

THE *TERTIUM COMPARATIONIS* OF THE *ELEMENTA PHYSIOLOGIAE* –
JOHANN GOTTFRIED VON HERDER'S CONCEPTION OF
"TEARS" AS MEDIATORS BETWEEN THE SUBLIME AND
THE ACTUAL BODILY PHYSIOLOGY

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*Summary**

It has been consistently pointed out in the research literature that his own experience of interminable suffering would have led Johann Gottfried von Herder (1744–1803) to develop 'premature religious leanings' during his later childhood and early adolescence. But it is less well known that Herder's university studies had first taken him to the Medical Faculty of Königsberg, where he sought to gather knowledge about his own illness and possible remedies. Because he could not cope with the circumstances of the dissection course, he had to abandon his classes in medicine and instead changed to studying theology and philosophy. As Herder's unpublished *Blue Book* shows, he closely followed Immanuel Kant's (1724–1804) exposé of the mathematical and physical sciences and developed his own interpretations on contemporary physiology – notably of Albrecht von Haller's (1708–1777) *Elementa physiologiae* – to which Herder juxtaposed his own considerations of the meaning of 'tears' for the human condition.

Introduction

The internal history of the scientific discipline of physiology – that is, the concept-oriented as well as institution-focused historical scholarship – has already attracted considerable attention.¹ The detailed cultural picture,

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¹ See, among others, Foster M., *Lectures on the History of Physiology during the Sixteenth, Seventeenth and Eighteenth Centuries* (Cambridge: 1907); Canguilhem G., *La formation du concept de réflexe aux XVII^e et XVIII^e siècles* (Paris: 1955); Hall T.S., *Ideas of Life and Matter* (Chicago: 1969); Rothschild K.E., *History of Physiology* (Huntington, NY: 1973);

encompassing physiological theories, academic practices and lay assumptions, has however appeared as a research subject so far only in a very limited sense.² This gap becomes even more visible when early modern developments in physiology are taken into account. Most of the current scholarship has focused on the nineteenth and twentieth centuries, when experimental physiology emerged on the scene as the most innovative discipline in biomedicine. Everyone wanted to be physiological – that is, scientific (*wissenschaftlich*).³ However, when we follow the term back into the Early Modern period, as the present chapter intends to do, we find many more, and very different, meanings of ‘physiology’.⁴ I shall take the German theologian, philosopher and polymath Johann Gottfried von Herder (1744–1803) as my case study.⁵ As I will show, ancient concepts of physiology were much alive in public and scientific discussions of the

Schiller J., *Physiologie et classification. Relations historiques* (Paris: 1980) and the contribution of V. Nutton in this volume, 27–40.

² Notable exceptions, for example, are: Lesch J.E., *Science and Medicine in France. The Emergence of Experimental Physiology, 1790–1855* (Cambridge: 1984); Coleman W. – Holmes F.L. (eds.), *The Investigative Enterprise. Experimental Physiology in Nineteenth-Century Medicine* (Berkeley: 1988); Sarasin P., *Reizbare Maschinen. Eine Geschichte des Körpers 1765–1914* (Frankfurt: 2001); Stahnisch F., *Ideas in Action. Der Funktionsbegriff und seine methodologische Rolle im Forschungsprogramm des Experimentalphysiologen François Magendie (1783–1855)* (Münster-Hamburg-London: 2003) and Schmidgen H. – Geimer P. – Dierig S. (eds.), *Kultur im Experiment* (Berlin: 2004).

³ See also: Bates D., “Why not call Modern Medicine ‘Alternative’?”, *Perspectives in Biology and Medicine* 43 (2000) 502–518.

⁴ On the succession of empirical models see: Duchesneau F., *La physiologie des lumières. Empirisme, modèles et théories* (The Hague: 1982), on the century-long structure and function debate: Debru C. (ed.), *Essays in the History of the Physiological Sciences* (Amsterdam-Atlanta GA: 1995), and for the experimental tradition in physiology, see: Tansey E.M., “The Physiological Tradition”, in Bynum W.F. – Porter R. (eds.), *Companion Encyclopaedia of the History of Medicine* (London-New York: 1996) 120–152. An overview of major topics in Early Modern Physiology and their cultural impact is given in: Rousseau G.S., “Nerves, Spirits, and Fibres: Towards Defining the Origins of Sensibility”, in Brissenden R.F. – Eade J.C. (eds.), *Studies in the Eighteenth Century, vol. III, Papers presented at the Third David Nichol Smith Memorial Seminar, Canberra 1973* (Toronto: 1973) 137–157; Rousseau G.S. (ed.), *The Languages of Psyche. Mind and Body in Enlightenment Thought* (Berkeley-Los Angeles-Oxford: 1990).

⁵ Herder’s interest in physiology has been explored from three directions: Erna Lesky focused on Herder’s preoccupation with the brain sciences: Lesky E., “Gall und Herder”, *Clio Medica* 2 (1967) 85–96, Wolfgang Pross traced Herder’s reception of Haller’s theory of the physiological forces: Pross W., “Herders Konzept der organischen Kräfte und die Wirkung der Ideen zur Philosophie der Geschichte der Menschheit auf Carl Friedrich Kielmeyer”, in Kanz K.T. (ed.), *Philosophie des Organischen in der Goethezeit. Studien zu Werk und Wirkung des Naturforschers Carl Friedrich Kielmeyer (1765–1844)* (Stuttgart: 1994) 81–99 and Michael Hagner has investigated Herder’s combination of physiological and anthropological writings: Hagner M., “The Soul and the Brain between Anatomy and Naturphilosophie in the Early Nineteenth Century”, *Medical History* 36 (1992) 1–33.

early Enlightenment.⁶ Nevertheless, their meanings and the analogical models themselves had already acquired very different connotations from those expounded in the physiology of Aristotle (384–322 BC) or Galen (129–200/216 AD), in comparison with Herder’s representations of the term. Yet Herder’s views should by no means be neglected as those of a physiological, eclectic ‘layman’, because as a major cultural philosopher, a medically-learned correspondent with natural historians, and a fervent critic of various learned journals and *Blätter*,⁷ he exerted an enormous influence on the general culture of his contemporaries.⁸

Herder’s views on contemporary physiology will be scrutinised here by paying special attention to the subject of ‘tears’.⁹ It has frequently been pointed out that Herder’s concern with subjects from medicine and illness came from his own experience of chronic personal suffering. It was argued, for example, that his personal biographical background determined his ‘premature religious leanings’ during his later childhood and adolescence, as well as his preoccupation with a pastoral theory of suffering.¹⁰ It has gone almost unnoticed, however, that Herder’s first university studies took him to the Faculty of Medicine at Königsberg (East-Prussia) where he tried – not untypically for doctors in the long history of medicine – to gain more knowledge about his own illness. However, the thin-skinned student from Mohrunen (which is today Morąg, in Poland) found himself incapable of coping with the atrocious circumstances of the anatomical dissection course: he fainted and passed out while witnessing his first dissection of a human body. As a consequence, Herder dropped his medical courses after the first year and changed to the study of theology and philosophy, being one of the famous pupils of Immanuel

⁶ See also: Craik E., *The Hippocratic Treatise On Glands* (Leiden: 2009) 11–13.

⁷ Stahnisch F., “Herders ‘anthropologische Physiologie’ und die ‘Hallesche Psychomedizin’: Zum Verhältnis von Körpervorstellung, Religion und Therapie im 18. Jahrhundert”, in Sträter U. – Lehmann H. – Müller-Bahlke T. – Soboth C. – Wallmann J. (eds.), *Die ‘Neue Kreatur’. Pietismus und Anthropologie. Interdisziplinäre Pietismusforschungen. Beiträge zum Zweiten Internationalen Kongress für Pietismusforschung 2005* (Tübingen: 2009) 821–834.

⁸ Zaremba M., *Johann Gottfried Herder. Prediger der Humanität* (Cologne: 2002) 159–186.

⁹ See also the introduction to the present volume.

¹⁰ Eva Schmidt, for example, deliberately included this interpretation from the obituary of the Weimar reform educator Johannes Daniel Falk (1768–1826) in her anthology on Herder’s theological legacy: Falk J., “Weimar, Montag Nachmittags d. 19. Dzbr. 1803”, in Schmidt E. (ed.), *Herder im geistlichen Amt. Untersuchungen / Quellen / Dokumente* (Leipzig: 1956) 265–268, esp. 267. Haym R., *Herder nach seinem Leben und seinen Werken dargestellt* (Berlin: 1954²), vol. 1, 6f. and Zaremba, “Prediger der Humanität” 23–26 have largely followed this perspective on Herder’s theological and philosophical intentions in their biographical accounts.

