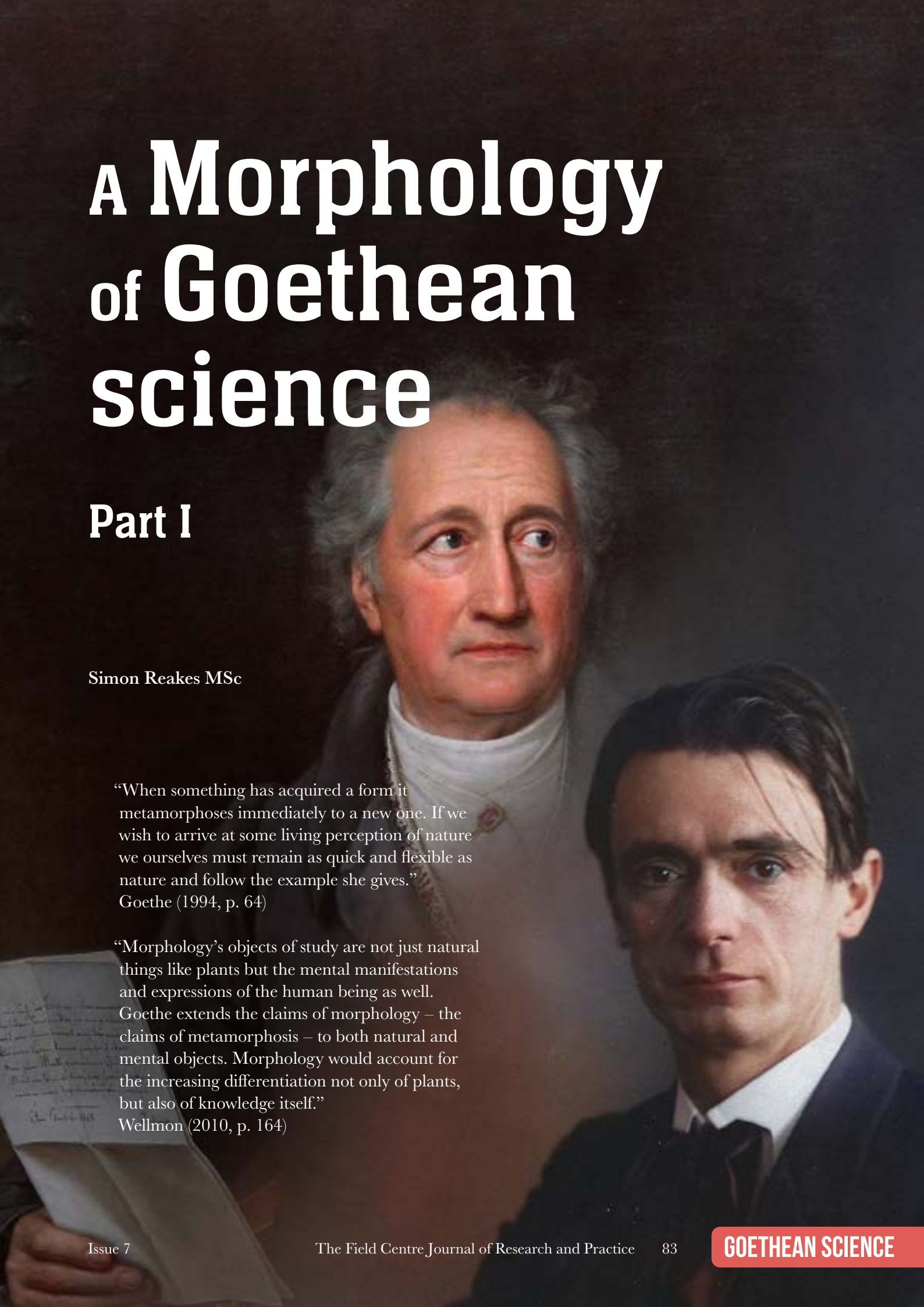


A Morphology of Goethean science



Part I

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“When something has acquired a form it metamorphoses immediately to a new one. If we wish to arrive at some living perception of nature we ourselves must remain as quick and flexible as nature and follow the example she gives.”

