDO* 1.4.23, ed. Derolez, 156; trans. Campbell, 149.

the veins to supply it with heat.⁶⁹ This too is mirrored in the universe, with the upper elements supplying the sun with fire so that its heat does not diminish.⁷⁰ In the same way that the moist and warm brain governs the whole body, the moisture and heat of the sun impacts the earth; causing the whole earth to flourish.⁷¹ The processes of the living world enable Hildegard to further illuminate the functions of the brain. She suggests that, in the same way that the brain fills up and produces “ex se reuma spumat” (foamy mucus) that it then discharges, the earth fills with moisture that enables it to sprout and bring fruits to maturity. This process usually reaches its end near the arrival of winter conditions, at which point the earth becomes so soft with moisture that it “sordidam spumam euomit” (spews forth foul foam).⁷² Returning to the connection between the brain and the sun, she suggests that the moisture of a person’s exhalation can waft up to cloud the brain in blackness, in the same way that black clouds can obscure the sun.⁷³ Both of these black clouds cause damage, with the body experiencing “flecma et liuorem” (phlegm and bruising) as a result, and the earth suffering “tempestates, tonitrua et grandinem” (tempests, thunderstorms, and hail).⁷⁴ In selecting terms such as *flecma* and *liuorem*, she demonstrates her familiarity with Greek medical terms, and a desire to employ them as aids for illuminating the human condition and its corresponding climatic manifestation. The brain provides Hildegard with a range of opportunities for depicting the microcosm’s connection to the macrocosm. Its high level of moisture, in particular, gives it its value, as this quality connected it to myriad aspects of Hildegard’s fruitful world, including the rich *uiriditas* of the cosmic egg that she initially portrayed in *Sciuias*.

⁶⁹ LDO 1.4.25, ed. Derolez, 157; trans. Campbell, 151.

⁷⁰ LDO 1.4.25, ed. Derolez, 158; trans. Campbell, 151.

⁷¹ LDO 1.4.25, ed. Derolez, 159; trans. Campbell, 151.

⁷² LDO 1.4.26, ed. Derolez, 162; trans. Campbell, 153.

⁷³ LDO 1.4.28, ed. Derolez, 162; trans. Campbell, 156.

⁷⁴ LDO 1.4.28, ed. Derolez, 162; trans. Campbell, 156.

Humeral theory plays a role in Hildegard's microcosm/macrocosm complex, which reveals her willingness to incorporate scientific learning and natural sources into this visionary treatise. She incorporates the humours into her descriptions of certain body parts, for example, the body's creation and expulsion of tears. She explains that happiness and sadness can cause the veins to move humours from the chest and lungs to the brain. In the brain, the humours receive moisture, and then "oculis infundunt" (pour out through the eyes).⁷⁵ Of course, this process has its counterpart in the universe, in the rains that are drawn up from the oceans, transformed by the moon, and returned to the earth as rain.⁷⁶ For Hildegard, the tears that are brought forth due to the Holy Spirit's inspiration are the "fructuosorum operum fructus" (fruit of fruitful works).⁷⁷ She likens these works to the richness of good earth, an image that evokes fertile lands that are typified by their ability to hold moisture, their rich nutrients, and their airiness.⁷⁸

The intricate mapping of the body's features and functions onto the universe enables Hildegard's audience to conceptualise their place within a world of almost unfathomable interconnections. She concludes this section of the vision by reiterating that the human being contains within it every part of creation.⁷⁹ This belief echoes earlier writers including Eriugena, who proposed in the *Periphyseon* that the human contains all creatures.⁸⁰ The human's position

⁷⁵ *LDO* 1.4.32, ed. Derolez, 168; trans. Campbell, 162.

⁷⁶ *LDO* 1.4.32, ed. Derolez, 168; trans. Campbell, 162.

⁷⁷ *LDO* 1.4.47, ed. Derolez, 181; trans. Campbell, 174.

⁷⁸ *LDO* 1.4.47, ed. Derolez, 181; trans. Campbell, 174.

⁷⁹ *LDO* 1.4.97-8, ed. Derolez, 231; trans. Campbell, 225.

⁸⁰ Dronke, "Introduction," xx. Dronke argued that there are striking parallels between the concepts that Hildegard incorporates into *LDO* and those found in Eriugena's *Periphyseon* IV, especially the idea that God creating every creature – which is man".

in the universe is portrayed in such a way that readers can perceive themselves as active participants in a dynamic system of vast connections. The world they inhabit, just like the body in which their soul lives, changes based on individual thoughts and deeds.

The human and the months

Where chapters 15 to 98 of the fourth vision demonstrate the perfect relationships between human anatomy and the universe, chapters 98 to 105 demonstrate the enmeshment of the human being with the cyclical processes of the world. As such, these chapters add additional layers to the microcosm/macrocosm model, by giving the body a temporal dimension that is mirrored in the universe. Hildegard reveals that, in addition to containing “in uiribus suis” (the powers of all creation), the human being contains within itself the months and seasons of the year.⁸¹ Using a similar interpretative model as the preceding chapters, she demonstrates how each body part relates to the qualities of a particular month of the year. Commencing with January, she states that:

For the first month, when the sun is raised up again, is cold and wet and quite variable, and it exudes water turned brilliant white. So too its qualities are joined to the brain, because, being cold and moist, it cleanses wasteful humor by expelling it through the eyes, ears, and nostrils.⁸²

Notably, this section commences with an exploration of the brain’s qualities, just as her initial mapping of the microcosm/macrocosm does at Chapter 14. Her suggestion that the weather in January is “variable” is almost certainly based on her experiences of local conditions. In Germany, January is the coldest and darkest month of the year. In addition to the coldness and

⁸¹ *LDO* 1.4.98, ed. Derolez, 232; trans. Campbell, 225.

⁸² *LDO* 1.4.98, ed. Derolez, 232: “Nam mensis primus, in quo sol sursum erigitur, frigidus et humidus existit et in multa diuersitate est et aquam in candorem conuersam exsudat. Unde et qualitates eius cerebro coniunguntur, quoniam illud frigidum et humidum exstans uilem humorem per oculos et per aures atque per nares eiciendo emundat.”; trans. Campbell, 226.

darkness, the weather is changeable, with periods of rain, snow, and dryness. During January, the brain cleanses itself of dirty liquid by expelling it through the eyes, ears, and nostrils. This is not the first time she writes about the brain in this way, with a similar discussion appearing in Chapter Two of *Causae et curae*.⁸³ This teaching also relies on her earlier microcosm/macrocosm work, in which she explains at length how the brain converts humours into moistures and expels them as tears through the eyes. Unlike the close attention that she gives the brain in the earlier chapters, Hildegard moves swiftly from the cold and wet qualities of January and the brain in the direction of the warmer, more abundant months.

