



A Morphology of Goethean science

Part II Into the Compost Heap

Simon Reakes MSc

Part 1 of this essay, published in issue seven, discussed an approach to Goethean science developed from the work of Rudolf Steiner, and how this was developed up to the 1980s in purely anthroposophical contexts. Part 2 takes up the story from the 1990s on, as a new generation of Goethean researchers re-engaged with academic research.

The first part of this essay focused on a fourfold way of knowing the world, one that drew on the model of the four classic elements in the Western tradition. I foregrounded the work of Bockemühl and Maier, focusing on their interpretation of, and the modes of knowing associated with each element. A brief glance back to the four elements will help with orientation, as we continue to follow the history of the morphology of Goethean science into Steinerian Goethean science.

In alchemical practice, both ancient and modern, the doctrine of the four elements plays a fundamental role. The doctrine can be traced back to Empedocles of Agrigento (c. 500–430 B.C.E.), whose poem *On Nature* describes four “invisible basic materials,” “the principles of solidity (Earth), fluidity (Water), vaporosity (Air) and combustibility (Fire)” (Haage, 2006, p. 18). The four root powers are animated by the basic polarity of Love and Strife/Conflict. In the following century, Aristotle (384–322 B.C.E.) took up the doctrine of the four elements. Such was the influence and coherence of these four invisible basic materials that, through the Aristotelean texts, the doctrine was prominent in the natural sciences and medicine until the late Middle Ages. (Haage, 2006)

Reading the Book of Nature

Just as Aristotle looked back to Empedocles, so Steiner looked back to Aristotle. In the wake of World War I, in a radically changed Western European atmosphere, Steiner argued that “The blundering, inadequate, and frequently repulsive attempts of modern natural science must be transmuted by a spiritual world-conception...” Steiner proposed (2022) that if such a spiritual world-conception could intervene in the natural sciences then there could “arise from them a true reading of the book of nature.” The book of nature is an old and telling metaphor. In drawing on the metaphor, Steiner can be seen to place value, not only on first person experience and empirical knowledge, but on doing so with spiritual eyes, and through a particular mode of observation. Steiner, again standing on the shoulders of giants, proposes (2022) that “[Paracelsus] was convinced that only by reading the book of nature first-hand and through personal contact with those who work with nature can one come to anything like truly natural scientific knowledge.”

In developing the model of the four elements as “modes of observation,” Bockemühl bases his approach not only on Steiner’s epistemology, but also Steiner’s imperative to undertake a transformation of the sciences, and to do so through reading the book of nature. Bockemühl’s reference point for this is the lecture given by Steiner as part of *Karmic Relationships Volume 3* in 1924¹ quoted above. Bockemühl’s Goethean approach is congruent with Steiner’s proposed transmutation of the natural sciences, both by way of reading the book of nature, and by actively transforming or guiding a transmutation.² Bockemühl argues that spiritual science “makes us aware of the invisible aspect of reality. It teaches us to perceive the things that cannot

1 The lecture, *Ahriman’s Fight Against the Michael Principle. The Message of Michael* was given on Aug 1 1924. See: <https://rsarchive.org/Lectures/GA237/English/RSP1977/19240801p01.html>

2 On Bockemühl’s reading the book of nature see Amrine’s “Goethean Method in the Work of Jochen Bockemühl”, in *The Perennial Alternative – Episodes in the Reception of Goethe’s Scientific Work* (pp. 223–240). Adonis Press, 2021.

be perceived if the scientific approach remains untransformed.” (Bockemühl, 1992, p. 296) Integral to this perceiving of the invisible aspect of reality is a Goethean method, infused with Steiner’s meditative approach and spiritual worldview. Bockemühl aims to arrive at the perception of the invisible aspect of reality through the cultivation of inner perception/inner vision, arguing (1992, p. 7) that “In the interplay of the formative movements, which are only visible to inner perception, we can discover an invisible temporal body or body of formative forces³.” Invisibility, then, turns out not to be a permanent category, but more something that can be brought into visibility through an appropriate approach.