Kant.¹¹ Also in this period, he held a continuing interest in biology and observed the recent progress made in surgery and medical sciences.¹² As is reflected in his still unpublished *Blue Book* – fittingly entitled ‘Ascetic Things’ (*Ascetische Sachen*)¹³ – which he wrote in around 1762–1766 and which became famous after his death, Herder went beyond Kant’s exposé of mathematical and physical science. Over and above this, he introduced his personal readings of the physiologists – notably, Albrecht von Haller’s *Elementa physiologiae corporis humani* (1757–1766)¹⁴ – which he linked to his own considerations of physical science and to theological, as well as anthropological, meanings of ‘tears’. This is accurately reflected in many of Herder’s writings, poems and sermons, where he deliberately introduced his own experiences and perceptions, comparing them to the current state of physiological knowledge.¹⁵

By drawing on Herder’s own publications, unpublished notes and contemporary sources on physiological theory and medical practice, this article aims to map out the local context of the development of Herder’s views about the physiology of tears at the cross-roads of personal suffering, intellectual and theological interests. As will become apparent later in this article, the physiological problem of ‘tears’ emerges in specific periods, and it attracts different levels of public and academic attention. While some earlier discussions did situate themselves in relation to the distant past – and Herder’s physiological terminology reflects this – the interpretation of physiology in general, and tears in particular, should be seen as undergoing qualitative breaks with those trends that derived from the Early Modern period and especially those that traced their roots to ancient Greek and Roman medicine.¹⁶ While my focus here is on such changing

¹¹ Nisbet H.B., “Naturgeschichte und Humangeschichte bei Goethe, Herder und Kant”, in Matussek P. (ed.), *Goethe und die Verzeitlichung der Natur* (Munich: 1998) 15–43.

¹² Zaremba, “Prediger der Humanität” 34.

¹³ Bound in a blue cover, Herder’s so-called ‘Blue Study Book’ consists of handwritten notices on natural history and philosophical metaphysics from his university time at Königsberg between 1762 and 1766 (Capsule XX; AHN (*Abteilung für Handschriften und Nachlässe*); it is kept in the Manuscript and Incunabula Collection of the Berlin State Library; Culture Forum).

¹⁴ Cf. Haller Albrecht von, *Anfangsgründe der Physiologie des menschlichen Körpers* (Berlin, Christian Friedrich Voss: 1762).

¹⁵ See, for example, in: Stahnisch F., “Dieu et cerveau, rien que Dieu et cerveau!”, Johann Gottfried von Herder (1744–1803) und die Neurowissenschaften seiner Zeit”, *Würzburger medizinhistorische Mitteilungen* 26 (2007) 124–165.

¹⁶ Cf. Edelstein L., “The Relation of Ancient Philosophy to Medicine”, in Temkin O. – Temkin C.L. (eds.), *Ancient Medicine. Selected Papers of Ludwig Edelstein* (Baltimore: 1967) 349–366, and more recently: Fögen T., “Tears and Crying in Graeco-Roman Antiquity: An Introduction”, in Fögen T. (ed.), *Tears in the Graeco-Roman World* (Berlin: 2009) 1–16.

terminology, with technical terms being re-interpreted in ordinary language and philosophical analyses given theological underpinnings, a new approach to ‘Herder’s physiology’ can also help us reach a better understanding of the advances in history of physiology more generally. The German polymath Johann Gottfried von Herder represents an extraordinary example of a learned individual whose personal life and intellectual work touched upon, if not centred on, an enduring occupation with understanding the meaning of tears and crying for the human condition.¹⁷ The current case study offers a new and local interpretation of the broader picture of ‘physiology’, but not understood as *the* central discipline, since this term was still problematic in the eighteenth century.¹⁸ Instead, together with all the repercussions existing between physiological research, scholarly interest and *the individual experience of health and illness*, it should be viewed as the ‘prime mover’ for the preoccupation with physiology.¹⁹ This occurred not only among lay people but also in this professional eighteenth-century philosopher who then acted as an important mediator for physiological concepts among his contemporaries.

In the historical scholarship, there is a remarkable discrepancy with respect to the knowledge available about Herder’s professional roles: while there is plenty of literature on the ‘Weimar theologian’,²⁰ the ‘school reformer’²¹ and ‘Superintendent General’²² of the Principedom of Saxony-Weimar, there is much less on his achievements in cultural anthropology, general philosophy and, above all, on Herder as a prolific interpreter of the biological and physiological sciences.²³ Despite this imbalance in research on Herder, I want to convey an image of him as a supreme scholar, book

¹⁷ See, for example, Minter C.J., “Literary ‘Empfindsamkeit’ and Nervous Sensibility in Eighteenth-Century Germany”, *The Modern Language Review* 96 (2001) 1016–1028, esp. 1021–1024.

¹⁸ Cf. Duchesneau, “La physiologie des lumières” 141–170.

¹⁹ On the issue of great philosophers’ and scholars’ interest in medicine, as grounded in their own illness, see Frank A.W., *The Renewal of Generosity. Illness, Medicine, and How to Live* (Chicago: 2004) 3–9 and Charon R., “Bearing Witness: Sontag and the Body”, *New England Journal of Medicine* 352 (2005) 756.

²⁰ Köpke W., “Truth and Revelation: On Herder’s Theological Writings”, in Köpke W. – Kroll S.B. (eds.), *Johann Gottfried Herder. Innovator through the Ages* (Bonn: 1982) 140–159.

²¹ Owren H., *Herders Bildungsprogramm und seine Auswirkungen im 18. und 19. Jahrhundert* (Heidelberg: 1985).

²² Kessler M., *Johann Gottfried Herder, der Theologe unter den Klassikern. Das Amt des General-Superintendenten von Sachsen-Weimar* (Berlin-New York: 2007).

²³ The most comprehensive studies of the relation between Herder’s anthropological and philosophical works have been published by Nisbet H.B., *Herder and the Philosophy and History of Science* (Cambridge: 1970) and Pross W. (ed.), *Johann Gottfried Herder. Werke* (Munich: 1984–2002).

collector and influential populariser of contemporary medicine and natural history; an activity situated in a particular local and personal context. From his student days, he continued to communicate with leading academics and learned natural historians and later became a frequent guest at natural history events at the University of Jena, rising to be a co-founding member of its Society for Natural History and Science [Fig. 1].²⁴

During this early period, and also in his later years at Weimar, Herder frequently corresponded with cutting-edge scholars, natural historians and contemporary physicians, a list of whom reads like the 'Who's Who of eighteenth-century European science': the Swiss reformed theologian Johann Caspar Lavater (1741–1801),²⁵ who developed his physiognomic doctrine into a comprehensive research programme on psychological character analysis, or Samuel Thomas von Sömmerring (1755–1830) of Mainz,²⁶ whose leading brain and nerve morphology Herder evaluated strongly. Sömmerring's doctrine was based on the assumption that human neuroanatomy displayed functionally organised localizable centres, and further held that nerve actions were the result of the exchange of 'nervous fluid' between individual nerve sheets, functionally related brain parts as well as the integrative action (*sensus communis*) of the brain's ventricles.²⁷ Other correspondents included Haller's pupil, the physician Johann Georg von Zimmermann (1728–1795) in Hannover,²⁸ who acted as an important populariser of his mentor's theory of irritability and sensibility as well as of empirically oriented medical practice, and the young Christoph Wilhelm Hufeland (1762–1838),²⁹ who was Herder's own family physician in Weimar. In addition, as a twenty-one year old Strasbourg student Herder

²⁴ Stahnisch, "Herder und die Neurowissenschaften" 128f.

²⁵ Dünzer H. – Herder F.G. von (eds.), *Aus Herders Nachlass, ungedruckte Briefe von Herder und dessen Gattin, Goethe, Schiller, Klopstock, Lenz, Jean Paul, Claudius, Lavater, Jacobi und andern bedeutenden Zeitgenossen* (Frankfurt: 1857), vol. 2, 10–209.

²⁶ See, for example, Herder's letter to Sömmerring on February 28th, 1785, in which he discusses Haller's physiological theory of nerve action and asks for Sömmerring's judgement: Dobbek W. (ed.), *Herders Briefe* (Weimar: 1959) 249–250.

²⁷ This interpretation relates back to Aristotle's introduction of the '*sensus communis*' as a particular disposition of the *psychê*, which is shared by all human beings and responsible for connecting the impressions from the individual sense organs within a coherent and intelligible representation. See, in particular, Aristoteles, *De anima* 1, 1–2, 402a–402b (Aristotle, *De Anima* (Über die Seele), in Karsch A. (ed.), *III. Schriften zur Naturphilosophie* (Stuttgart: 1847), vol. 1, 1–2). See also the contributions by Kodera 143 n. 14 and Bidwell-Steiner 666–667 in this volume.

²⁸ Cf. Bonin D., *Johann Georg Zimmermann u. Johann Gottfried Herder nach bisher ungedruckten Briefen* (s.n.: 1910).

²⁹ See, for example, Gesche A., *Sprache und die Natur des Menschen* (Würzburg: 1993) 93f.