The level of attention that Hildegard gives to each month varies, and this reflects the preference for the living world's warmer and moister conditions that characterises this treatise. The quality of January, for example, garners little more than two sentences.⁸⁴ Other months, most notably the fertile months of April and May, are explored at length, and their qualities are explicitly used to explain how the corresponding part of the human body functions. This is especially evident in her explanation of the fifth month, May. She notes that May is “quintus autem suavis et lenis et gloriosus in omnibus fructibus terrae est” (pleasant, mild and glorious with all the fruits of the earth).⁸⁵ It has “suauissimum odorem florum habet” (the sweetest smell of flowers that cause[s] human hearts to cheer) and is the month in which “omnes fructus terrae, de quibus homo gaudet, procedant” (all the earth's fruits that make people happy burst forth).⁸⁶ The unevenness of her treatment of the months reveals Hildegard's guiding appreciation of the abundance of the living world.

⁸³ *Causae et Curae* 2.276, ed. Berger, 172.

⁸⁴ Hildegard devotes very few words to the coldest months, January and February.

⁸⁵ *LDO* 1.4.98, ed. Derolez, 234; trans. Campbell, 228.

⁸⁶ *LDO* 1.4.98, ed. Derolez, 235; trans. Campbell, 228-9.

Hildegard's desire to portray the abundance of the living world is also captured by the very different language that she uses depending on the qualities of the month. When outlining the qualities of February, she describes it as purgative and associates it with the need to cleanse the body of defilement.⁸⁷ This stands in contrast with the evocative terms utilised to capture the environmental signs of April and May. April is "uiridis et odoriferus" (verdant and aromatic) with sweet perfume everywhere. The pleasant aromas of which she speaks are mirrored in the human, who emits pleasant aromas through their honest and helpful deeds. The fifth month, she explains, is representative of the five senses, which take in the refreshing and beneficial fruits of this month through taste, smell, and sight.⁸⁸ In associating the spring month of May with the five bodily senses, and using such evocative language to describe the month's fruits and aromas, Hildegard reveals an undeniable preference for a world that is characterised by abundance. In Spring, life is new and full of potential. This is point in the annual cycle of seasons in which the signs that most clearly indicate God's power are evident to the human.

God as Life in the world

In the commentary on the Prologue to the Gospel of John that follows the microcosm/macrocosm mapping of chapters 15 to 104, the audience gains its most profound insight into the many meanings of "life" in Hildegard's worldview. The Prologue to the Gospel of John announces John the Baptist's role in Christ's narrative as the primary witness and announcer of Christ's presence in the world. The central place of John's pronouncement of

⁸⁷ *LDO* 1.4.98, ed. Derolez, 232-233; trans. Campbell, 226-7.

⁸⁸ *LDO* 1.4.98, ed. Derolez, 235; trans. Campbell, 228-229.

Christ in salvation history enables Hildegard to use its key teachings to explicate her understanding of the signs of life. Firstly and most significantly, she explicates that God is life, and therefore, life means God. She explains that God is “the Life of life without beginning” and the Word is inseparable from God.⁸⁹ We learn from Hildegard that the Word contains the creative principle and is the source of life.⁹⁰ She asserts that God gives life to his work, that is, the universe and the human being, through the light and breath of the Word.⁹¹ Myriad phrases from her exegesis on the Prologue capture her understanding of God as light and life. She explains that “Deus enim unica uita est” (God is the unique Life), and “Sic omne quod Deus fecit in ipso uita est, quoniam illud a Deo uitale in natura sua est” (everything that God made is life in him, for that which is from God is alive in its nature).⁹² Her repetition of key phrases and deliberate rephrasing ensures that the audience comprehends the core message of her treatise that God is Life.

Connected to her exegesis of God as Life, Hildegard teaches her audience how the human being is also life. Returning to the core principle of the human in the image of God, she instructs that “God made the form of Man according to his image and likeness, because he wanted that form to contain the holy divinity; therefore, he signified all creatures in humankind.”⁹³ She further explains that human beings live *through* “the life that awakened creation”.⁹⁴ Of course, that life is God, and as such, the two are wholly infused. If God is life, the human being is also life, and she brings this out by affirming that: “humankind is life, and

⁸⁹ *LDO* 1.4.105, ed. Derolez, 251; trans. Campbell, 248.

⁹⁰ Mews, “Process Thought,” 10.

⁹¹ *LDO* 1.4.105, ed. Derolez, 251; trans. Campbell, 246-7.

⁹² *LDO* 1.4.105, ed. Derolez, 253; trans. Campbell, 249-250.

⁹³ *LDO* 1.4.14, ed. Derolez, 145; trans. Campbell, 139.

⁹⁴ *LDO* 1.4.105, ed. Derolez, 253; trans. Campbell, 250.

all that pertains to them is alive because of them. For God created Man with all creation connected to him beneath the sun, so that he would not be alone upon earth”.⁹⁵ In these vast statements, which map closely onto phrases that she quotes directly from the Prologue to John, she unequivocally brings together the human being and the living world within her conceptualisation of God as Life.

As Hildegard unfolds her interpretation of the Prologue to John, the value of the innumerable microcosmic/macrocosmic connections established in the earlier chapters of the vision becomes clear. Her exegesis of the Prologue to John provides her audience with the most profound and mystical level of understanding life. The intricate analogical work that she performs in Vision Four, mapping every part of the human body onto its corresponding component of the universe, tangibly represents what God as Life means in the living world. That is to say, in Vision Four, she presents her full understanding of how every component of the human being is connected to the universe and its cycles, which are enlivened by God and the Word. Once her audience appreciates the inextricable interconnections between the human and the universe as seen in chapters 15 to 105, can they grapple with the meanings locked in the Prologue to John.

The Book of Life

Hildegard concludes the final vision of *LDO* with reference to the Book of Life; informing her audience that the “liber uite” (Book of Life) is “scriptura uerbi Dei est” (the writing of God’s

⁹⁵ *LDO* 1.4.105, ed. Derolez, 262: “Homo itaque hoc modo ut predictum est uita est, et omnia quę ipsi adherent per ipsum uitalia sunt; quoniam Deus hominem cum omnibus appendiciis suis sub sole creauit, quatinus in terra solus non sit...”; trans. Campbell, 260.

Word) that informed the writing of this treatise.⁹⁶ The *liber uite* that Hildegard refers to is that of the Book of Revelation, and its pages reveal the list of believers who will achieve everlasting life at judgement. However, this *liber uite* seems to be more than a list of believers. It is God's Word, "per quod omnis creatura apparuit et quod omnium uitam secundum uoluntatem eterni patris, uelut in se preordinauerat, exspirauit" (through which all creation appeared and which breathed forth the life of all things).⁹⁷ Hildegard's priority throughout *LDO* is not depicting or glorifying the living world. She does not endeavour to demystify the workings of the living world; in fact, she unequivocally states that while a living thing can be seen and known to procreate, the source of its vitality cannot be known nor seen.