The transmutation, or put another way the spiritualisation, of the natural sciences is just one aspect of Steiner’s larger perspective on transmutation and transformation. In Steiner’s work, and consequently Steinerian Goethean science, we can find the view that not only should particular fields or disciplines undergo a transmutation, but the Earth itself must undergo such a process. This is complex territory, and one that involves Steiner’s esoteric worldview, an examination of which is beyond the scope of this essay.⁴ It is worth noting, though, that Steiner’s philosophy embraces both ends of a spiritual-material spectrum. For whilst concerned with the esoteric matters such as the evolution of consciousness, cosmology, an arcana of spiritual beings and gods, and pre-birth and post-life existence, Steiner’s philosophy is eminently practical, and concerned with everyday matters. The invisible, the esoteric, the spiritual are not transcendent but immanent. For example, Steiner’s insights and indications have influenced practical domains such as agriculture, education, therapeutic education, medicine and social forms.

“Our Task is the Transformation of the Earth”⁵

This second part of the essay explores key ideas promoted by Bockemühl and Margaret Colquhoun (1947–2017). After Bockemühl, Colquhoun can be considered one of the most significant individuals in the morphology of Goethean science into Steinerian Goethean science, and one who exemplifies the spanning of the spiritual-material spectrum.

3 Formative forces are also referred to etheric forces. See Bockemühl, J. (1985). “The Formative Movement of Plants” in *Elements and Ethers: Modes of Observing the World. Towards a Phenomenology of the Etheric World* (pp. 73–88). Anthroposophic Press.

4 This topic is too large to address here. Readers are directed to chapter four of Steiner’s *Occult Science* (Steiner, 1997), “The Evolution of the Cosmos and Man” and chapter six, “The Present and Future of Cosmic Evolution”.

5 Steiner, R. (1918). *How is Knowledge Of The Higher Worlds Attained?* https://rsarchive.org/Books/GA010/English/RSPC1947/GA010_c01.html. Retrieved October 2022, from Rudolf Steiner Archive

One of the key ideas picked up by Colquhoun⁶ is Steiner's transformation of the Earth. Both the directive to read nature as a text and to consciously guide a process of transformation of the Earth, the latter through working the landscape, are present in the work of Colquhoun. Having studied with Bockemühl at the Goetheanum (Dyson, 2017, p. 108), Colquhoun would further the Goethean approach, grounding it in the Pishwanton Project, which she set up in 1996.⁷ For Colquhoun, the idea of the transformation of the Earth through working with the landscape requires a method. One year later, in her article "An exploration into the use of Goethean science as a methodology for landscape assessment: the Pishwanton Project" (1997), Colquhoun introduces a synthesis of Goethean, Spinozan and Steinerian terminology in a three-stage method, with a proposed fourth stage to bring them all together. As there is no evidence that Bockemühl drew on the work of Spinoza, it can be conjectured that Colquhoun's interest in Spinoza has, if not its source, then a very strong footing in Steiner's early work on Goethean science.⁸

Presented using terms drawn from Goethe and Steiner, Colquhoun's initial framing of the Goethean method is articulated through three levels of inquiry (Figure 1). A summary of the process is given here, but the reader is directed to the paper for a fuller understanding. For Level 1, general data, such as "height above sea level, aspects of slopes, orientation in the points of the compass, prevailing wind direction, rainfall, soil types" (Colquhoun, 1997a, p. 151) are collected in a group. Findings are shared. For Level 2, how the landscape has come into being over time is studied. This coming into being explores not only the landscape's recent history, but also its geomorphology. Again, findings are shared in the group, and "[o]nce each person has reconstructed as much of the history of his or her place as possible we try together to build imaginative pictures by living within the stream of time." (Colquhoun, 1997, p. 155) At Level 3, "We approach the 'spirit of the place' and, given space and a listening

6 Colquhoun's *Reading Nature as a Text – Goethe's Science Today* (Colquhoun, n.d.) is prefaced with Steiner's quote, "Our task is the transformation of the Earth."