Goethe (1994, p. 64)

“Morphology’s objects of study are not just natural things like plants but the mental manifestations and expressions of the human being as well.

Goethe extends the claims of morphology – the claims of metamorphosis – to both natural and mental objects. Morphology would account for the increasing differentiation not only of plants, but also of knowledge itself.”

Wellmon (2010, p. 164)

In this essay I show how Goethean science has, since its inception by Goethe himself, undergone a metamorphosis. In particular I focus on how the tradition of Goethean science has drawn inspiration from the work of Rudolf Steiner (1861-1925). This merits exploration as a significant number of subsequent developments in Goethean science have been strongly influenced by the life and work of Steiner, both in theory and in practice. To date, Goethean science, informed by Steiner's approach, has been researched and applied by a number of key thinkers in the field (Bockemühl 1985; Brook 1998, 2000; Colquhoun 1997, 2004; Hoffman 2007; Wahl 2005).

As Wellmon argues (2010), knowledge itself undergoes manifestations, expressions and differentiation. Goethean science is no exception here, and research into Goethean science, informed by Steiner's oeuvre, can be seen as a significant area of study. Without it, the domain of Goethean studies remains incomplete. This essay makes a contribution towards this reframing of Goethean science.

A great fugue

Morphology: Goethe (1749 - 1832) coined the term. It seems only apt, then, to take a morphological approach to the study outlined above. However, as Goethe predominantly employed morphology to the study of natural phenomena¹, and the study of Goethean science inspired by Steiner does not involve natural phenomena, the morphological approach taken here needs clarification.

The perspective adopted here is that morphology "as the study of the way in which phenomena change over time, is a science of becoming rather than being" (Trop, 2013, p. 389). As a science of becoming, Goethean morphology can be conceived "as a method for dealing with how these objects developed and changed over time" (Wellmon, 2010, p. 161). It does this by exploring the relationship of "both the parts and the whole, including how forms deviate from and correspond to one another" (Wellmon, 2010, p. 164-165). Applying such perspectives, this essay explores the becoming of Goethean science; that is, the development over time of Goethean science through individuals drawing on indications from Steiner.

Applied to the field of inquiry that is outlined above, questions can be asked. What has changed over time? How has it changed? Who was instrumental in bringing developments about? By way of method, a hermeneutical approach to portraying the chronology of Goethean science informed by Steiner is taken, so that the phenomena of the study are followed through

¹ A notable exception to this is Goethe's exploration of the history of science. See Fink, 1991.

a developmental sequence. For Goethe, “The history of science is a great fugue in which the voices of nations are heard one after the other” (*Scientific Studies*, p. 304). Likewise, this paper follows the successive interweaving and development of Goethean science post-Steiner.

The morphological gaze

Necessarily, what has been proposed so far is only possible if what has been called the morphological gaze can be employed. Trop describes the morphological gaze as “a gaze situated in and produced by the same process of becoming as the phenomenon it observes” (Trop, 2013, p. 390). This is the gaze that leads Goethe in *Epirrhema* (c. 1819) to say of nature that “There's nought outside and nought within, For she is inside out and outside in” (*Selected Poems*, p. 159). Such a gaze allows for a seeing with rather than a looking at phenomena (Gordon, 2021). It is above all an empathetic way of seeing, concordant with the becoming of what is being observed. Writing about morphology and Goethe's plant studies, Powers (2019, p. 299) argues that the morphological gaze “follows and flows along with the object of study in the course of its formative unfolding.” It is to the formative unfolding of Goethean science within Steinerian Goethean science that this essay now turns.

At this point it is necessary to delineate the boundaries of this modest study. Steiner's own conception and application of Goethean science, whilst both fascinating and wide ranging, will not be explored here. It is a vast subject and will need to be left for another time. Instead, the focus here is on the advent and development of Goethean science, post-Steiner, with an emphasis on methodological development.

As Goethe himself wrote, there is “a delicate empiricism which makes itself utterly identical with the object, thereby becoming true theory” (Goethe, 1824; in Miller, 1995, p. 307). What follows in the work of Wilson, Maier, Bockemühl, Colquhoun, Brook, Hoffman, and Wahl can be seen as various methodological contributions in this arena.