SOCIETAS PHYSICA IENENSIS
SOCIUM
VIRUM PERILLUSTREM
IOAN. GODOFR. HERDER
PRAESES SUMMI SEN. ECCLES. VIVAR. VICARIUM
SIBI DEVOTE ADSCRIPSIT
HONORARIUM

SPERANS EUM OMNIA QUAE UNQUAM POTERIT
COMMODO IN SOCIETATEM EIUSQUE SCOPUM
VENERABILEM ESSE COLLATURUM



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A. N. Scherer

Fig. 1. Johann Gottfried von Herder, *Certificate from the Society for Natural History and Science*, 1793.

met Johann Wolfgang von Goethe (1749–1832),³⁰ having been deeply influenced by him as well due to his wider biological and geological interests. As a result of Goethe's proximity with Prince Carl August (1792–1862), Herder received the influential position of theologian in the vibrant cultural centre of Weimar,³¹ and this friendship with Goethe would continue until his death.

³⁰ Hahn K.-H., *Briefe an Goethe. Gesamtausgabe in Regestform* (Weimar: 1981) 164.

³¹ Ebersbach V., *Carl August. Goethes Herzog und Freund* (Cologne: 1998) 101–103.

As I have already suggested, it was in Herder's student years in particular that his later interests in medicine and the natural sciences emerged. I shall now consider these in more detail. Looking at Herder's inaugural lecture of 1765 as a new Instructor of the Cathedral School in Riga (Latvia), Maryland-based literary scholar Simon Richter has strikingly mapped the impressive multi-layered interests of this early-Enlightenment polymath.³² From his early years in Königsberg and the school appointment in Riga, Herder taught and read widely in natural history, geography, European history, mathematics, French language and culture, rhetoric and philosophy. His knowledge and expertise in theology, the ancient languages and ancient history went far beyond what could have been expected from a contemporary clergyman. What he charmingly said about Haller's learned attitude, when he spoke about the latter's 'heavy weight of the [Bernese] Alps on his learned shoulders' (*die Alpenlast der Gelehrsamkeit auf seinen Schultern*), also held true for Herder himself.³³ The thematic *intersections*³⁴ between natural history, philosophy and areas of aesthetics were a direct expression of Herder's urge to transcend and question discrete subject boundaries.³⁵ This tendency to blend together different fields of knowledge also emerged later in his reflections on contemporary physiological assumptions and, in particular, in his discussion of the 'irritability'³⁶ of the bodily organs – a concept also central for apprehending the status of 'tears' in Herder's thought. As the medical historian Richard Töllner has pointed out, Haller's example of the inherent vital and irritable disposition of the muscle fibres to act similarly serves the characterisation of Herder's views on the physiology of the tear glands: 'In Haller, irritability of the soul was one of the major traits of the discoverer of "irritability's" own character'.³⁷

Interestingly, past research in medical history has not addressed the question of how suffering might have influenced and changed the intellectual views of this great philosopher and theologian, and investigations

³² Richter S., "Medizinischer und ästhetischer Diskurs im 18. Jahrhundert: Herder und Haller über Reiz", *Lessing Yearbook* 25 (1993) 83–95.

³³ Herder J.G. von, "Briefe zur Beförderung der Humanität, Achte Sammlung", in Suphan B. (ed.), *Sämtliche Werke* (Berlin: 1883) 116.

³⁴ This is of course also the title of the series in which this volume appears.

³⁵ Richter, "Medizinischer und ästhetischer Diskurs" 85–87.

³⁶ Cf. Pross W., "Haller und die Aufklärung", in Steinke H. – Boschung U. – Pross W. (eds.), *Albrecht von Haller. Leben. Werk. Epoche* (Göttingen: 2008) 415–460, esp. 441–448.

³⁷ Töllner R., "Zur Deutung der 'Fragmente Religiöser Empfindungen'", in Steinke H. – Boschung U. – Pross W. (eds.), *Albrecht von Haller. Leben. Werk. Epoche* (Göttingen: 2008) 485–496, esp. 485; Engl. tr. F.W.S.

from general social and cultural history have only been reluctantly touched upon in this context.³⁸ This Weimar theologian and philosopher still presents many puzzles to today's scholars; in particular, the means by which he dealt with questions of health, disease and dying. As the latter part of this article will argue, there is an intriguing perspective to be gained from developing a pathographic understanding of Herder's life. This perspective does not only illuminate some paths of thought and his theological leanings, but sheds further light on how he integrated contemporary medical advances into the philosophical accounts in which he popularised such advances. The next part of my essay, on Herder's disease, explores this perspective further by looking at the biographical landmarks in his life, while trying to suggest how his suffering influenced his understanding of human physiology and illness.

*Herder's disease: 'Dacrocystitis congenita'*³⁹

Born with a functionally constricted tear duct of the right eye, from early childhood onwards, Herder suffered immensely from recurrent and chronic infections of this eye and the adjacent parts of his face. Quite strikingly, as his early biographer, the idealist philosopher Rudolph Haym (1821–1901), has pointed out, most of the portrait depictions show Herder from the left side of his face [Fig. 2].⁴⁰

In 1770, when Herder was twenty-six years old, he screwed up his courage and sought the help of a renowned ophthalmic surgeon; he travelled to the Alsatian capital of Strasbourg to consult with the local professor of surgery, Johann Friedrich Lobstein (1734–1786).⁴¹ Lobstein first tried

³⁸ An exceptional article is: Wapnewski P., "Herders Leiden", in Dietze W. – Dahnke H.-D. – Goldammer P. – Hahn K.-H. – Otto R. (eds.), *Herder Kolloquium, Referate und Diskussionsbeiträge 1978* (Weimar: 1980) 1001–1016. However, also Wapnewski did not address the interplay between experiences of illness and the specific intellectual development of Herder's thought and belief system.

³⁹ 'Dacrocystitis congenita' is characterised through recurrent infections of the nasal tear duct caused by a congenital obliteration of the duct's opening in the lower eyelid. Zink C., "Dacrocystitis congenita", in Zink C. – Engst R. – Kriwet V. – Schäbl H. – Spitzer T. – Weimann A. – Wolters, J.-W. (eds.), *Psyhyrembel klinisches Wörterbuch mit klinischen Syndromen und Nomina Anatomica* (Berlin-New York: 1986²⁰⁰⁵) 321. On the development of major surgical treatment options in this condition, see: Werb A., "The History and Development of Lacrimal Surgery in England and Europe", *Advances in Ophthalmic Plastic and Reconstructive Surgery* 5 (1986) 233–240.

⁴⁰ Haym, "Herder nach seinem Leben" 108–117.

⁴¹ Wapnewski, "Herders Leiden" 102–1016.

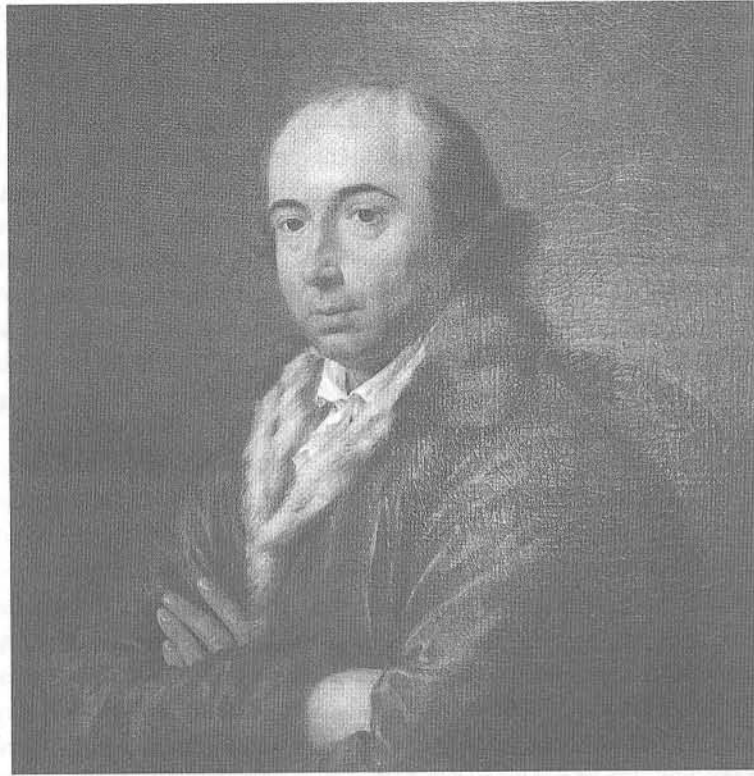


Fig. 2. Friedrich Rehberg, *Johann Gottfried von Herder*, before 1800. Archival records of Johann Gottfried Herder, Goethe and Schiller Archive. Oil portrait on canvas.

blood-letting and, when this was unsuccessful, he then introduced a probe into the tear duct which also was unable to open its lumen.⁴² The surgical procedures were performed within the extended period of a three-month stay, during which Herder consulted a number of doctors and received additional physical treatment in the hospital as well as in the baths. This medical journey had been pre-planned and organised by his friend Goethe, who between 1768 and 1771 studied Law at Strasbourg University

