

**Program workshop 'Vital Matters'
University of Groningen**

Vrijdag 29 augustus 2014 (Academy Building, room A12)

9.00-9.20 coffee, registration

9.20- 9.30 welcome

Chair: Klaas van Berkel

9.30-10.15 *Boerhaave's pupils in the Netherlands. An inventory of Students and Dissertations* – André Looijenga (University of Groningen)

10.15-11.00 *Jerome Gaub, Noxious Powers and the Pathology of the Soul* – Rina Knoeff (University of Groningen)

11.00-11.15 coffee

11.15-12.00 *William Cullen, resuscitation, and the cultural life of vitalism* – Catherine Packham, (University of Sussex)

12.00-13.30 lunch

Chair: Rina Knoeff

13.30-14.15 *Piss Prophets: The Chemistry of Urine in the Leiden Laboratory* – Ruben Verwaal (University of Groningen)

14.15-15.00 *Breaking Habits: Pleasure and Health in Dietetic Medicine, 1750-1800* – Elizabeth Williams (Oklahoma State University)

15.00-15.15 tea

15.15-16.00 *Enlightenment Medicine and the Living Metal* – Andrew Cunningham (Cambridge University)

16.00-16.45 *Metals, gemstones: vitalist natural bodies in eighteenth-century medicine?* – Marieke Hendriksen, (University of Groningen)

19.00 Dinner at restaurant *de Pauw* (Gelkingestraat 52)

Zaterdag 30 augustus 2014 (Academy Building, room A12)

Chair: Catrien Santing

9.30-10.15 *Vital Bones: Skeletons, Relics, and Therapies in the Long Eighteenth Century* – Anita Guerrini (Oregon State University)

10.15-11.00 *(Conceptual) Mechanisms of Life: from Boerhaave's expanded mechanism to the vitalist animal economy* – Charles Wolfe (Ghent University)

11.00-11.30 coffee

11.30-12.15 Comments & discussion, Inger Leemans, Vrije Universiteit Amsterdam

12.15 lunch at 't Land van Kokanje

Abstracts

Boerhaave's pupils in the Netherlands. An inventory of Students and Dissertations

Boerhaave was already honoured as “*communis Europae praeceptor*” during his lifetime. During the years he was professor at Leiden (1709-1738), about 1800 individuals matriculated as medical students. There were no less than 603 medical promotions during this period. The medical dissertations from Boerhaave's period offer new insights into the practices of and trends in teaching at the Leiden medical faculty.

I have made an inventory of the 1709-1738 medical dissertations. I have focused especially on the *corollaria* or *annexa*, sequences of often polemic statements on medical theory and practice attached to the end of dissertations. Combining the various clues from trends in these *corollaria* with statements on Boerhaave's teaching by his students in their dissertations, one gets a clearer view of a broad circle of mainly Dutch and North German pupils who were “Boerhaave's Men”.

Jerome Gaub, Noxious Powers and the Pathology of the Soul

Rina Knoeff

Eighteenth-Century 'Vitalist' thought was never only on the life-giving powers of the body, but as much about the noxious powers threatening the body's health. Jerome Gaub, following the Boerhaavian focus on chemistry, latent peculiar powers and nervous diseases, put pathology high on the medical agenda and introduced a pathology of the soul which became widely accepted in Dutch eighteenth-century medicine and culture.

William Cullen, resuscitation, and the cultural life of vitalism

Catherine Packham

This paper considers the relationship between practical advice on resuscitation in late eighteenth-century Britain, and vitalist physiology and medicine. The emerging distinction between death and 'apparent death' in the mid-eighteenth century, on which the possibility and practice of resuscitation was founded, threw into relief the unknowability of death and the physiological process of dying: a parallel or counter to the unknown principle of life approached by vitalist science. Taking as its starting point William Cullen's *Letter to Lord Cathcart* (1776), Cullen's relationship to Edinburgh Medical School, where vitalist medicine flourished, is reviewed. Cullen's advice on resuscitation is then considered from three angles. Firstly, as providing a theoretical model for explaining the practice and possibility of resuscitation; secondly and relatedly, as offering a practical context within which the elusive 'vital spark' hypothesised by vitalism might be empirically approached. Thirdly and more generally, it is argued that the practice of resuscitation promised to address the particular epistemological predicament faced by vitalism: its combination of post-Newtonian empiricism and the inevitable hypothesis or conjecture necessary when faced with the mysteries of 'life'. Finally, the cultural life of vitalism is considered in the larger cultural response to resuscitation, in the activities of various Humane societies and in various associated literary responses.