Changing consciousness

Since much of Steiner's oeuvre is influenced and concerned with the work of Goethe, it is perhaps not surprising that so many of Steiner's followers should have likewise made Goethe's work and his methods their concern. It was Michael Wilson (1901 - 1985) who in 1968 specifically drew on Steiner's complex notion of the intertwined evolution of the world and the human

being to explore a *Goethean Approach to Science* (Wilson, 2018a).² Wilson, as a devout student of Steiner's ideas, would later propose that "Rudolf Steiner's presentation of Goethe's method enables us to see Goethe's ideas in a better perspective in relation to man's changing consciousness" (Wilson, 2018c). In the 1970s Wilson would go on to further hone his approach to Goethean science informed by Steiner's anthroposophy, or *spiritual science*.

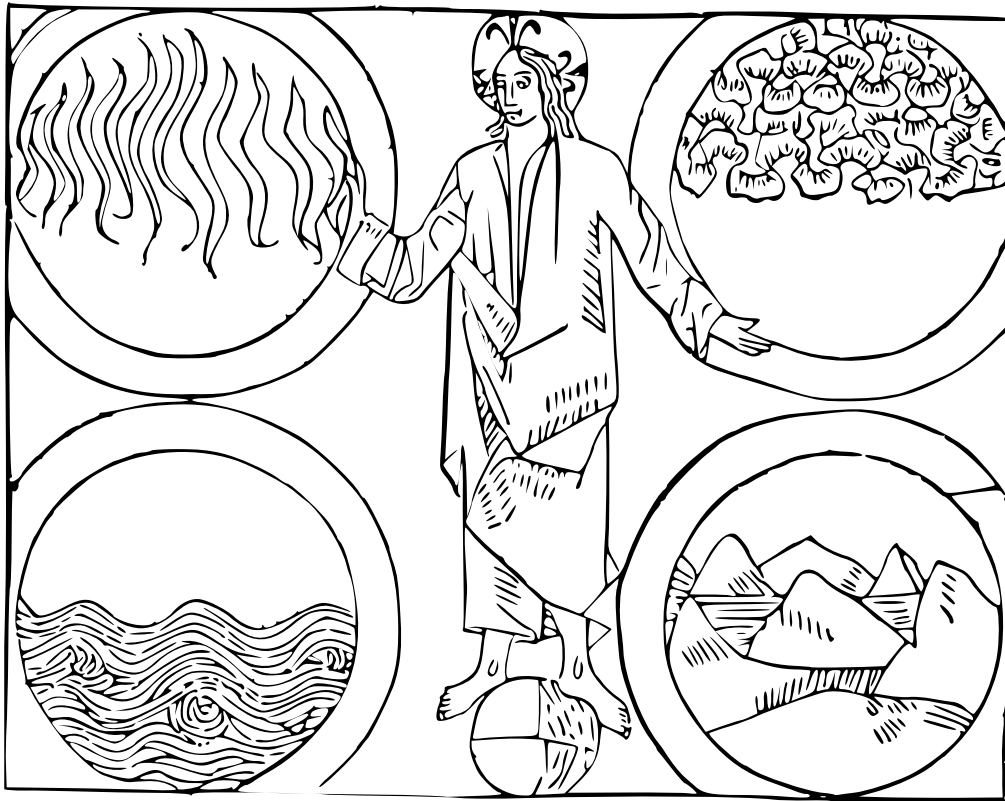
Levels of knowing

Two years after Wilson published *The Goethean Approach to Science*, Georg Maier (1933 - 2016) set the tone for future developments in the field. In his *The Classical Four Elements as Different Ways of Approaching Nature* (1970) Maier makes the case for the four classical elements of earth, water, air and fire, as "different layers of our embeddedness in the world" (2021, p. 1) and suggests they can "portray a conscious practice of the four levels of knowing". Maier quotes from Empedocles³ on the four elements, but references Steiner's second natural science course (Steiner, 1920) as his inspiration. An in-depth analysis of Maier's paper would take us too far afield, but of significance here is his approach to the four elements and their correspondence to modes of cognition. A mode of cognition that arises from delicate empirical observation can grasp the theory of what is observed through intuitive perception.