⁴² For the new therapeutic options available at the time, as well as the restrictions imposed on surgical intervention by the still prevailing humoral physiological model, see Ruisinger M., "Der flüssige Kristall. Anatomische Forschung und therapeutische Praxis bei Lorenz Heister (1683–1758) am Beispiel des Starleidens", in Helm J. – Stukenbrock K. (eds.), *Anatomie. Sektionen einer medizinischen Wissenschaft im 18. Jahrhundert* (Stuttgart: 2003) 101–125, which presents the full array of surgical procedures used by the famous Helmstedt surgeon Lorenz Heister (1683–1758).

and came to appreciate Lobstein's expertise as a surgeon and anatomist while taking medical classes during his first winter semester there.⁴³ Lobstein then ventured to operate on Herder's obliteration of the tear duct, intending to widen the anatomical lumen underneath the tear sac (the communication between the eye and nose). Following this procedure, a highly painful and purulent condition developed, which – read in terms of modern understandings of infection – developed into a clear *dacrocystitis* of the annexes to the right eye.⁴⁴ Goethe described the whole surgical procedure, the punctuation of the ensuing fistula and cauterisation of the infected red part of Herder's eye in his 1811 novel 'Out of my Life. Poetry and Truth' (*Aus meinem Leben. Dichtung und Wahrheit*),⁴⁵ while using Herder's own description:

A little channel was drilled into the [Herder's] constantly blocked nose, but the tears did not want to flow through the carefully crafted duct [...]. I was told that my tear sac did not have a normal anatomical position. The sac was pressed in a different direction, too hard, or even too much of a sac, or what do I know? In short, now I have to sit still – under the hands of this otherwise highly able surgeon – full of pain and impatience. I can only trust and hope that the flexibility of my tear sac will later help me to cope with the weather conditions and my eternal cold, which have both conspired against me.⁴⁶

Dr. Lobstein even ventured to use a newly invented technique: he sought to widen the tear sac by pressing little wax sponges and gentian roots

⁴³ Minor J.M. Le, "The chair of anatomy in the Faculty of Medicine at Strasbourg: 350th anniversary of its foundation", *Surgical and Radiological Anatomy* 24 (2002) 1–5.

⁴⁴ Effective treatment of medical problems concerning the lacrimal glands and tear ducts had to wait until more specific operations on the lacrimal glands became possible through inventions such as the lacrimal probe of William Bowman (1816–1892) and the canaliculus knife of Adolph Weber (1829–1915) around 1860. In fact, it would not be incorrect to say that modern dacryology and lacrimal surgery started only in the latter half of the nineteenth century. See also: Werb, "The History and Development of Lacrimal Surgery" 233–240.

⁴⁵ Cf. Goethe J.W. von, *Aus meinem Leben. Dichtung und Wahrheit. Zweite Abtheilung*, Book 10 (Tübingen: 1816).

⁴⁶ 'Man bohrte in die stets verstopfte Nase [Herders] einen Kanal, freilich wollten die Thränen in den so geschickt gegrabnen Kanal nicht abfließen [...], da mein Thränensack anders liege, oder anders gedrückt sey, oder zu hart und zu sehr Sack sei, oder, was weiss ich mehr? Kurz da muss ich unter den Händen meines sonst sehr geschickten Operateurs noch dasitzen voll Schmerz und Ungeduld und auf die Flexibilität meines Thränensacks, mit dem Wetter und ewiger Schnuppe gegen mich im Bunde sind, hoffen'. From Herder's letter to Caroline Flachsland (1750–1809) in Darmstadt, on November 6, 1770, in Schauer H. (ed.), *Herders Briefwechsel mit Caroline Flachsland. Nach den Handschriften des Goethe- und Schillerarchivs*, vol. 39 (Weimar: 1928) 442f., Engl. tr. F.W.S.

into the opening while he continued his soundings. But this manoeuvre, likewise, failed to deliver the anticipated result. The wound continued to bleed and the tear sac was increasingly filled with a purulent substance so that the duct once again became obstructed.⁴⁷ For Herder, the philosopher-patient, this cure eventually ended in a complete disaster – in ‘drooping’ and ‘annoyance’. As a sign of his own distress and also as a souvenir of the suffering he had endured, Herder kept the surgical lead rod with which his wound had so often been poked, for the rest of his life. Following the disappointing outcome to his treatment, he left Strasbourg in February 1771 and returned to Bückeburg, near Hannover, where he held the position of chaplain to the court of Schaumburg-Lippe. Herder’s dreadful experiences are well reflected in a letter of March 1771 to the merchant’s wife, Amalia Rheinholdina Busch (1733–1792), in whose house in Riga he had formerly educated the family’s four children while continuing his theology studies and serving as the cathedral cantor:

Three weeks have turned into twice three months. One surgical incision and one act of nose drilling developed into twenty surgical operations and two hundred soundings of my tear duct. The result: My eye appears worse than it had ever been; after all the pain, the costs, the disturbances, and the annoyances, etc.! I now have enough material to write a tragically amusing story [an *epopee*] or a piece of ophthalmomachism [an *ophthalmomachia*].⁴⁸

The continuation of this diseased condition of his right eye resulted in great psychic distress for Herder throughout his whole life. Therefore, is it surprising that even close friends, such as Goethe, perceived him as ‘suspicious’, ‘oversensitive’, often with ‘brusque reactions’, ‘anxious’ and with a ‘depressing’ effect on others? In fact, Goethe himself states that Herder exerted a quasi-magical influence on him, but he did not want to let himself be disturbed by Herder’s continuous lamentations and sometimes outright hostile attitude, regarding it as explicable in terms of what he had

⁴⁷ Today, conditions similar to Herder’s are treated through application of antibiotics and additional surgical reconstruction of an artificial tear duct or by *canaliculorhinostomia* – the insertion of a plastic tube into the mucosa of the internal nose: Patel B., “Management of Acquired Nasolacrimal Duct Obstruction: External and Endonasal Dacryocystorhinostomy: Is there a Third Way?”, *British Journal of Ophthalmology* 93 (2009) 1438–1443.

⁴⁸ ‘Aus den drey Wochen sind nicht blos zweimal drei Monathe, sondern aus Einem Schnitt und Einer Nasenbohrung so sind wohl 20. Schnitte u. 200. Sondirungen etc. geworden, u. endlich nach allen Schmerzen, Kosten, Unruhen, Verdrüsslichkeiten etc. ist mein Auge ärger, als es war! Dass ich Materie gnug hätte, eine höchst tragischlustige Epopee oder Ophthalmomachie zu schreiben!’. From Herder’s letter to Amalia Rheinholdina Busch in Riga, on March 28, 1771, in Hahn K.-H. (ed.), *Briefe. Gesamtausgabe, 1763–1803* (Weimar: 1984), vol. 1, 323; Engl. tr. F.W.S.

undergone,⁴⁹ ‘as his [Herder’s] illness increased, so did his tendency to disagree vehemently, overshadowing and weakening his invaluable liveliness and amiability. One could not approach him without strongly appreciating his mild character, but also one did not come back from him without being greatly aggrieved [...]’.⁵⁰ Not only his good friend Goethe and his wife Caroline, but also other close friends, perceived that Herder’s health was changed and influenced over long periods of depressive moods. This can certainly be traced back to the enduring pain suffered as a result of the congenital eye condition and his dreadful experiences with surgeons and other physicians. It is striking to see that Herder himself mentioned that he was suffering from a ‘hidden disease of the gall bladder’, which – as a symptom taken from humoral pathology – fits well with his general constitution, and he often saw new occurrences as a ‘relapse of his illness’.⁵¹

As a consequence of his chronic eye disease and vulnerable constitution, beginning in the 1770s and continuing throughout his whole life, Herder was a frequent visitor to the spas of Bad Pyrmont (Lower Saxony), Carlsbad (Bohemia) and Aachen (in the Rhineland).⁵² It seemed that the tranquillity of the spa hotels and the seclusion of these healing places helped him to regain his mental equilibrium and recover from the exertion of his office as Superintendent General. Like his friend Goethe, Herder was a fervent supporter of therapeutic water cures, an appreciation that further developed through his personal acquaintance with the great physician Christoph Wilhelm Hufeland of Weimar. They both met in the duke’s residency of Thuringia and later, in 1787, as their pastor Herder even presided over the marriage between Christoph Wilhelm and Juliane Amelung (1771–1845). Young Hufeland, with his magnum opus of 1797, ‘Macrobiotics. The Art of Prolonging Human Life’ (*Makrobiotik. Die Kunst, das menschliche Leben zu verlängern*), soon developed into one of the most influential physicians and medical theorists of this time.⁵³ Moreover, he made great progress in promoting the healing effect of bathing, the

⁴⁹ Goethe J.W. von, quoted in Wapnewski, “Herders Leiden” 1016.

⁵⁰ Goethe J.W. von, quoted in Kohlhagen N. – Sunnus S., *Eine Liebe in Weimar. Caroline Flachsland und Johann Gottfried Herder* (Stuttgart: 1994²) 209.

⁵¹ Herder in his letter to Busch, in Hahn “Briefe: Gesamtausgabe” 67; Engl. tr. F.W.S.