The ultimate goal for humanity is a return to Adam's perfect form in the Holy City of new Jerusalem. There, the believer achieves perpetual life; no longer decaying in sin, but living a life that is unchanging, as intended for Adam.⁹⁸ Once in this final state, the human does not need "to grow or be fed by anything" as it will "exist in that brilliance that will never pass away, never be changed."⁹⁹ That is to say, the human will have no need for the natural world. In the Book of Revelation, John beholds a new and complete creation. The "new heaven and new earth" that he sees is the "Holy City, the new Jerusalem".¹⁰⁰ It is difficult to ascertain whether John here refers to a real heaven and earth, or solely the Holy City.¹⁰¹ Nevertheless, these chapters demonstrate that the believer's final destination is living in salvation, without any need for the fruits of the living world. In keeping with Hildegard's preference for

⁹⁶ *LDO* 3.5.38, ed. Derolez, 462; trans. Campbell, 478.

⁹⁷ *LDO* 3.5.38, ed. Derolez, 462; trans. Campbell, 478.

⁹⁸ *LDO* 1.4.105, ed. Derolez, 260; trans. Campbell, 258.

⁹⁹ *LDO* 1.4.105, ed. Derolez, 262; trans. Campbell, 260.

¹⁰⁰ Rev. 21:1-2.

¹⁰¹ Jan Lambrecht, "Final Judgments and Ultimate Blessings: The Climactic Visions of Revelation 20, 11-8," *Biblica* 81, no. 3 (2000): 371.

moistness, believers will need only “the river of the water of life” in the new Jerusalem.¹⁰² Within Hildegard’s semiotic world, every human thought and deed has implications in the living world. Thoughts and deeds determine which winds God sends into the atmosphere, and thus the conditions that humans experience in the world. Humans not only impact the universe, the human form also contains the whole universe within it, and exists in the image and likeness of God.¹⁰³ The interconnections between the microcosmic human and the macrocosmic universe are suffused with divine energy through the Living Light, so that every sign the human enacts and perceives in the world is potentially divine. In light of such a complex and integrated view of the human in the world, the Book of Life cannot be only a list of names in Hildegard’s theology. It must represent “life” in the broadest sense, including the way believers lived their lives, and the reverberations of their lives in the universe.

Conclusion

Hildegard’s reading of Scripture and the world in *LDO* is grounded in her understanding that God is in the world and the human, as Life. Life encapsulates a range of meanings, including the biological processes of the living world that infuse plants with energy, and the seasons and months that carry the human from childhood to old age. Most importantly, life represents God and the creative principle via *uiriditas*. These different though connected meanings of life underpin Hildegard’s spiritual cosmology in *LDO*. As in her earlier works, the Living Light is the sign that expresses the divine life-energy of the universe in *LDO*. The Living Light imbues the universe and the human with energy, and this connection between God and life gives

¹⁰² Rev. 22:1.

¹⁰³ *LDO* 1.4.105, ed. Derolez, 248; trans. Campbell, 244-45.

spiritual significance to the world. The Living Light and the myriad meanings that Hildegard wove into the concept enabled her to move beyond Augustinian semiotics, by giving her the language and images to capture the energy of a thing and its relationship to the divine.

Despite her ultimate interest in the perpetual life afforded to believers after Judgement, Hildegard places unmistakable and immense importance on the living world. *LDO* celebrates the great possibilities of abundance and harmony that can exist within the living world. It also warns against the disasters that grow out of disharmony. The only way to obtain the “joys of heaven” is through achieving perfect balance within body and soul, which reverberates through the cosmos and creates abundance in the world. Conversely, the strongest enactments of vengeance by God are those that see the processes of the living world thrown into disorder and chaos. *LDO* provides an encompassing vision of how the living world informed Hildegard’s scriptural interpretation and Christian faith. The signs that she perceives in the world and designates meaning are most often familiar from Scripture. However, she explores them in a new way in *LDO*. Importantly, the signs of the living world are so fully integrated in her reading of Scripture that she does not require philosophical notions that are common amongst her scholarly contemporaries. The concepts of *natura* and the book of Nature are unnecessary substitutes for the divine power that she knew as the Living Light. For Hildegard, the Living Light unifies and energises the universe and the human being in such a way that all created things are connected.

Epilogue

In this thesis I have explored how the natural world was understood in selected works by Honorius and Hildegard. As twelfth-century thinkers, both were immersed in an intellectual climate that is now renowned for its fascination with the universe and its creative powers. Honorius and Hildegard saw world signs and their capacity to reveal divine messages through different lenses. Though they shared an optimism around the possibilities, and an intellectual license to explore them. For myriad reasons, it is difficult for modern readers to access medieval perspectives on the natural world. This is especially true when analysing texts that intentionally obscure the writer's experience of the landscape in the pursuit of a universal encyclopaedic text or a visionary composition. To assess Honorius and Hildegard's understandings of the natural world, in spite of their attempts to de-emphasise their embeddedness in specific environs, I employed ecosemiotic principles alongside the methods of intellectual history. Ecosemiotic principles draw attention to the environmental signs in a text, and as such, I have proposed using selected principles for reading the functions of natural signs in excerpts from Honorius and Hildegard. This approach redresses common scholarly narratives of a medieval natural world that was evil, insignificant, or devoid of spiritual meaning. Indeed, by adopting a lens that pays attention to natural signs in texts, this thesis has brought to light the oft-neglected message from medieval writers that their audience must be attentive to the signs of the universe.

Traditionally, Honorius has often been labelled conservative in his intellectual pursuits and outputs; looking to the past for information, and merely compiling it for widespread consumption. The examination provided here has shown that his second work, the *Imago*

mundi, completed in 1110, was an innovative attempt to reframe inherited information relating to the universe and the components of the natural world. Moving away from the structuring paradigms of his encyclopaedic forebears, Isidore of Seville and Hrabanus Maurus, Honorius centred philosophical concepts that required his audience to carefully contemplate the structure of the universe and the images it contained. Indeed, he opened Book One with the image of the cosmic egg, enabling it to serve as the structuring paradigm onto which readers could map their new knowledge of the world. Despite the controversies that beset learned circles in the decades preceding the *Imago mundi*, wherein religious authorities such as Manegold of Lautenbach forcefully condemned classical texts and the study of the natural world, Honorius proposed that understanding the signs of the world was integral to the correct interpretation of Scripture. Within the timeline of the twelfth-century “discovery of nature” Honorius was an early writer to focus on the universe and its signifying capacity. In so doing, his innovative yet cautious exploration of the world’s signs empowered his contemporaries to follow the ideas he presented to their most cosmic proportions.