Maier begins with Earth. As a way of knowing, Earth is "the attitude of the external observer" (Maier 2021, p. 2), through which what is experienced through the senses can be studied. After Earth comes Water, which as the fluid element, has form but it is not stable. "Forms and patterns of a fluid are interrelated, and when changes occur they all change coherently" (Maier 2021, p. 2). Water as a way of knowing corresponds to cognitive fluidity, mobility and change, such that "We witness transformations" (Maier, 2021, p. 2) in what is observed. For Maier, whatever comes to us in the Earth way of knowing is given. But with Water, "the relationship of the observer to the fluid [is that of] I go to the water (2021, p. 3, emphasis in original). Moving from Earth to Water as ways of knowing requires moving "from the external observer to the intensely experiencing participant" (Maier, 2021, p. 4) and requires "heightened attentiveness" (Maier, 2021, p. 3).

² For example, Wilson proposes that "The Goetheanist will recognise all the facts and processes of the finished world of creation whether they be comfortable or not. He will revere them as divine handiwork at the different levels and will be grateful that they are put into his hands to control and to use for his own needs. He will see them against the background of their own cosmic memory but will try not to populate them with a spirituality which is long since retired. On the contrary he will study how the gods did their work in the past, and from this he will learn how they are ready to do the work in his own soul life, once he has made the necessary decisions. Here he meets darkness and light in their full reality." (Wilson, 2018, pp. 228 - 229)

³ "For it is with earth that we see Earth, and Water with water; by air we see bright Air, by fire destroying Fire. By love do we see Love, and Hate by grievous hate."



The World Soul, 1487.
Representation of the Christian concept of 'Anima Mundi', the World Soul, with the four elements, and Christ as 'Anthropos', the Primal Man. Woodcut, French, 1487

When it comes to Air, Maier describes the mutual reciprocal relationship, the systole and diastole of breathing. Air, both as an element and as a way of knowing, is participatory. “We are in the air, and the air is in us” (Maier, 2021, p. 3). Air reveals “unceasing transformation” (Maier, 2021, p. 5) and “we must actually enter into these transformations” (2021, p. 3). As might be expected, Fire is even more rarefied than Air. As a way of knowing, Fire relates to a “point of transition”, and one that works by “appearing and disappearing” (Maier, 2021, p. 4). Fire can only be known and experienced by bringing a “realisation to life” and an “actual incident” (Maier, 2021, p. 7). A requisite for knowing through Fire is an inner readiness for action” (Maier, 2021, p. 5).

Modes of observing

The next major node in our chronology occurs in 1977 with the publication of Jochen Bockemühl’s article, *Elements and Ethers: Modes of Observing the World*. Both Bockemühl (1928 – 2020) and Maier worked at the Goetheanum, Switzerland, the “headquarters for the School of Spiritual Science and the General Anthroposophical Society”⁴. Maier worked at the Research Institute at the Goetheanum from 1969 to 1998,⁵ while from 1971 to 1996

⁴ <https://www.goetheanum.org/en> Accessed 30.11.2021

⁵ <https://www.natureinstitute.org/about/georg-meier?rq=maier> Accessed 30.11.2021

Plate 18 from Johann Daniel Mylius' *Philosophia reformatata* (1622). The spherical fundaments depict the alchemical symbols of the four classical elements. Left to right: earth, water, air, fire



Bockemühl acted as of head of the Goetheanum's Natural Science Section at the Goetheanum⁶.

Bockemühl (1977) both looks back, and substantially builds on, Maier's approach to the four elements.⁷ Although Bockemühl follows Maier very closely in his analysis of the four elements as ways of knowing, his advancement to the study comes from a more detailed elaboration, and one which lays an epistemological ground. Bockemühl is explicit in his wish to "develop a new relationship to our own thinking – through introspection – and thereby achieve a new and immediate experience of nature like the one Goethe was endowed with naturally" (1977, ix). This Bockemühl wishes to do "out of the background of anthroposophy" (1977, ix). To see how he undertakes the task, we now turn to his study of the four elements.