⁵² Zunckel J.G., “Gedächtnisrede am Grabe Sr. Hochwürdig. Magnificenz des Herrn Präsidenden von Herder gesprochen am 21sten Dezember 1803”, in Schmidt, “Herder im geistlichen Amt” 280.

⁵³ Genschorek W., *Christoph Wilhelm Hufeland. Der Arzt, der das Leben verlängern half* (Leipzig: 1986⁶) 38–76.

vitalising and positively 'irritating' effect of cold water applications, and he underlined the general 'activation' of natural healing powers through hydrotherapy.⁵⁴

As already indicated above, there are numerous suggestions that Herder's mood changes and sufferings were not really of an acute nature, or were just reactions to a somatic illness. Concentrating on an earlier letter from 1777 to his editor friend Johann Friedrich Hartknoch (1740–1789) in Königsberg, a chronic ailment seemed to have affected Herder,⁵⁵ exemplified by numerous 'symptoms of the mind'. This included, among other things, his prolonged dissatisfaction with his elections into public positions, his continuous personal bitterness over money troubles and his tendency to seek refuge in the private context of his family. The noticeable signs and symptoms displayed by Herder appear to represent an overarching psychosomatic disorder, apparently caused from ongoing depressive resentment.⁵⁶ Due to feeling deep-seated disappointment that he could never be relieved of his early childhood disease, Herder often experienced bouts of extreme bad temper that eventually, over time, diminished – in later years only disturbed as a result of an ailment of the right hypochondriac region and individual episodes of 'gall fever'.⁵⁷

Herder's interest in medicine and his reflections on the natural history and physiology of his time

According to many Herder scholars, his academic interest in medicine and preoccupation with themes from natural history and physiology started with his initial university studies at the Königsberg Medical School.⁵⁸ In

⁵⁴ Wittern R., "Natur kontra Naturwissenschaft: Zur Auseinandersetzung zwischen Naturheilkunde und Schulmedizin im späten 19. Jahrhundert", *Erlanger Universitätsreden* 37 (1992) 7.

⁵⁵ Kohlhausen – Sunnus, "Eine Liebe in Weimar" 214, Biedrzyński E., *Goethes Weimar. Das Lexikon der Personen und Schauplätze* (Zurich: 1992) 199f.

⁵⁶ Similar perspectives are still taken in recent research programs on tears and crying as psychosomatic processes; see, for example: Vingerhoets A.J.J.M. – Bylsma L.M. – Rottenberg J., "Crying: A Biopsychosocial Phenomenon", in Fögen T. (ed.), *Tears in the Graeco-Roman World* (Berlin: 2009) 439–475.

⁵⁷ Falk J., "Nachrufe", *Zeitung für die elegante Welt* (December 19th, 1803) 1241 and (January 3rd, 1804) 3.

⁵⁸ See, for example, Häfner R., "L'âme est une neurologie en miniature: Herder und die Neurophysiologie Charles Bonnets", in Schings H.-J. (ed.), *Der ganze Mensch. Anthropologie und Literatur im 18. Jahrhundert. DFG-Symposium 1992* (Stuttgart: 1994) 391–409, esp. 391–396.

1762, Herder had followed the Prussian regiment surgeon Johann Christian Schwartz-Erla (ca. 1710–ca. 1769) from his home province of Livonia to the East Prussian capital, where the latter practised for many years and where he had held close ties to the Medical Faculty. Not only did Schwartz-Erla try to find effective treatment for young Herder's eye condition as well as offering him the opportunity to study medicine, he also asked him, in return, to translate his own surgical work into Latin. This was his first contact with medical writing.⁵⁹

Herder had already written back to his parents as well as to his former elementary school teacher Sebastian Friedrich Trescho (1733–1804) in Mohrungen, saying that he was quite overwhelmed by the demands of his changed life in Königsberg and the new burden brought by his university studies. As we have seen, he therefore did not continue his medical classes after the first year, instead changing to theology and philosophy. Like his teacher Kant, he continued to be interested in natural history and in the fascinating progress being made in medicine, physiology and surgery in the early Enlightenment; this is reflected in his early study compilations, the *Blue Book* (ca. 1762–1766) from Königsberg and also his later *Brown Book* (1765).⁶⁰ Both include many excerpts from Kant's lectures as well as Herder's additional readings in natural history and physiology; for example, the French naturalist George-Louis Leclerc de Buffon's (1707–1788) *Histoire Naturelle* of 1769, from which Herder quoted that 'man, in general, is not sufficiently aware about the interior of his own body'.⁶¹ While this could have been a direct reflection upon his own ailment, it was also an expression of Herder's curiosity as to what the sciences of his day could contribute to philosophical and anthropological thought more generally.

In the *Blue Book*, for example, Herder referred back to the *Elementa physiologiae* of the Swiss-German physician and polymath Albrecht von Haller and drew attention to the latter's theory of 'irritability' (*Irritabilität* or *Erregbarkeit*) and 'sensibility' (*Sensibilität* or *Empfindlichkeit*) as major

Stiftung Weimarer Klassik (ed.), *Johann Gottfried Herder. Briefe*, eds. Dobbek W. – Arnold G. (Weimar: 1996), vol. 10, 250–253.

⁵⁹ Haym, "Herder nach seinem Leben" 20f.

⁶⁰ Herder's so-called 'Brown Book', bound in a brown cover, is a compilation of handwritten notes, on theological and philosophical matters in particular, and includes a number of considerations on natural history. Herder completed the 'Brown Book' later in Riga in East Prussia (today Latvia) (in: Capsule XXI; AHN, of the Manuscript and Incunabula Collection of the Berlin State Library; Culture Forum).

⁶¹ See in Capsule XXIX; AHN; I, C; 1 f/b.

physiological concepts to explain the functioning of the living body.⁶² Von Haller, recognised by eighteenth-century scholarship as one of the major theorists of the fibre doctrine of nerve action, also introduced a new concept; that the structural properties of the nerves consisted in their 'sensitivity' to external stimuli (such as in the cranial nerves leading to annexes of the eyes) and, of the muscles, that their 'contractility' (as in the small muscles of the tear glands) lay in the ability to act and move both voluntarily and involuntarily. Moreover, from 1757, Haller also emphasised that any nervous fluid, remaining after it had effectively instigated movements in the body, could be reabsorbed from the organs' periphery and the inner cavities, while it was being transported back to the brain directly through the fine nerve channels. Although structurally resembling the circulation system with flow outwards through the arteries and back through the veins, it would form a circulatory system of its own, with the tear gland apparatus acting as one of its pressure valves.⁶³ In addition, Haller points out that the notions of 'irritability' and 'life force' had already acquired great popularity in the enlightened circles of the period. Starting with his famous experiments on irritability, using frogs as test animals, he claimed to have identified the fundamental difference between the physiological dispositions of individual body parts, for example the disposition of a muscle to be irritable, and that of nerves to be sensible,⁶⁴ a finding which changed the views of those scholars of physiology who came after him. For Herder, in particular, Haller's demonstration of the substrate and function of the tear glands proved to be highly stimulating for his own reflections on the physiology and mechanism of tears and crying:

Still another cause [of crying] is the instance of a gentle passion, whether it is united with great joy or deep grief. In the instance of joy, the tears start to flow because of the great luck of a friend or during the meditation of an example of great virtue [*ein bewundernswürdiges Beispiel einer Tugend*]. If these instances are presented to highly sensitive persons, they will immediately burst into tears. And that this also brings about deep sad-

⁶² Haller, "Anfangsgründe der Physiologie", vol. I, 314.

⁶³ With the introduction of the concepts of 'sensitivity' and 'irritability', Haller provided a new physiological basis for the understanding of the vital function of the living bodies, a development, which provided a decisive departure to the physicalist and mechanist tradition that had followed to René Descartes (1596–1650) also in medicine and biology. For a more, in depth discussion, see: Steinke H., *Irritating Experiments. Haller's Concept and the European Controversy on Irritability and Sensibility, 1750–1790* (Union, NJ-Amsterdam: 2005) 93–126.

⁶⁴ Töllner R., *Albrecht von Haller. Über die Einheit im Denken des letzten Universalgelehrten* (Wiesbaden: 1971) 173–182.

ness is likewise known to everyone [*Und dass dieses die Traurigkeit bewirke, ist Jedermann bekandt*].⁶⁵

As is reflected in Herder's famous *Blue Book*, he not only followed the course of Kant's exposé of contemporary mathematical and physical sciences but also brought in other concepts of leading physiologists – especially Haller's *Elementa physiologiae* – concerning the functioning of the body, alongside his own considerations of the *meaning* of 'tears' for the human condition [Fig. 3].

It is precisely here – even though scholars like Richard Töllner have also underlined the physico-theological views of the Bern physiologist⁶⁶ – that the theologian-philosopher goes well beyond Haller's substrate-oriented physiology. Herder now asks a proto-psychosomatic question, as in his 1800 essay 'On the Meaning of Emotion' (*'Zum Sinn des Gefühls'*);⁶⁷ namely, what were the physiological *and* psychological or anthropological functions of tears and crying: were they an expression of the soul and a direct effect of this non-physical entity? Would the soul reside in the fibres of the body and was it also subject to physical sensibility?