7 In 2019, following the death of Margaret Colquhoun in 2017, the Life Science Trust which manages the Pishwanton Project entered into partnership with Ruskin Mill Land Trust, working in collaboration with the Field Centre. See: lifesciencecentre.co

8 Consider for example, this passage from Steiner's *Goethean Science* (Steiner, 1988) from which Colquhoun draws in her depiction of Spinoza. "The first kind is that in which upon hearing or reading certain words we recall certain things and form certain mental pictures of these things which are similar to the pictures by which we represent the things to ourselves pictorially. The second kind of knowledge is that in which, out of sufficient mental pictures of the characteristics of things, we form general concepts for ourselves. The third kind of knowledge, however, is that in which we advance from an adequate picture of the real being of certain attributes of God to an adequate knowledge of the being of things. Spinoza calls this kind of knowledge *scientia intuitiva*, knowledge in beholding. This last, the highest kind of knowledge, is that for which Goethe strove." (Steiner, 1988, p. 33)

ear, it will speak within us.” (Colquhoun, 1997, p. 155) Poems and other artistic activities can aid this process.

A point of emphasis for Colquhoun is the vertical movement towards a higher level of knowledge and encounter undertaken in the Goethean inquiry. It is an “ascent from material phenomena to reach the underlying but invisible spiritual being of the place, the Genius Loci.” (Colquhoun, 1997b, p. 156) Having undertaken the ascent, the descent follows and Colquhoun’s indications for a fourth level are that all the previous three levels are brought together so as to explore future possibilities for the place/landscape. “Out of a state of ‘becoming one with’ (or ‘being the being’) the place we are able to develop an assessment or decisions leading to action.”

	Level	Spinoza	Goethe + today’s terminology	Colquhoun
1	This level is highly appropriate for the world of physical things, separate parts in a landscape or a plant	That which upon hearing or reading certain words we recall certain things and form mental pictures of these things which are similar to the things themselves	Exact sense perception It might be described today as ‘seeing the “is now”’	Meeting the ‘is now’ – the physical Level 1
2	At this level we ‘live’ in between the physical parts with a more fluid type of alive thinking which connects all the parts of a living whole together in a way in which we recreate inwardly their development in relation to one another	Out of sufficient mental pictures of the characteristics of the things, we form general concepts for ourselves	Exact sensorial fantasy This could be called today ‘seeing “becoming” or “relationship”’	Living into the ‘becoming’ – in time and relationships Level 2
3	This is the level at which we experience an intangible deep feeling of what meets us in a landscape – or touches us in its essence out of the whole	We advance from an adequate picture of the real being of certain attributes of God to an adequate knowledge of the being of things (Scientia Intuitiva)	Knowledge in beholding This could be described today as ‘seeing “being”’	Seeing ‘being’ or meeting the genius loci Level 3

Figure 1. Colquhoun’s “The levels of knowledge according to Spinoza [sic] and Goethe”

Colquhoun would later go on to develop “a methodology that combined Goethe’s approach to Natural Science with her deep understanding of the *Seven Life Processes*⁹, as originally outlined by Steiner.” (Dyson, 2017, p. 107) The seven stages of Colquhoun’s revised Goethean method give a far clearer and more directive approach for sensing and planning future landscape developments on a specific site. In summary, the seven stages of Colquhoun’s revised Goethean method are:



Figure 2. Colquhoun’s Seven Stage Goethean Process

Stage One: Exact Sense Perception

Stage Two: Exact Sensorial Imagination/Fantasy

Stage Three: Seeing in Beholding or the Revelation of Character/Gesture (Inspiration)

Stage Four: Becoming One With or Intuition

Stage Five: Apprehending the Idea, Atmosphere or Gesture

Stage Six: Growing the Idea into Matter

Stage Seven: Landing the New¹⁰

9 See Steiner’s lecture of 12 August 1916, Dornach: <https://rsarchive.org/GA/GA0170/19160812p01.html>

10 (Colquhoun, n.d.)