Pisse-Prophets and the Chemistry of Urine in the Leiden Laboratory, c. 1700-c. 1750

Ruben Verwaal

Early modern doctors often diagnosed illnesses based on their patients' urine. Interestingly, from 1700 onwards medical men increasingly approached urine from a chemical perspective. Herman Boerhaave's studies on the chemistry of urine proved a productive research and teaching program for his successor Jerome Gaub and numerous doctoral students. This paper will explore their lecture dictates and doctoral dissertations to show that although some medical ideas about urine remained the same throughout the early modern period, new meanings of urine were added by means of hands-on chemical experiments. The importance of urine in the diagnosis and prognosis of patients continued, but eighteenth-century medical professors added ideas of 'vital powers' of human nature that shaped urine and the hidden elements it consisted of. The chemical analysis of urine therefore helped physicians to redefine the nature of the human body in vitalist terms.

Breaking Habits: Pleasure and Health in Dietetic Medicine, 1750-1800

Elizabeth A. Williams

To modern dietitians few problems are thornier than helping patients to change eating habits. This paper on dietetic medicine of the later eighteenth century explores recommendations that physicians made to patients for modifying diet and considers the extent to which they recognized and articulated the role of habit in the onset and cure of illness. The paper focuses on English and French physicians including William Cullen, Erasmus Darwin, and leading figures of the Montpellier school, examining both records of consultations and theoretical writings about foods, regimen, and digestion. Recent work on the medicine of foods and eating suggests that the later eighteenth century saw a strong drive among physicians toward standardization of eating rules and recommendations as experimental and quantitative methods gained new authority in dietetics. This paper explores a counter-current: increased recognition among some physicians of the complex psychology of eating and the difficulty and even potential dangers of breaking eating habits.

Metals and gemstones: vitalist natural bodies in eighteenth-century medicine?

Marieke Hendriksen

From my research on the use of mercury as an injection mass in eighteenth-century anatomical preparations, it emerged that mercury was understood as a 'vital matter,' a living substance associated with resurrection and the lymphatic fluid by many anatomists and medical men. In this paper, I explore whether other metals and gemstones (believed to obtain their color from metals) too were understood as substances with vital powers in eighteenth-century medicine and chemistry, and particularly in the work of Boerhaave and his followers. I argue that although Boerhaave by the end of life understood metals as possible vitalist substances with limited medical potential and gemstones as non-vital materials with little use in medicine, the work of his students and admirers show that the understanding of metals and gemstones as vitalist bodies with therapeutic potential was still wide-spread in the eighteenth century.

Vital Bones: Skeletons, Relics, and Therapies in the Long Eighteenth Century

Anita Guerrini

Bones, particularly skulls, were long used in various therapeutic preparations for a variety of ailments. What was the peculiar vital quality of bones that gave them such healing power? This paper will compare the medical uses of bones to therapeutic uses of skeletal relics in an attempt to find commonalities between them. Although the medicinal uses of bones declined in the eighteenth

century, they did not disappear, and among those who believed, relics, old and new, retained their powers.

(Conceptual) Mechanisms of Life: from Boerhaave's expanded mechanism to the vitalist animal economy

Charles T. Wolfe

Early modern antimaterialists such as François Lamy or Nicolas Bergier assert that materialists reduce living beings and *a fortiori* living human beings to automata. After all, isn't one of the most famous books of the time entitled *L'Homme-Machine*? But reality is more complex, more eclectic, more hybrid. For one, La Mettrie really employs the machine as an *analogy*, and never reduces 'organic' properties to 'inorganic' properties (Thomson 2001, Wolfe 2009). Further, mechanist physiologies (Descartes, Boerhaave) and *a fortiori* micro-mechanist physiologies (Haller) never dispense with a functional explanatory dimension, seeking to account for the specificity of living beings without being 'finalistic' (or strongly teleological); this can be seen even in mechanistic pathology (Bertoloni Meli 2013). In addition, in both the supposedly 'purest' forms of mechanism (like Descartes) and overtly in the more overdetermined forms (like Boyle's corpuscularianism), chemical properties creep into the matter theory inherent in the mechanism (Des Chene 2001, Hutchins 2014). Lastly, models of biological 'organization' including the 'animal economy' in its vitalist versions (Wolfe and Terada 2008, Wolfe forthcoming) open up a conceptual space which sometimes resembles a kind of 'expanded mechanism', sometimes a heuristic vitalism which would remain compatible with mechanistic accounts of specific lower-level organs and functions (Bordeu, Ménuret de Chambaud). Our challenge then is to understand how (a) mechanical models of Life are not denials of vital properties but attempts to – analogically and otherwise – grasp such properties, (b) there is nevertheless a shift towards a more ontologized sense of vital 'structure' with the concept of animal economy (one might say, more physiological and less anatomical, if these terms are understood not as neutral categories in the history of medicine but as conceptual and polemical categories), yet (c) even this more ontologized sense of a vital unity or interconnection (sympathy, cohesion, consensus etc.) is not, per se, an *anti-mechanism*. Conceptual mechanisms of life are eclectic, plural, and "tolerant" (Roux 2014).

References

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