These reflections were not of purely theoretical interest for Herder; they also had considerable practical value and implications. For example, he further speculated about the coming of a new medical profession, that of a 'physiologist of both the soul and the human body' (*'Ein Physiologe der Seele und des Körpers des Menschen'*)⁶⁸ which '[...] we do not yet have. He [the physiologist of the soul and body] will then fully tell us what it is to think and to hear! In all these three notions [in the preceding chapters Herder discussed 'thought', 'body', and 'sensitivity'], we get the whole metaphysics of space, time and force'.⁶⁹ Herder was quite explicit about how such a future psychophysiology could work in practical terms. He developed this theme in his 1774 psychophysiological essay

⁶⁵ 'Noch eine andere Ursache [Weinen] beruhet auf eine zarte Leidenschaft, es mag sich nun selbige mit der Freude, oder mit der Betrübniß vereinigen. So fließen bei der Freude über das grosse Glück eines Freundes, oder über ein bewundernswürdiges Beispiel einer Tugend, so man lebhaft schildert, Personen von empfindlichen Sinnen, die Thränen häufig in die Augen. Und dass dieses die Traurigkeit bewirke, ist Jedermann bekandt'. Haller, "Anfangsgründe der Physiologie", vol. V, 741f., Engl. tr. F.W.S., and also Herder, *Blue Book* 30f.

⁶⁶ Töllner, "Fragmente Religiöser Empfindung" 490.

⁶⁷ Herder, J.G. von, *Zum Sinn des Gefühls* (1800), in Pross, *Herder. Werke*, vol. II, 241–250.

⁶⁸ Herder, J.G. von, *Zum Sinn des Gefühls* (1800), in Pross, *Herder. Werke*, vol. II, 244.

⁶⁹ Herder, J.G. von, *Zum Sinn des Gefühls* (1800), in Pross, *Herder. Werke*, vol. II. Engl. tr. F.W.S.

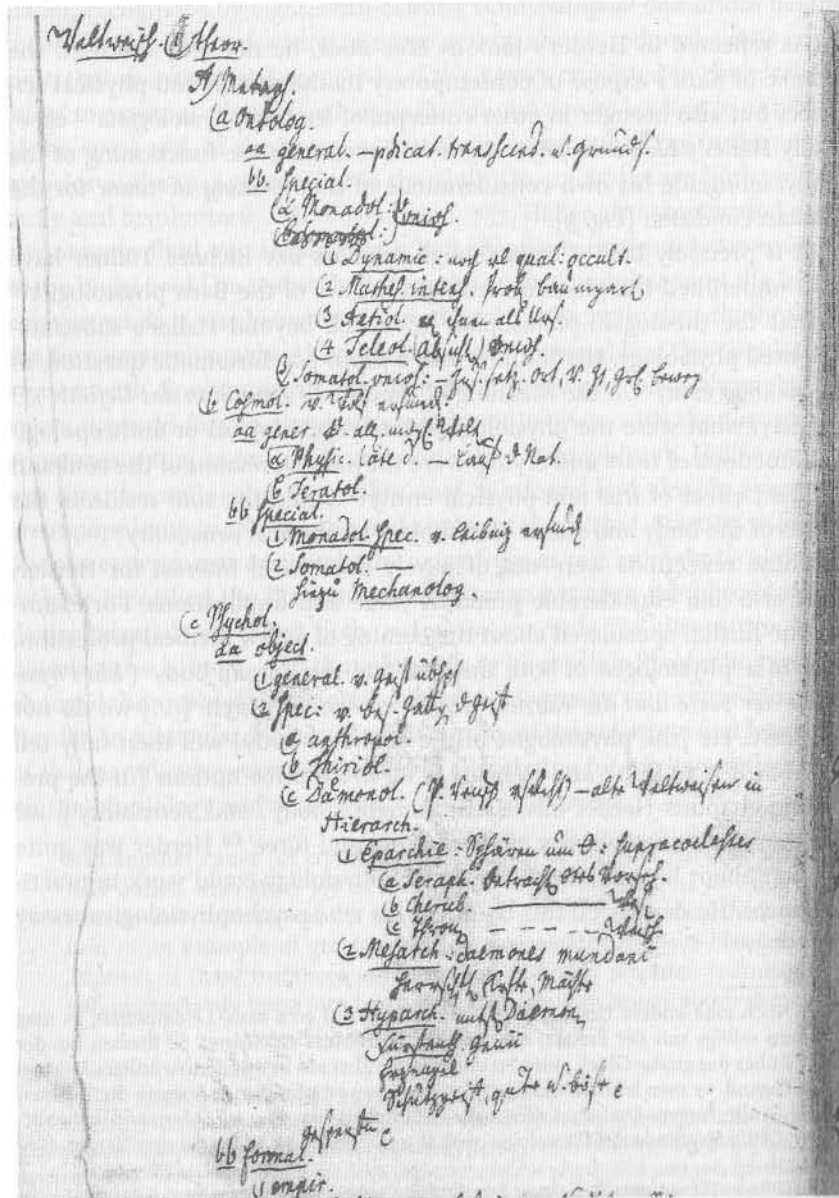


Fig. 3. Johann Gottfried von Herder, *Table of Notes on Physiology, Psychology and Anthropology*, ca. 1765.

'On Perception and Emotion' ('*Vom Erkennen und Empfinden*'),⁷⁰ where he specifically receives, and uses, the Hallerian physiological doctrine of 'irritability', squaring this with the traditional notion of a healthy bodily equilibrium in order to produce a detailed explanation of how the flowing of tears occurs, and what this process means in terms of the wider psychological context addressed:

Nature works in manifold ways, right up to the infinite. She changes herself in all grades possible, so that her general actions cannot be applied in the full and necessary depth to all parts of the body [...]. We realise that when one part of the body is mutilated, its fluids are attracted towards the neighbouring, homogenous part, and they strengthen it considerably. That is also the case with the genius [*dem Genie*] of sensibility and the internal drives. Those organs, which nature neglects, wither, whereas all others will continue to thrive.⁷¹

According to Herder's physiological views, *tears* are interpreted as an element of physical compensation of bodily fluids or the effect of scarcity or overflow in other organs. This assumption derives from, and further expands, Haller's 'overflow model of crying', in which the tear glands are affected by the irritability of the fibres that loosen the (muscular) valves of the lachrymal glands so that the tears can freely run from the eyes:

Regarding the nature of this liquid [the tears], we only know a few things, namely that it is clear and salty water, which completely evaporates when it is brought into contact with fire. I [Haller] am not aware of a chemical analysis of the tears, as it is barely possible to collect enough fluid from the lachrymal glands to pursue such kinds of experiments. I have read, however, that they can build crystals. It happens quite often that small stones are formed in the tear ducts as in all the other aqueous liquids of the human body.⁷²

⁷⁰ Herder, Johann Gottfried von, *Vom Erkennen und Empfinden* (1774), in Pross, *Herder. Werke*, vol. II, 543–579.

⁷¹ 'Die Natur arbeitet ins Mannichfalte, ins Unendliche; sie verändert mit allen Graden, und kann also selten diese Tiefe über alle Organe erstrecken [...]. Wir sehen, wenn ein Glied des Körpers verstümmelt wird, dass sich die Säfte wohl nach dem andern, nachbarlichen, ihm homogenen hinziehen und es ungewöhnlich verstärken; so gehts mit diesem Genie an Empfindungen und Trieben. Die von der Natur versäumten, und im Verfolg ungebrauchten Organe dorren, andre nehmen zu sehr überhand'. 572f.; Engl. tr. F.W.S.

⁷² 'Wir wissen von der Natur dieser Feuchtigkeit [der Tränen] nur was wenig, nämlich, dass sie ein helles, doch salziges Wässerchen ist, welches im Feuer ganz und gar verbräut. Ich [Haller] kenne keine chemische Auseinandersetzung der Thränen, da man schwerlich sehr viel davon sammeln kann, als zu einem Versuche hinlänglich ist. Ich lese, dass sie zu Kristallen angeschossen: und es geschieht nicht selten, dass sich wie in den übrigen wässrigen Feuchtigkeiten des menschlichen Körpers, so auch ebenfalls in den

For Haller, the tears thus displayed an important property in that they could form a solid substance of the body, and could serve as primary elements to build up the individual fibres of the living body. This assumption of a primordial character of tears, not only as excess body fluid but also as physiological building blocks was, of course, still a continuation from the tradition of humoral pathological views.⁷³ Herder discussed humoral views not only in his physiological reflections, but also in the letters to his wife Caroline, where the extensive influence of the liver and the gall bladder is emphasised. These signs can be seen as indicators for Herder's general constitution, a situation which may be referred back to the contemporary medical theories of the day in which reinterpretations of ancient humoral pathology were part of medical education right into the mid-nineteenth century. Nevertheless, with the advent and progress of organ pathology, a change in medical theory had occurred in that individual humoral conditions were now more strongly related to specific bodily organs.⁷⁴ It is not astonishing, then, to see Herder's illness described as often being 'depressed' and at the same time as being 'short-tempered', suffering from 'hardening of the liver' and found to be 'suffering from a gall fever' or from 'gall cramps' – in a sense being typical patterns of a 'melancholic', sometimes 'choleric' picture from humoral pathology.