Certain images conjured in the *Imago mundi* and other texts by Honorius appear in the writings of Hildegard, most likely due to her direct contact with his books through the monastic library network. I have demonstrated that Hildegard explores the popular philosophical concepts that she procures from Honorius and others in a way that uplifts her own understanding of the living world. In particular, Hildegard depended on the works of Honorius, which opened up of the possibility of observing the natural world for its signifying capacity. Where Honorius urgently, though cautiously, proposed that his audience understand the images of the world for their spiritual development, Hildegard experimented with a more detailed and cosmic vision of world signs, even in her earliest works. Through close examination of excerpts

from her first visionary treatise, *Sciuias*, I have demonstrated how Hildegard experimented with the image of the universe as an egg. The elaborate schema that she provides, connecting every component of an egg with its counterpart in the universe, is profound in its level of detail and scale. She is totally committed to portraying the universe in the literal shape of an egg, despite the imperfections it introduces to her image of the universe. In light of how Hildegard treats environmental signs in the wider treatise, I have argued that what we find in *Sciuias* is an early, though partially-integrated understanding of how the living world relates to the human being and the divine. I have also shown that she thoroughly internalised the microcosm/macrocosm model, which initially emerged from Galen and became the domain of secular learning. Despite the medical origins of this concept, the microcosm/macrocosm brings a physiological and elemental perspective *Sciuias*; a text that is largely concerned with human behaviour and the Church. I suggest that it is in her medico-botanical treatise, *Causae et curae* that she demonstrates her fuller understanding of the microcosm/macrocosm model, and further reveals her indebtedness to writers including Honorius.

In her final visionary treatise, *LDO*, Hildegard demonstrates her honed ability to represent her interpretation of Scripture through environmental signs. In comparison to Honorius, whom provides the image of the universe as the prelude to Scripture, Hildegard fully entwines images of the cosmos with her interpretation of Scripture in the most significant synthesis of her career. The blending of rich allegories from the universe and scriptural narratives enables her audience to simultaneously discover the signifying capacity of the living universe and its relationship to Scripture. With its focus on the universe and its relationship to the divine, *LDO* does not depict the workings of the world for encyclopaedic or medicinal

purposes, such as can be seen in *Physica* and *Causae et curae*. It also diverges from the themes of the *Liber uitae meritorum*, which focuses primarily on human behaviour and psychology.

When we compare Hildegard's treatment of the universe and its signs in her early works and those of her later career, we see the evolution of her understanding, as she worked through and resolved the problems generated by her initial engagement in world signs. Unlike Honorius, who explicitly rejected aspects of the egg allegory, most particularly its shape, Hildegard persisted with it across her writings, until it served as the perfect model for her image of the universe and its connection to the human microcosm, and the divine in *LDO*. This development of her thinking cannot be examined without reference to the purpose of the text, and her broader oeuvre. Scholars working with the Matthew Fox translation of *LDO* could not deeply study Hildegard's profound mapping of the microcosm/macrocosm, due to the omission of parts of the long fourth vision, erroneously presumed to be repetitive. Until the publication of Nathaniel Campbell's 2018 translation of the Dronke and Derolez edition, Vision Four was neglected and therefore not accounted for in her overall achievement. In closely analysing parts of this vision, I have demonstrated the contributions she made to the spiritual ecosemiosis of her time.

Across her writing career, Hildegard refused to employ popular terms and concepts when articulating her vision of the universe. In particular, she strictly avoided the terms *microcosmus*, *macrocosmus*, *minor mundus*, and *major mundus*. Though she draws significant aspects of her knowledge either directly or indirectly from physiologists and encyclopaedists including Galen, Trota of Salerno, Isidore of Seville, Hrabanus Maurus and Honorius, she

disconnects herself from these intellectuals through her omission of their terminology. I have argued that instead of relying on terms that would clearly associate her with intellectual movements and other writers, she uses the processes of the universe, its energies, cycles, and components, to explicate the meaning of Scripture. The processes and components of the universe become Hildegard's language for exploring complex and mystical scriptural narratives, and enabled her to recast concepts such as the microcosm/macrocosm and explore them to new depths. They enabled her to capture, expand, and explain ideas that were circulating in her intellectual environment, without locating herself within any one intellectual movement. Her decision to omit conventional terminology has significance that is yet to be fully appreciated, and further study on this topic will help elucidate its impact on her visionary and medical outlooks.

Of course, in writing this thesis I have provided only a glimmer of what is possible through the application of ecosemiotics to medieval sources. Both Honorius and Hildegard wrote prolifically across their careers, and expectedly responded to the differing needs of their audiences. A larger project could take into deeper consideration Honorius' *Clavis physicae*, which includes summaries and commentaries on Eriugena's *Periphyseon*. Similarly, Hildegard's developing understanding of natural images could be studied in her second visionary treatise, *Liber vite meritorum*, or in the important topic of her reading of Scripture. In addition, it must be acknowledged that Honorius and Hildegard both existed within a century that is known for its deep fascination with the world and its creative energies. I have selected these particular figures and texts to provide a snapshot of a shift in thinking about the universe that took place in the twelfth century. Writers across France and Germany, in particular, grappled with how the universe should be understood within the Christian outlook. From the

German lands, the most prominent examples that could have equally received close examination include Hugh of Saint Victor, whose *De sacramentis (On the Sacraments of Christian Faith)* reveals his German doctrinal roots in its advocacy for the signifying power of the natural world. Similarly, the Benedictine monk, Conrad of Hirsau (c. 1070-c. 1150) encourages his audience to ground their necessary contempt of the world in true understanding of the world in *Dialogus de mundi contemptu uel amore (Dialogue about Contempt or Love of the World)*.¹ In France, the Chartrians including Thierry of Chartres and William of Conches pursued a different approach to the world, focussing instead on the Timaeon cosmos.²

Honorius and Hildegard belonged to a moment in the revival of the philosophical, religious and scientific possibilities of understanding the world. By virtue of the encyclopaedic genre that Honorius utilised to represent images of the world, he offered his reader an optimistic, though ultimately static universe. Images of a universe that is devoid of metabolic flows and biological life were typical of encyclopaedic and other texts that closely followed the Augustinian semiotic. The vitality captured by the Greek notion of the *logos* was subsumed in favour of contemplating *res* and *signum*, *uti* and *frui*. Hildegard's dissatisfaction with the lack of life and vitality in ruminations on Scripture is clear from the opening Declaration of her first treatise, through to the final words of her magnum opus. To Hildegard, the Living Light, through *uiriditas*, was the continuous and sustaining force that underpinned her engagement with world signs. One of her great contributions to the revival was a demonstration of the life inherent in the universe. Where many of her contemporaries explored the personified *Natura*

¹ Conrad of Hirsau, *Dialogus de mundi contemptu uel amore. Extraits de l'Allocutio ad deum et du De veritatis inquisitione*, ed. Robert Bultot, Textes inédits, Analecta Mediaevalia Namurcensia 19 (Louvain: Editions Nauwelaerts, 1966).

² Wetherbee, *Platonism and Poetry in the Twelfth Century: The Literary Influence of the School of Chartres*, 29.

as the life-force in the universe, Hildegard drew upon her deep interactions with ecosemiosis to make clear that such abstraction is not required to understand the energy of the universe. Instead, she reveals that the energy that pervades the universe is Life, through the Living Light, who is God. Her construction of *uiriditas* echoed, in some ways, the early Greek engagement with the concept of *logos*, and enabled her to expose the mystical meanings in scriptural narratives such as the Prologue to the Gospel of John. The culminating exegesis of her visionary career, her exegesis of the Prologue in *LDO*, can be seen as the endpoint of a series of experiments in articulating how the living world is connected with the human and the divine. It also demonstrates how the living world is a perfect semiotic universe, ripe with divine meaning and implications for the salvation narrative. These semiotic connections help reimburse the Word with the lost meanings of *logos*.