⁶ <https://www.natureinstitute.org/article/craig-holdrege/jochen-bockemuhl-remembrance?rq=Bockemuhl> Accessed 30.11.2021

⁷ In addition to the four elements as ways of knowing, Bockemühl also explores the four ethers as modes of cognition. Bockemühl's study of the four ethers will not concern us here as it would move too far from our main objective. Bockemühl claims, following Steiner's usage of the term etheric, that "thinking as an organ of perception can give us access to the different layers of the etheric world" (1977, p. 39). For a detailed anthroposophical perspective on the theory and practice of researching the etheric realm see Dorian Schmidt's *Life Forces – Formative Forces: Methodology for Investigating the Living Realm* (2013).

Earth

for Bockemühl, represents our observing of the world as an onlooker, as if from outside. In the Earth mode, phenomena, as objects, are separate from ourselves. That which can be observed is distinct from ourselves, and this is so because “the qualities of solidity, impenetrability and separateness are rooted in our cognitional attitude itself” (Bockemühl, 1977, p. 9, emphasis in original). In the Earth mode of observing the world, only the surfaces of things are encountered. This gives rise to a rooted way of seeing and knowing, one based on an attitude of cognitive permanence so that one can “come to firm conclusions” (Bockemühl, 1977, p. 9, emphasis in original).

Water

as a way of knowing relates to sequential unfolding and transformations. Using the example of a plant, Bockemühl argues for the imaginative following of the transformations of its form if a true understanding is to come about. He is keen to emphasise the inner engagement that the fluid way of knowing invites. Water flows. The imagination flows. And imagination is fundamental for following the metamorphosis of the plant. This is accomplished when “our imaginative activity molds [sic] itself to one form and then dissolves this again as it flows on toward the next form” (Bockemühl, 1977, p. 12). Bockemühl makes the case that introspection is explicitly called for, as “Our attention is directed to processes which play themselves out between sense perception and inner soul experience” (Bockemühl, 1977, pp. 10-11). If Earth meets the surfaces of the world, then Water, as an imaginative process between the observer and the observed, has a morphing, sculptural quality to it that allows us to grasp living forms. Through the fluid element, “we experience how the world constantly transforms itself” (Bockemühl, 1977, p. 34).

Air

As with Maier, so with Bockemühl, descriptions of Air and Fire as ways of knowing are more elusive and less worked through. Bockemühl attempts to evoke the Air mode through describing its “capacity for movement, compression, rarefaction, and desiccation,” (Bockemühl, 1977, p. 26). Whilst not visible in itself, air reveals itself in the phenomena of the world. For example, the workings of air become visible in the movement of the trees, its leaves, and in the flight of birds. Utilising an introspective analogy, Bockemühl claims that it is through moving “inwardly in accordance with this image of the air, that the cognitional attitude corresponding to the air element is reached” (Bockemühl, 1977, p. 26). Epistemologically, through Air “we receive the light of ideas and compress them into our consciousness” (Bockemühl, 1977, p. 29). Air for Bockemühl brings an intimate revelation, a disclosure.

Warmth

In accordance with Steiner's nomenclature, Bockemühl refers to the Fire mode of knowing as Warmth. For Bockemühl, Warmth is the element which penetrates and energises everything (1977, p. 30), and he places a unitive emphasis on Warmth as a way of knowing. "Warmth is an immediate presence, full of content but undifferentiated. Form and content can barely be separated" (1977, p.30). In Warmth, "all outer manifestations disappear. They are 'burned up'" (Bockemühl, 1977, p. 31).