What was decisive for Herder himself was the assumption of the fundamental physiological character of the bodily fluid of tears, which gave him *carte blanche* to claim that they acted as mediators between, firstly, the physiological function and morphological structure of the body. Secondly, in accordance with Haller, their assumed primordial nature as 'building blocks' of the body allowed Herder to introduce his conception of tears as a *tertium comparationis* of the *Elementa physiologiae*, that is, as the missing link between bodily physiology on the one hand and human emotion

on the other.⁷⁵ Beyond the rather mechanistic interpretations of the *anatomia animata*⁷⁶ of the human body, as in Haller's doctrine, Herder stressed the psychophysiological dimension of tears as the paradigmatic example for the workings of the soul in full concert with the physiological actions in the human body (while relating to emotional states of joy, fear, sorrow, and anger, and so on). Not only does the soul act, according to Herder, when perceiving a sad or joyful situation, but it continues its influences along a complete spectrum from 'sensibility' to 'irritability' – especially conceiving and comparing emotions and bodily actions with or without the influence of volition and human intentionality.

When creating his own idiosyncratic physiological theory, Herder widely exploited the perspective of tears as mediators between physiology, psychology and, for him, more often spirituality. In fact, he developed it into a model which was based on a number of anthropological background assumptions,⁷⁷ which sought to explain why certain people are more prone than others to tears and crying. In the contemporary context of 'Sensitivity' (*Empfindsamkeit*) this had become a decisive question in determining devoutness, moral virtues, even the essence of humanity at large. For Herder, people who cry and show their tears present a stronger degree of receptivity to sensitive events. This condition further explained

⁷⁵ In his primary discussion of the *tertium comparationis*, particularly in focusing on the aesthetics of the sense impressions and the semiology of their meanings, Herder emphasised that there must be an overlapping quality, which two things need to have in common and without which no comparison would be possible. In particular, Herder criticises Gottfried Ephraim Lessing (1729–1781) for having conflated the signs of poetry with the signs of painting in the latter's work of 1766 *Laocoon. An Essay on the Limits of Painting and Poetry* (*Laokoon oder Über die Grenzen der Mahlerey und Poesie*), in which Lessing reflected on an adequate representation of pain and suffering through aesthetic means. It is particularly in his attack on Lessing that Herder uses physiological background assumptions. For example, he states that the physical materiality of bodies yields a point of comparison between the sublime and physiological functions. Later in his argument, Herder accuses Lessing of having mixed up the two aesthetic perspectives of painting and poetry, because "The signs of painting are natural. The relation of the sign to what is ostentatiously referred to is grounded in the thing itself". The signs of poetry, however, are absolutely arbitrary, according to Herder. The articulated sounds have nothing in common with the thing that they represent. They are only accepted on the grounds of a mutually shared convention, so that the nature of both is unequal and the *tertium comparationis* vanishes. Herder, Johann Gottfried von, "Kritische Wälder. Oder Betrachtungen, die Wissenschaft und Kunst des Schönen betreffend. Erstes Wäldchen XI. Herrn Lessings Laokoon gewidmet (1769)", in Suphan B. (ed.), *Herder – Sämtliche Werke* (Berlin: 1883), vol. 3, 239.

⁷⁶ On the concept of the vital elements of morphological structures, as represented in the figure of the *anatomia animata*, see Töllner, "Albrecht von Haller", 137–140.

⁷⁷ I have described this perspective elsewhere as Herder's 'anthropological physiology'; see Stahnisch, "Herder's 'Anthropologische Physiologie'" 826f.

Thränen, Steine erzeugen'. Haller, "Anfangsgründe der Physiologie", vol. V, 739f.; Engl. tr. F.W.S.

⁷³ Following Galen's comments on the Hippocratic *De natura hominis*, physicians understood that the four humours (blood, phlegm, black, and yellow bile) made up the essence of the body and that health depended on their balance. Pain is felt when one of these humours is lacking or in excess in the body, without being compounded with the other humours. When more of any one specific humour left the body, then the mere process of this flow caused suffering. *Tears*, according to this model, were associated with melancholy and as such with the abundance of black bile. See, for example, Grant M. (ed.), *Galen on Food and Diet* (London-New York: 2000) 30f., Fögen, "Tears and Crying in Graeco-Roman Antiquity" 4f.

⁷⁴ Cf. Hess V., *Von der semiotischen zur diagnostischen Medizin. Die Entstehung der klinischen Methode zwischen 1750 und 1850* (Husum: 1993) 31–33.

to him why pious prayer or the singing of a church song could give rise to tears through an act of immersing oneself in eternal joy and deepest grief – a perspective that the theologian in Herder was certainly most interested in investigating. It is no coincidence, then, that both Herder and Haller deemed tears physiologically basic to the irritability of specific anatomical structures (the tear glands, the eyelids, or the adjacent facial musculature etc.) such as Haller had described in his chapter on physiology ‘On the Nature of the Tears’ (‘Über die Natur der Tränen’)⁷⁸ of his basic textbook – the *Elementa physiologiae*. However, Herder’s theological understanding and sentimentalist ethics came to be much more strongly related to the knowledge about the inner self and human emotions. Like other theorists of ‘sensitivity’, he regarded a deep knowledge of the personal ‘heart’ and ‘feelings’ as providing the primary access to the highest degrees of virtue and coercion with other human beings. Although tears and crying were certainly important aspects of the individual being, his or her emotional state was seen as a crucial determinant of human communication in broad terms.

For Herder, tears could only be fully comprehended when they were appreciated as a means to further understanding between individuals, that is, as an expression of empathy (as: *Mitfühlen*) and a true sign of offering help and support. Sensitivity, in general, was the particular means by which social virtues were supported and achieved and, in return, spiritual development could likewise only be attained through introspection and emotional experience. He thus understood the gentler emotions such as love, tenderness, friendship, empathy and melancholy as particularly valued for their social character, a dimension that is largely absent from his physiologist contemporary, Haller.⁷⁹

The philosopher-theologian as medical patient: A creative tension

Herder deliberately introduced his own experiences as a patient into many of his academic writings, poems, and religious sermons, providing subjective, if not objective instances of comparison with the state of contemporary physiological knowledge.⁸⁰ When looking at Herder’s unpub-

⁷⁸ Haller, “Anfangsgründe der Physiologie”, vol. V, 741f.

⁷⁹ Cf. Elferen I. van, “‘Ihr Augen weint!’ Intersubjective Tears in the Sentimental Concert Hall”, *Understanding Bach* 2 (2007) 77–94, esp. 78f.

⁸⁰ See also Wapnewski, “Herders Leiden” 1013–1016.

lished notes, philosophical publications and essays on contemporary medical theory, it becomes clear that his views on the physiology of tears were located at the cross-roads between intellectual and theological interest, and personal suffering; also, that these views came out of numerous encounters with contemporary physicians and natural historians.⁸¹

During his studies at Königsberg, it already appeared to Herder that the acquisition of specific knowledge about the human physiological condition could not be a question of mere reasoning and animal experimentation alone,⁸² but ought to involve psychological assumptions as well. When he changed to become a student of theology, these considerations were increasingly embraced, in religious terms, and spelled out as examples of a wider communication with God, expressed, for example, in Herder’s poem ‘See the celestial physician with a quiet gaze’ (‘Schaue den himmlischen Arzt mit stillem Blicke’), written in his student days:

See the celestial physician with a quiet gaze | the soul that passed away |
[open the doors for the Supreme]. The mother cries, oh! what moist tears |
[God displays wonders of his gentle deeds]; and [is] full of power and force.
| See, he [can] raise you to eternal [life].⁸³

Even though the interpretation of God as having the highest capacity for healing both the body and the soul was widely present in theological views about health and illness – developed to a very high degree in contemporary views⁸⁴ – it is Herder’s juxtaposition of the poem with excerpts from natural history and medical treatises which represents the particular physico-theological perspective. While the mention of the ‘mother’s moist tears’ can be seen as in complete harmony with the figuring of literary and theological sensitivity in the general context of *Empfindsamkeit*, the eschatological perspective ‘on the wonders of [God’s] gentle deeds’ and the recurrent image of ‘man as a mirror of God’ were directed towards the

⁸¹ Cf. Stahnisch, “Herder und die Neurowissenschaften” 129f.

⁸² For the individual physiological practices of eighteenth-century physiology, see: Steinke, “Irritating Experiments” 49–92.