The signs from the living world that Honorius and Hildegard consider require more scholarly interrogation. Honorius diligently collated and arranged existing ideas for his audience to consume easily. Hildegard nurtured the ideas that are presented in their infantile state in Honorius work; taking them from seeds to a bountiful harvest of ideas. Irrespective of their intellectual priorities, these two authors shared a curiosity for the natural world, and the ultimate goal of illuminating Scripture for the benefit of others. Signs from the living world were an interpretative tool that they could effectively pass on to their readers; enabling them to see the spiritual meaning in the universe and its relationship to Scripture.

Bibliography

Primary Sources

Ambrose of Milan. *Exameron*, edited by C. Schenkl, CSEL 32.1 (Vienna, 1897).

Augustine of Hippo. *De doctrina Christiana*, edited and translated by R. P. H. Green. New York: Oxford University Press, 1995.

———. *The City of God against the Pagans*, translated by Robert W. Dyson. New York: Cambridge University Press, 1998.

———. *The Literal Meaning of Genesis*, translated and annotated by John Hammond Taylor. New York: Newman Press, 1982.

Basil of Caesarea. “The Hexameron.” In *Basil of Caesarea, Letters and Select Words, Nicene and Post-Nicene Father, series 2, vol. 8*, translated by Blomfield Jackson. Cambridge, MA: Hendrickson Publishers, 1999.

Bernard Silvestris. *Cosmographia* in *The Cosmographia of Bernard Silvestris*, translated and introduced by Winthrop Wetherbee. New York: Columbia University Press, 1973.

Calcidius. *Timaeus* in *Studien zum Timaioskommentar des Calcidius*, edited by Jan H. Waszink. Leiden: Brill, 1964.

Conrad of Hirsau. *Dialogus de mundi contemptu uel amore, attribué à Conrad d’Hirsau. Extraits de l’Allocutio ad deum et du De veritatis inquisitione*. Edited by Robert Bultot. Textes inédits, *Analecta Mediaevalia Namurcensia* 19. Louvain: Editions Nauwelaerts, 1966.

Hildegard of Bingen. *Cause et Cure*, edited by Laurence Moulinier. Berlin: Akademie Verlag, 2003.

———. *Causa et Curae*, edited by Paul Kaiser. Leipzig: Teubner, 1903.

- . *Hildegard von Bingen's Physica*, translated by Priscilla Throop. Rochester, VT: Healing Arts Press, 1998.
- . *Hildegard of Bingen's Book of Divine Works with Letters and Songs*, edited by Matthew Fox. New Mexico: Bear & Co, 1987.
- . *Hildegard of Bingen: On Natural Philosophy and Medicine: Selections from Cause et cure*, translated by Margret Berger. Cambridge: D.S. Brewer, 1999.
- . *Liber diuinorum operum*, edited by Albert Derolez and Peter Dronke, CCCM 92. Turnhout: Brepols, 1996.
- . *Sciuias*, edited by Führkötter and Carlevaris, CCCM 43, 43A. Turnhout: Brepols, 1978.
- . *Sciuias*, translated by Mother Columba Bishop and Jane Hart. New Jersey: Paulist Press, 1990.
- . *The Book of the Rewards of Life (Liber Vitae Meritorum)*, translated by Bruce W. Hozeski. New York: Garland Publishing Inc., 1994.
- . *The Letters of Hildegard of Bingen, vols. 1 and 2*, translated by Joseph L. Baird and Radd K. Oxford: Oxford University Press, 1994, 1998.
- Holy Bible in Latin Language with Douay-Rheims English Translation. Access online at <https://vulgate.org/>
- Honorius Augustodunensis. *Clavis physicae*, edited by Paulo Lucentini. Rome: Edizioni di storia e letteratura, 1974.
- . "Honorius Augustodunensis: *Imago mundi*," edited by V.I.J. Flint, *Archives d'histoire doctrinale et littéraire du moyen âge* 49 (1982): 7–153.
- Hrabanus Maurus. *De uniuerso: the peculiar properties of words and their mystical significance*, translated by Priscilla Throop. Vermont: MedievalMS, 2006.

- Hugh of Saint Victor. *On the Sacraments of the Christian Faith (De Sacramentis)*, translated by Roy Deferrari. Massachusetts: Mediaeval Academy of America, 1951.
- Isidore of Seville. *Isidori episcopi Etymologiarum siue originum libri XX*, ed. Wallace M. Lindsay, 2 vols. Oxford: Oxford University Press, 1962.
- . *The Etymologies of Isidore of Seville*, translated by Stephen A. Barney, W.J. Lewis, J.A. Beach, and Oliver Berghof. Cambridge: Cambridge University Press, 2006.
- Johannes Scotus Eriugena. *Periphyseon: The Division of Nature*, translated by I. P. Sheldon-Williams and revised by John O'Meara. Washington: Dumburton Oaks, 1987.
- Manegold of Lautenbach. *Liber contra Wolfelmum*, translated Robert Ziolkowski. Louvain: Peeters Publishers, 2002.
- Pseudo-Chrysostom. "Homily 53 on Matthew, 25:27" in *Opus imperfectum in Matthaeum*, CPL 0707. *Revue Bénédictine* 84 (1974).
- Rupert of Deutz. *De sancta trinitate et operibus eius: libri I-IX*, edited by Hrabanus Haacke. Turnhout: Brepols, 1971-1972.
- Theoderic of Echternach. *The Life of Saint Hildegard*. In *Jutta & Hildegard: The Biographical Sources*, translated and introduced by Anna M. Silvas, 118-210. Turnhout: Brepols, 1999.
- William of Hirsau. *Willehelmi abbatis Constitutiones Hirsaugienses vols. 1 and 2*, edited by Pius Engelbert. Siegburg: Schmitt, 2010.

Secondary Sources

- Allers, Rudolf. "Microcosmus: From Anaximandros to Paracelsus." *Traditio* 2 (1944): 319-407.