Readers may also be familiar with Colquhoun's seven stage process through the work of Christopher Day. Day's seven stage process, which he refers to as *Incarnating project out of place-study*, (Day, 2003, p. 44), is credited to Colquhoun.¹¹ Such a schema is a guide for the transformation of the past of a place to a future vision, enacted through a project. Day states that, "Scientifically – that is, with a Goethean scientific approach – we can work towards understanding the forces, physical and spiritual, temporal and atmospheric, that make a place." (Day, 2003, p. 44). Throughout *Consensus Design* (Day, 2003), Day foregrounds terms with distinctly theological connotations, *redeeming* and *incarnating*. The former applies to an "already-formed place", whilst the latter applies to an "undeveloped 'site'" (Day, 2003, p. 44).

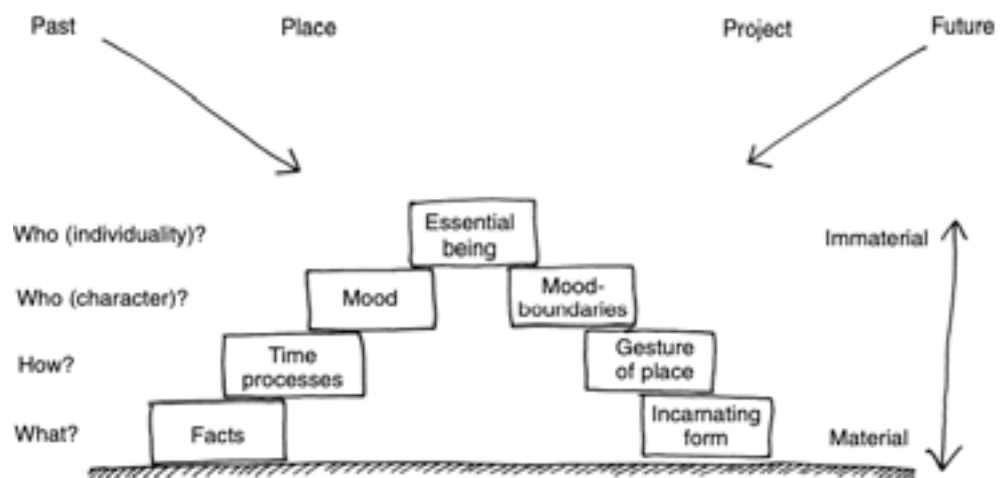


Figure 3. Day's Incarnating project out of place-study. Reproduced from Day, C. (2003). *Consensus Design: Socially inclusive process*. Architectural Press.

Colquhoun's seven stages are directed to co-shaping and endeavouring to collaborate with the landscape, for "growing the idea into matter" and "landing the new" (Colquhoun, n.d.a). For Colquhoun, "The whole journey is one of inserting oneself as a human being into the Will of the World." (Colquhoun, n.d.) Furthermore, "The Journey of the Goethean Science process can be regarded or experienced as a journey through the elements to the World Spirit/Logos or Christ being."¹² (Colquhoun, n.d.) Such a journey brings with it "a renewed experience of responsibility for our actions on

11 "After Colquhoun" (Day, 2003, p. 48).

12 Terms such as the World Spirit and the Will of the World, distinctive in Colquhoun's lexicon, are most likely attributable to Steiner. Consider for example, Steiner's emphasis on the cultivation of inner experience that can bring about a sense for "the eternal language of the *world spirit* and understand the mysterious riddles of creation." ([my emphasis – S.R.] Steiner, 1994, p. 23)

earth.” (Colquhoun, n.d.) The Goethean science process that Colquhoun is referring to, whilst being informed by both Goethe and Steiner, is also informed by the times in which Colquhoun undertook her work, which coincides with the birth of the ecology movement in the 1980s.¹³

The Germination of a New Earth

Having briefly examined Colquhoun’s Goethean method that concretely relates to the idea of the transformation of the Earth, I will now examine an instance of how this was applied in Colquhoun’s own hands-on practice.