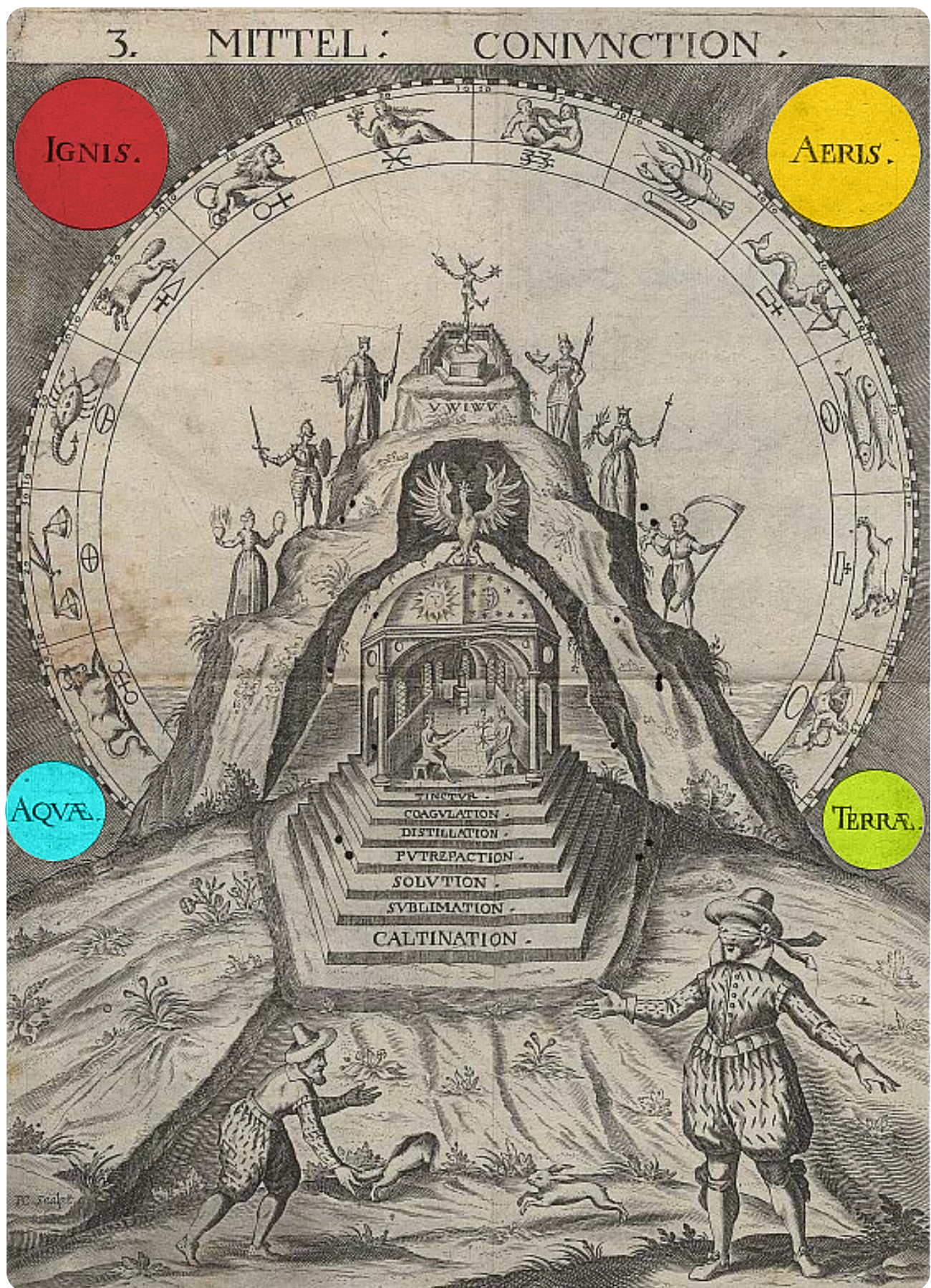
With such notions of being in the immediate presence of the phenomena such that the encounter can be considered undifferentiated with all outer manifestations disappearing, it is perhaps unsurprising that Bockemühl's commentary on the Fire mode of knowing is comparatively sparse in contrast to the other elements.

The next generation

Following the work discussed above on the four elements as modes of knowing, the next morphology of Steinerian Goethean science was to take a decisive turn. The Goethean method, articulated above by Wilson, Maier and Bockemühl, had been published exclusively to an anthroposophical audience through anthroposophically associated publishers.⁸ That was to change, beginning in the 1990s with publications by Colquhoun (1997) and Brook (1998, 2000, 2009). What was previously received by a small and select readership was now to be opened up to academic eyes. Part II of this essay will discuss what happened next.

Full reference list available on request from the author.

⁸ Wilson's work would later be published by Logos Verlag Berlin in 2018.



Mandala illustrating common alchemical concepts, symbols, and processes. From *Spiegel der Kunst und Natur*