- Ambrosoli, Mauro. *The Wild and The Sown: Botany and Agriculture in Western Europe, 1350-1850*, translated by Mary McCann Savatorelli. Cambridge: Cambridge University Press, 1997.
- Bartlett, Anne Clark. "Miraculous Literacy and Textual Communities in Hildegard of Bingen's Scivias." *Mystics Quarterly* 18, No. 2 (June 1992): 43-55.
- Benson, R.L. and Giles Constable. *Renaissance and Renewal in the Twelfth Century*. Toronto: University of Toronto Press, 1982, 1991.
- Berman, Constance H. *The Cistercian Evolution: The Invention of a Religious Order in Twelfth-Century Europe*. Philadelphia: University of Pennsylvania Press, 2000.
- Berger, Margaret. "Interpretative Essay." In *Hildegard of Bingen: On Natural Philosophy and Medicine*, translated by Margret Berger. Cambridge: D.S. Brewer, 1999.
- Berndt, Rainer ed. '*Im Angesicht Gottes suche der Mensch sich selbst*': Hildegard von Bingen (1098–1179). Berlin: Akademie Verlag GmbH, 2001.
- Biernoff, Suzannah. *Sight and Embodiment in the Middle Ages*. New York: Palgrave-MacMillan, 2002.
- Brenner, Elma. "The Medical Role of Monasteries in the Latin West, c. 1050– 1300." In *The Cambridge History of Medieval Monasticism in the Latin West*, edited by Alison I. Beach and Isabelle Cochelin, 865-881. Cambridge: Cambridge University Press, 2020.
- Bruun, Mette Birkedal and Emilia Jamroziak. "Introduction: Withdrawal and engagement." In *The Cambridge Companion to the Cistercian Order*, edited by Mette Birkedal Bruun. Cambridge: Cambridge University Press, 2013.
- Bono, James J. "Medical Spirits and the Medieval language of Life." *Traditio* 40 (1984): 91-130.

- Brooks, Britton Elliot. *Restoring Creation: The Natural World in the Anglo-Saxon Saints' Lives of Cuthbert and Guthlac*. New York: Boydell & Brewer, 2019.
- Burnett, Charles. "Scientific Speculations." In *A History of Twelfth-Century Western Philosophy*, edited by Peter Dronke, 151–76. Cambridge: Cambridge University Press, 1988.
- Campbell, Nathaniel M. "Introduction." In *Book of Divine Works*, translated by Nathaniel Campbell. Washington D.C.: Catholic University of America Press, 2018.
- . International Society of Hildegard von Bingen Studies, "Liber Divinorum Operum," hildegard-society.org/p/liber-divinorum-operum.html#I-4.
- Carruthers, Mary. *The Book of Memory: A Study of Memory in Medieval Culture*. Cambridge: Cambridge University Press, 1990.
- Chenu, Marie-Dominique. *Nature, Man and Society in the Twelfth Century: Essays on New Theological Perspectives in the Latin West*, edited and translated by Jerome Taylor and Lester Little. Toronto: University of Toronto Press, 1997.
- Cizewski, Wanda. "The Doctrine of Creation in the First Half of the Twelfth Century: Selected Authors (Rupert of Deutz, Honorius Augustodunensis, Peter Abelard, and Hugh of St. Victor)." PhD thesis, University of Toronto, 1983.
- Clements, Matthew. "The circle and the maze: Two images of ecosemiotics." *Sign Systems Studies* 44, no. 1/2 (2016): 69-93.
- Constable, Giles. "Hildegard's Explanation of the Rule of Saint Benedict." In *Hildegard Von Bingen: in ihrem historischen Umfeld*, edited by Alfred Haverkamp, 163-188. Mainz: Verlag Philipp von Zabern, 2000.
- . *Letters and Letter-Collections*. Turnhout: Brepols, 1976.

- Crouse, Robert D. "Honorius Augustodunensis: De Neocosmo." PhD thesis, Harvard University, 1970.
- Curtius, Ernst Robert. *Europäische Literatur und lateinisches Mittelalter*. Bern und München: Francke, 1948. Translated by Willard R. Trask and introduced by Colin Burrow. New Jersey: Princeton University Press, 2013.
- Cushing, Kathleen G. "Of Locustae and Dangerous Men: Peter Damian, the Vallombrosans, and Eleventh-century Reform." *Church History* 74, no. 4 (2005): 740-757.
- Dale, Corinne. *The Natural World in the Exeter Book Riddles*. Cambridge: Boydell & Brewer, 2017.
- Deploige, Jeroen. "Priests, Prophets, and Magicians: Max Weber and Pierre Bourdieu vs Hildegard of Bingen." In *The Voice of Silence: Women's Literacy in a Men's Church*, edited by Thérèse de Hemptinne and María Eugenia Góngora, 3-22. Turnhout: Brepols, 2002.
- Descola, Phillipe. "Beyond nature and culture: Forms of attachment," trans. Janet Lloyd, *HAU: Journal of Ethnographic Theory* 2, no. 1 (2012): 447-471.
- Di Sciacca, Claudia. "London, British Library, Cotton Vespasian D. xiv, fols. 4-169: A Case Study of an English Post-Conquest Miscellaneous Manuscript." In *Fruits of Learning: The Transfer of Encyclopaedic Knowledge in the Early Middle Ages*, edited by Rolf H. Bremmer Jr and Kees Dekker. Peeters: Leuven, 2016.
- Disenza, Nicole Guenther. *Inhabited Spaces: Anglo-Saxon Constructions of Place*. Toronto: University of Toronto Press, 2017.
- Doyle, Dennis. "Vision Two of Hildegard of Bingen's Divine Works: A Medieval Map for a Cosmic Journey." *Pacifica: Journal of the Melbourne College of Divinity* (Jun 2007): 142-161.

- Dronke, Peter. *Fabula: explorations into the uses of myth in medieval Platonism*. Leiden: Brill, 1974.
- Economou, George D. *The Goddess Natura in Medieval Literature*. Massachusetts, Harvard University Press: 1972.
- Endres, Joseph A. *Das St. Jakobsportal in Regensburg und Honorius Augustodunensis*. Kempten and Munich: Joseph Kösel'schen, 1903.
- . *Honorius Augustodunensis: Beitrag zur Geschichte des geistigen Lebens im 12. Jahrhundert*. Kempten and Munich: Joseph Kösel'schen, 1906.
- Fassler, Margot E. "Allegorical Architecture in *Sciuias*: Hildegard's Setting for the Ordo Virtutum." *Journal of the American Musicological Society* 67, no.2 (2014): 317–378.
- Felten, Franz J. "What Do We Know About the Life of Jutta and Hildegard at Disibodenberg and Rupertsberg?." In *A Companion to Hildegard of Bingen*, edited by Beverly Mayne Kienzle, Debra L. Stoudt & George Ferzoco, 15-38. Leiden: Brill, 2014.
- Flanagan, Sabina. *Hildegard of Bingen, 1098-1179: A Visionary Life*. London, New York: Routledge, 1989.
- Flint, V.I.J. "Honorius Augustodunensis." In *Authors of the Middle Ages: Historical and Religious Writers of the Latin West*, edited by Patrick J. Geary, 89-183. Aldershot: Variorum, 1995.
- Ford, Jack. "Divine Love in the Medieval Cosmos: The Cosmologies of Hildegard of Bingen and Hermann of Carinthia." *Chicago Journal of History* 8, no. 5 (2017): 17-37.
- Foucault, Michel. *The Archaeology of Knowledge and The Discourse on Language*, translated by A.M. Sheridan Smith. New York: Pantheon, 1972.
- Fox, Matthew, "Introduction." In *Hildegard of Bingen's Book of Divine Works: With Letters and Songs*, edited by Matthew Fox. Santa Fe: Bear & Company, 1987.