Colquhoun’s proposes “we can take full responsibility for the handling, care and future evolution of the earth, with which we are so intimately bound up and co-dependant [sic] upon.” (Colquhoun, n.d.b).” No small task indeed. And yet, despite, or maybe because of the boldness of Colquhoun’s cosmically charged claims, what she offers is remarkably down to earth. In her article, *The Living Earth as a Spiritual Being*, Colquhoun, (2008), like Bockemühl before her, points to the practice of making of biodynamic compost heaps, based on the recommendations of Steiner. In June 1924 at Koberwitz, Germany, Steiner proposed (2004, lecture 4) that “In compost we have a means of kindling the life within the Earth itself.” Colquhoun would work with this idea, reframing it in her own way.

“When we make a [biodynamic] compost heap and put in these preparations we create a kind of embryonic mother ground. If we can do this on however small a scale, we are making seed spaces for the germination of a New Earth.” (Colquhoun, 2008, pp. 40–41) Colquhoun’s image of the embryonic mother is striking. In his *The Forge and the Crucible, The Origins and Structures of Alchemy*, Eliade proposes (1978, p. 52) that “The image of the Earth-Mother pregnant with every kind of embryo” is an “exceedingly ancient symbolism.”¹⁴ An exceedingly ancient symbolism, combined with the practical concern of biodynamic compost making, Colquhoun’s approach, emblematic of the morphology of Goethean science into Steinerian Goethean science, synthesises the often separate domains of the sacred and the profane. It is just such an approach that leads Colquhoun to claim (2008, p. 37), “Goethe’s way is like a kind of modern Druidism – a shamanic journey in the Celtic tradition – an entering deep into matter, consciously seeking or being open to the spirit within.”¹⁵

13 The first Gaia conference, *Is The Earth A Living Organism?*, which explored James Lovelock’s Gaia hypothesis, took place in 1985.

14 For Eliade’s discussion on the “Multiple Meanings of the Symbolism of the Embryo” see his *Rites and Symbols of Initiation, The Mysteries of Birth and Rebirth* (2nd ed.). Harper & Row. (1975) pp. 57–60.

15 For an exploration of Goethe and Shamanism see Flaherty, G. (1989) Goethe and Shamanism. *MLN*, (Modern Language Notes), 104(3), 580–596. 10.2307/2905047. It is not known whether Colquhoun was familiar with Flaherty’s paper. An exploration of Colquhoun’s likening of Goethe to “modern Druidism – a shamanic journey in the Celtic tradition” merits further research.

Concluding thoughts

Our brief exploration into the continuing morphology of Goethean science into Steinerian Goethean science started with the imperative to read in the book of nature. Such reading, it was argued, requires not only active engagement through first person experience, but the development of spiritual eyes. If a renewal of reading in the book of nature could be undertaken, then the transformation of the domain of the natural sciences was possible. Further, this transformation could extend into the domain and context of human beings. That context being the Earth. For “Our task is the transformation of the Earth.” Colquhoun’s approach to taking up this task was to develop a methodology in landscape studies, modelled on Steiner’s *Seven Life Processes*, that would enable the projects to develop that are resonant with the genius loci. Extending the task of the transformation of the Earth into the everyday practice, Colquhoun points to the very Earth beneath us, the biodynamic compost heap. Dark, decaying matter, that through transmutation, brings fertility and new life to the Earth. “If we can do this on however small a scale we are making seed spaces for the germination of a New Earth.” (Colquhoun, 2008, p. 41)

Whether one agrees or not with Colquhoun’s comparison of Goethe’s way to modern Druidism or shamanism, what is evident in the above exploration is a reorientation and reframing in the morphology of Goethean science into Steinerian Goethean. The imperative for the transformation of the Earth has arrived. What Colquhoun has emphasised, perhaps beyond all else, is complementing the ascent of the Goethean method with a descent into a new form: a growing, or incarnating, of the spiritually apprehended idea into matter.

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