

Christoph Sander

# Magnetism and Nutrition

## An Ancient Idea Fleshed out in Early Modern Natural Philosophy, Medicine, and Alchemy

**Abstract:** Already in Antiquity, Galen linked magnetic attraction, by way of an analogy, to the idea that animal parts are able to attract their own ‘specific quality’. For example, a kidney attracts urine just like the magnet attracts iron. In the Middle Ages, Averroes argued that foodstuff and iron possess a specific disposition which allows them to move themselves towards the body and a magnet respectively. Thus, the concepts of ‘specific attraction’ and ‘dispositional self-movement’ were regarded as crucial to understanding the powers of both a magnet and a living body. Particularly in the early modern period, these concepts were spelled out differently by Aristotelians, Galenists and Paracelsians. During this period, the magnetism-nutrition analogy was also transformed into a vitalist principle in order to explain magnetic attraction itself. Natural philosophers such as Gerolamo Cardano suggested that a magnet, being alive in some way, seeks out iron as its foodstuff – a popular idea among alchemists as well.

This paper aims to trace the complicated history of two intertwined concepts, ‘nutrition’ and ‘magnetism’, which were closely related in pre-modern times but appear to be unrelated from a modern perspective. By uncovering the historical origin(s) of this relation, its rationale, its subsequent transformation and its dissolution, the historical concept of ‘nutrition’ will come into sharper view from the perspective of the history of ideas. At the same time, from the perspective of the philosophy of science, this historical study presents a test case scenario for discussing the importance of metaphors and analogies in the formation of scientific theory.

In 1629, the Dutch philosopher and trained physician Isaac Beeckman jotted down some thoughts in his scientific diary after reading Galen’s *De marcore*.<sup>1</sup>

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<sup>1</sup> See Isaac Beeckman, *Journal tenu par Isaac Beeckman de 1604 à 1634*, ed. by de Waard (1939), vol. III, p. 124: *Hinc mihi in mentem venit quaerere an membra corporis nostri nutrimentum trahant per virtutem quandam magneticam, an potiùs eo modo quo cor sanguinem attrahit, videlicet*

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For the entire article,  
please ask:

[c-sander@heimat.de](mailto:c-sander@heimat.de)