- Franklin-Brown, Mary. *Reading the World: Encyclopedic Writing in the Scholastic Age*. Chicago: University of Chicago Press, 2012.
- Froula, John. "Introduction: Hugh of St Victor: On Sacraments of the Christian Faith." In *Victorine Christology*, edited by Christopher P. Evans, 111-182. Turnhout: Brepols, 2018.
- Fuhrmann, Horst. *Germany in the High Middle Ages, c. 1050-1200*. Cambridge and New York: Cambridge University Press, 1986.
- Gaspar, Giles. *Anselm of Canterbury and his Theological Inheritance*. London: Routledge, 2004.
- Gilomen-Schenkel, Elsanne. "Double Monasteries in the South-West Empire (1100-1230)." In *Partners in Spirit: Women, Men, and Religious Life in Germany, 1100-1500*, edited by Fiona J. Griffiths and Julie Hotchin, 47-74. Turnhout: Brepols, 2014.
- Gongora, Maria Eugenia. "Feminea Forma and Virga: two images of incarnation in Hildegard of Bingen's Symphonia." In *The Voice of Silence: Women's Literacy in a Men's Church*, edited by Thérèse de Hemptinne and María Eugenia Góngora, 23-36. Turnhout: Brepols, 2002.
- Gersh, Stephen. "Anselm of Canterbury." In *A History of Twelfth-Century Western Philosophy*, edited by Peter Dronke, 255-278. Cambridge: Cambridge University Press, 1988.
- Hannam, Walter Andrew. "The *Inevitable* Of Honorius Augustodunensis: A Study in the Textures of Early Twelfth-Century Augustinianisms." PhD thesis, Boston College, 2013.
- Haskins, Charles Homer. *The Renaissance of the Twelfth Century*. Cambridge, MA: Harvard University Press, 1927.
- Hemptinne, Thérèse de. "Reading, Writing and Devotional Practices: Lay and Religious women and the Written Word in the Low Countries (1350-1550)." In *The Voice of*

- Silence: Women's Literacy in a Men's Church*, edited by Thérèse de Hemptinne and María Eugenia Góngora, 111-126. Turnhout: Brepols, 2004.
- Hicks, Andrew. *Composing the World: Harmony in the Medieval Platonic Cosmos*. New York: Oxford University Press, 2016.
- Jaeger, Stephen. *The Envy of Angels: Cathedral Schools and Social Ideals in Medieval Europe 950-1200*. Philadelphia: University of Pennsylvania Press, 1994.
- Jordan, Erin L. "Transforming the landscape: Cistercian nuns and the environment in the medieval Low Countries." *Journal of Medieval History* 44, no. 2 (2018): 187-201.
- Kienzle, Beverly Mayne. *Cistercians, Heresy and Crusade in Occitania, 1145-1229*. Suffolk: Boydell & Brewer, 2012.
- . *Hildegard of Bingen: Gospel Interpreter*. Lanham: Rowman & Littlefield, 2020.
- Kohn, Eduardo. *How forests think: toward an anthropology beyond the human*. Berkeley: University of California Press, 2013.
- Kull, Kalevi. "Semiotic ecology: Different natures in the semiosphere." *Sign Systems Studies* 26, no. 1 (1998): 344-371.
- . "Semiotic Ecology." In *Encyclopedia of Ecology, vol. 4: Systems Ecology*, edited by S. E. Jorgensen and B. D. Fath, 3210-3214. Oxford: Elsevier, 2008.
- Jan Lambrecht, "Final Judgments and Ultimate Blessings: The Climactic Visions of Revelation 20, 11-8," *Biblica* 81, no. 3 (2000): 362-385.
- Lebeuf, Jean. "Dissertation où l'on combat le sentiment commun, qu'il a existé autrefois dans l'Eglise d'Autun un Prêtre nommé Honorius Auteur de differens ouvrages. Et où l'on fait voir que l'Ecrivain connu sous le nom d'Honorius d'Autun, a écrit et fleuri in Allemagne et non en France." *Recueil de divers écrits pour servir d'éclaircissemens a*

- l'histoire de France, et de supplement a la notice des Gaules 1*. Paris: Jaques Barois Fils, 1738.
- Leigh-Choate, Tova. William T. Flynn, and Margot E. Fassler. "Hearing the Heavenly Symphony: An Overview of Hildegard's Musical Oeuvre with Case Studies." In *A Companion to Hildegard of Bingen*, edited by Beverly Mayne Kienzle, Debra L. Stoudt & George Ferzoco, 163-192. Leiden: Brill, 2014.
- Li, Shannon M. Turner. "Irimbert of Admont and his Scriptural Commentaries: Exegeting Salvation History in the Twelfth Century." PhD thesis, Ohio State University, 2017.
- Liebeschütz, Hans. *Das allegorische Weltbild der heiligen Hildegard von Bingen*. Leipzig-Berlin, 1930.
- Maddocks, Fiona. *Hildegard of Bingen: The Woman of her Age*. New York: Doubleday, 2001.
- Maran, Timo and Kalevi Kull. "Ecosemiotics: Main Principles and Current Developments." *Geografiska Annaler: Series B* 96, no. 1 (2014): 41-50.
- Maran, Timo. "On the Diversity of Environmental Signs: A Typological Approach." *Biosemitics* 10, no. 3 (2017): 355-368.
- Maskulak, Marian. "Balancing Tensions in the Work of Hildegard." *Magistra* 16, no. 1 (2010): 38-59.
- Mathewes, Charles. "A Worldly Augustinianism: Augustine's Sacramental Vision of Creation." *Augustinian Studies* 41, no. 1 (2010): 333-348.
- Matthews Sanford, Eva. "Honorius, *Presbyter* and *Scholasticus*." *Speculum* 23, no. 3 (1948): 397-425.
- Metzler, Irina. "Perceptions of Hot Climate in Medieval Cosmography and Literature." *University of Reading* 23 (1997): 69-105.

- Mews, Constant J. "Hildegard of Bingen and the Hirsau Reform in Germany, 1080-1188." In *A Companion to Hildegard of Bingen*, edited by Beverly Mayne Kienzle, Debra L. Stoudt & George Ferzoco, 57-84. Leiden: Brill, 2014.
- . "Process Thought, Hildegard of Bingen and Theological Tradition." *Concrescence: Australasian Journal of Process Thought* 1, no. 1 (June 2000).
- . "The Legacy of Gregory the Great in the Latin West." In *A Companion to Gregory the Great*, eds. Bronwen Neil and Matthew J. Dal Santo, 315-342. Leiden: Brill, 2013.
- . "The World as Text: The Bible and the Book of Nature in Twelfth-Century Theology." In *Scripture and Pluralism: Reading the Bible in the Religiously Plural Worlds of the Middle Ages and Renaissance*, edited by Thomas J. Hoffman and Thomas E. Burman, 95-122. Leiden: Brill, 2005.
- Moran, Dermot. "'The Secret Folds of nature' Eriugena's Expansive Concept of Nature." In *Re-Imagining Nature: Environmental Humanities and Ecosemiotics*, edited by Alfred Kentigern Siewers, Kathryn W. Shanley, John Carey, Jeffrey Jerome Cohen, Katherine M. Faull, Timo Maran, Dermot Moran, Michael Oleksa, Cynthia Radding, and Sarah Reese, 104-117. Maryland: Bucknell University Press, 2014.
- Morton, Timothy. *Ecology without Nature: Rethinking Environmental Aesthetics*. Cambridge, MA: Harvard University Press, 2007.
- Moulinier, Laurence. "Abbesse et agronome: Hildegard et le savoir botanique de son temps." In *Hildegard of Bingen: The Context of Her Thought and Art*, edited by Charles Burnett and Peter Dronke. London: Warburg Institute, 1998.
- Newman, Barbara. "The Visionary Texts and Religious Worlds of Religious Women." In *Crown and Veil: Female Monasticism from the Fifth to the Fifteenth Centuries*, edited

- by Jeffrey F. Hamburger and Susan Marti, translated by Dietlinde Hamburger, 151-171.
New York: Columbia University Press, 2008.
- Newman, Martha G. "Foundation and twelfth century." In *The Cambridge Companion to the Cistercian Order*, edited by Mette Birkedal Bruun, 25-37. Cambridge: Cambridge University Press, 2013.
- . *The Boundaries of Charity: Cistercian Culture and Ecclesiastical Reform 1098–1180*. Palo Alto, CA: Stanford University Press, 1996.
- Otten, Willemien. *From Paradise to Paradigm: A Study of Twelfth-Century Humanism*. Leiden: Brill, 2004.
- Pain, Nesta. *Empress Matilda: Uncrowned Queen of England*. London: Weidenfeld & Nicolson, 1978.
- Panzaru, Olga. "Introduction to Ecosemiotics." *Scientific Papers. Agronomy Series. Universitatea de Științe Agricole și Medicină Veterinară Iași* (2008): 418-422.
- Pollmann, Karla. "Human Sin and Natural Environment: Augustine's Two Positions on Genesis 3:18." *Augustinian Studies* 41, no. 1 (2010): 69–85.
- Rapp, Beverlee Sian. "A Woman Speaks: Language and Self-Representation in Hildegard's Letters." In *Hildegard of Bingen: A Book of Essays*, edited by Maud Burnett McNerney, 3-24. New York and London: Garland Publishing Inc., 1998.
- Roberts, Lawrence D. "Preface." In *Approaches to Nature in the Middle Ages*, edited by Lawrence D. Roberts, ix-xiii. New York: Medieval & Renaissance Texts and Studies, 1982.
- Röckelein, Hedwig. "Monastic Landscapes." In *The Cambridge History of Medieval Monasticism in the Latin West*, eds. Alison I. Beach and Isabelle Cochelin, 816-83-. Cambridge: Cambridge University Press, 2020.

- Salmon, Fernando. "The Body Inferred: Knowing the Body through the Dissection of Texts." In *A Cultural History of the Human Body in the Medieval Age*, vol. 2, edited by Linda Kalof, 77-98. New York: Bloomsbury Academic, 2010.
- Schipperges, Heinrich. "Honorius und die Naturkunde des 12. Jahrhunderts." *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften* 42, no. 1 (1958): 71-82.
- Schmitt, Miriam. "Hildegard of Bingen: Viriditas, Web of Greening Life-Energy: I." *American Benedictine Review* 50, no. 3 (1999): 253-276.
- Schmitt, Jean-Claude. "La culture de l'imgo." *Images Medievales, Annales HSS* no. 1 (1996): 3-36.
- Siewers, Alfred Kentigern. "Introduction: Song, Tree, and Spring: Environmental Meaning and Environmental Humanities." In *Re-Imagining Nature: Environmental Humanities and Ecosmiotics*, edited by Alfred Kentigern Siewers, Kathryn W. Shanley, John Carey, Jeffrey Jerome Cohen, Katherine M. Faull, Timo Maran, Dermot Moran, Michael Oleksa, Cynthia Radding, and Sarah Reese, 9-47. Maryland: Bucknell University Press, 2014.
- . "The Ecopoetics of Creation: Genesis LXX 1-3." In *Re-Imagining Nature: Environmental Humanities and Ecosmiotics*, edited by Alfred Kentigern Siewers, Kathryn W. Shanley, John Carey, Jeffrey Jerome Cohen, Katherine M. Faull, Timo Maran, Dermot Moran, Michael Oleksa, Cynthia Radding, and Sarah Reese, 49-78. Maryland: Bucknell University Press, 2014.
- Silvas, Anna M. *Jutta & Hildegard: The Biographical Sources*. Turnhout: Brepols, 1999.
- Shyovitz, David I. *A Remembrance of His Wonders: Nature and the Supernatural in Medieval Ashkenaz*. Philadelphia: University of Pennsylvania Press, 2017.
- Smyth, Marina. "The Physical World in Hiberno-Latin Texts." *Peritia* 5 (1986): 201-234.

- Stock, Brian. *Myth and Science in the Twelfth Century: A Study of Bernard Silvester*. New Jersey: Princeton University Press, 1972.
- . *The Implications of Literacy: Written Language and Models of Interpretation in the Eleventh and Twelfth Century*. New Jersey: University of Princeton Press, 1983.
- Stover, Justin A. “Hildegard, the Schools, and their Critics.” In *A Companion to Hildegard of Bingen*, edited by Beverly Mayne Kienzle, Debra L. Stoudt & George Ferzoco, 109-136. Leiden: Brill, 2014.
- Sukhoverkhov, Anton. “Natural Signs and the Origin of Language.” *Biosemiotics* 5 (2021): 153–159.
- Sweet, Victoria. *Body as Plant: Doctor as Gardener: Premodern Medicine in Hildegard of Bingen’s Causes and Cures*. PhD thesis, University of California, 2003.
- . “Hildegard of Bingen and the Greening of Medieval Medicine.” *Bulletin of the History of Medicine* 73, no. 3 (1999): 381-403.
- Ticciati, Susannah. “The Human Being as Sign in Augustine’s *De doctrina christiana*.” *Neue Zeitschrift für Systematische Theologie und Religionsphilosophie* 55, no. 1 (2013): 20-32.
- Tree, Isabella. *Wilding*. Croydon: Picador, 2018.
- Van Nieuwenhove, Rik. *An Introduction to Medieval Theology*. Cambridge: Cambridge University Press, 2012.
- Wetherbee, Winthrop. “Introduction.” *The Cosmographia of Bernard Silvestris*, translated and introduced by Winthrop Wetherbee. New York: Columbia University Press, 1973.
- . “Philosophy, Cosmology, and the Twelfth-century Renaissance.” In *A History of Twelfth-Century Western Philosophy*, edited by Peter Dronke, 21-53. Cambridge: Cambridge University Press, 1988.

Zahora, Tomas. *Nature, Virtue, and the boundaries of Encyclopaedic Knowledge: The Tropological Universe of Alexander Neckam (1157-1217)*. Turnhout: Brepols, 2014.