⁸³ ‘Schaue den himmlischen Arzt mit stillem Blicke | die verstorbene Seele | [öffnet die Türen dem Erhabenen]. Es weint die Mutter, o wie feuchte Tränen | [Er gibt Wunder seines zärtlichen Tuns]; nur da Kraft in seiner Stärke [ist]. | Seht, er [kann] in Zukunft [zum Leben] wecken | [Dich auch]’. Herder, “Schaue den himmlischen Arzt mit stillem Blicke”, unpub., n.d. (ca. 1762/1763) (Capsule XX; AHN (*Abteilung für Autographen, Handschriften und Nachlässe*); of the Manuscript and Incunabula Collection of the Berlin State Library; Culture Forum).

⁸⁴ See, for example, in: Viehmeyer L.A., “Abraham Wagner and George de Benneville: Physicians of Body and Soul”, in Helm J. – Wilson R. (eds.), *Medical Theory and Therapeutic Practice in the Eighteenth Century. A Transatlantic Perspective* (Stuttgart: 2008) 261–280.

general possibility of a physiologically and psychologically healthy being. Following Herder, complete rejuvenation of the body parts and fluids – and likewise psychophysical healing – was only possible through the powers of ‘the celestial physician’,⁸⁵ which he further translated into a form of procedural ethics, namely the rapprochement with the sick and suffering person – the *homo patiens*.⁸⁶ This literary figure likewise bears strong idiosyncratic similarities with the chronically-ill Herder, who had to cope with recurrent infections of his eye and for whom the subject of ‘tears’ was more than just a theoretical issue during the Age of Sensitivity. Even more so, crying and tears became a constant, even daily, individual health concern for Herder – hence, more than everything else, tears became truly ‘an analogue, mirror and exterior imprint of the actions of the soul’.⁸⁷

Previously, in his 1772 *Essay on the Origins of Language* (*Abhandlung über den Ursprung der Sprache*), awarded the Prize of the Royal Prussian Academy for the Arts and Sciences in Berlin two years previously, Herder did not just reflect on human consciousness and the materiality of the human body, but also transferred such theoretical considerations into a medical account of health and disease. Placing the focus on the physiological functions of bodily organs and the phenomenological unity of the human individual, Herder based his theory on the current anthropological assumption of the ‘double nature of man’, which would later form the background to his wider psychological and medical considerations.⁸⁸ His notions were always oriented towards a holistic gaze, which he also expected of the medical doctors of his time. In a way, this also tied in with the programme of a new group of younger physicians, working around 1800, who stressed the need to observe a much tighter pathogenetic relationship between the physical and the mental health constitution of each individual patient. Hufeland can be seen as one of the major protagonists of this trend; in his magnum opus, *Macrobiotics. The Art of Prolonging Human Life*, he emphasised that a stricter observation of the physiological and psychological equilibrium was essential for preserving a healthy body in general:

⁸⁵ Herder, “Schaut den himmlischen Arzt!” n.pag.

⁸⁶ Stolberg M., *Homo patiens. Krankheits- und Körpererfahrung in der Frühen Neuzeit* (Cologne: 2003).

⁸⁷ Herder, “Vom Erkennen und Empfinden” 548.

⁸⁸ See also: Ruprecht E., “Herders Gedanken Über die Seele und ihre Unsterblichkeit”, in Poschmann B. (ed.), *Bückeburger Gespräche über Johann Gottfried Herder 1979* (Bückeburg: 1980) 31–49.

Who can write about human life without considering the moral world, to which each individual also belongs? [...] numerous instances clearly show that the human being has been designed for a higher moral destiny. And this makes for a most decisive difference between the nature of man and that of an animal. Without any human culture in general and without the culture of an individual person, man will constantly be in opposition with his nature; and he will only develop into the most perfect human being, if he observes [this double nature].⁸⁹

Herder further claimed that the phenomenology of the patient’s condition was tightly linked to the general context of language regarding both the expression and the healing of an illness.⁹⁰ This demand possibly originated in Herder’s own experiences with the physicians caring for him in Königsberg, Strasbourg and Bückeburg (Westphalia), ‘those high priests and nosy scholars, who arrive with their servants carrying swords and needles’. It seems unlikely that his own physicians paid to the psychosomatic condition the amount of respect for which Herder himself had called, in his essay ‘On Perception and Emotion in the Human Soul’ (*Vom Erkennen und Empfinden der menschlichen Seele*) of 1774:

Psychological Physiology is the most important part of universal wisdom, because this discipline alone can give us access to the (innermost) sanctuary of the soul [...]. Without all mysticism, and in the strictest philosophical sense [*im schärfsten philosophischen Verstande*], the inner man is identical to the outer man, through and through. The latter is only a shell for the former, and *a priori* [Albrecht von] Haller, [Richard] Mead [1673–1754], [Johann Georg von] Zimmermann are certainly his confidants more than all earlier thinkers together; for *a priori* we know nothing about the soul.⁹¹

⁸⁹ Hufeland, Christoph Wilhelm, *Die Kunst, das menschliche Leben zu verlängern* (Jena, Akademische Buchhandlung: 1797) Vorrede, 16 ‘Wer kann vom menschlichen Leben schreiben, ohne mit der moralischen Welt in Verbindung gesetzt zu werden, der es so eigentümlich zugehört? [...] unwiderlegliche Gründe tun dar, dass schon das Physische im Menschen auf seine höhere moralische Bestimmung berechnet ist, dass dieses einen wesentlichen Unterschied der menschlichen Natur von der tierischen macht, und dass ohne menschliche Kultur der Mensch unaufhörlich mit seiner eigenen Natur im Widerspruch steht, sowie er hingegen durch sie [die Doppelnatur] auch physisch erst der vollkommenste Mensch wird’. Engl. tr. F.W.S.

⁹⁰ Herder, “Abhandlung über den Ursprung der Sprache”, in Pross, *Herder. Werke* vol. 2, 251–399, esp. 254f.; Engl. tr. F.W.S.

⁹¹ Herder, “Vom Erkennen und Empfinden” 563 ‘[Die] Psychologische Physiologie [ist] der wichtigste Teil der Weltweisheit. Sie allein kann uns ins Heiligtum der Seele führen: [...] Ohne alle Mystik und im schärfsten Philosophischen Verstande ist der innere Mensch dem äussern durch und durch einwohnend: dieser nur die Hülle von jenem, und die [Albrecht von] Haller, [Richard] Mead [1673–1754], [Johann Georg von] Zimmermann sind mehr, als alle Grübler *a priori*, seine Vertrauten: denn *a priori* wissen wir von der Seele nichts’. Engl. tr. F.W.S.

This discussion of Herder's physiological views would not be complete without emphasising his deep roots in theology and his central belief in the eternal soul. With his metaphysical confession: 'Yes, I find in language and in the essence of God the direct cause, why nobody other than God himself could have created it', Herder – in contrast to Haller⁹² – was convinced that the soul resides directly in the body; it could affect human physiology at any moment and was explicitly subject to the worldly influences of God:

So here we have to stick with experience and clear notions, for both of which it is enough to understand why they could not be complete. Here, we find the forces of the soul [*die Kräfte der Seele*] distributed, as it were, uniformly in all of the manifold actions of the vital body. Without particular parts of our body, we feel, no rational thought can even be possible: [...] The soul feels itself to be part of the body, and feels comfortable there [...]. *Mens sana in corpore sano*.⁹³

From his perspective in 'On Perception and Emotion in the Human Soul', where he argued for a functional meaning of the unity of body and soul, Herder not only explained how he understood the existence of consciousness itself, but also argued for an inseparable relation between the human body and soul.⁹⁴ In light of these theological interpretations, however, the mortal body was no more than a 'sheath of the mind', an idea that he had already expounded in his views on human evolution, and which figures strongly in his best-known book, the *Ideas on the Philosophy of the History of Mankind* of 1784–1791.⁹⁵ In Herder's physiological thought, it also comes as no surprise to find the newly-emerging interpretation of living phenomena in an anthropological perspective. If we follow the recent

⁹² In modern terms of the philosophy of mind, although the positions of Haller and Herder are not analytically clear cut, it is possible to align Haller's views primarily with dualist theories of the mind-body relation. On the contrary, Herder argues more for an epiphenomenalist theory of mind, based on an inherently universal assumption of the mind-matter relationship. For the modern theories see, for example, Plantinga A., "Evolution, Epiphenomenalism, Reductionism", *Philosophy and Phenomenological Research* 68 (2004) 602–619.

⁹³ Herder, "Vom Erkennen und Empfinden" 548 "Wir müssen hier also bloss bei der Erfahrung und bei klaren Begriffen bleiben, von denen es genug ist, einzusehen, warum sie nicht vollständig werden konnten. Da finden wir nämlich die Kräfte der Seele gleichsam ausgebreitet in alle manichfaltige [!] Verrichtungen des organischen Leibes. Ohne gewisse Teile, fühlen wir, kann unser Denken nicht vor sich gehen: [...] Die Seele fühlt sich im Körper, und fühlt sich wohl [...]. *Mens sana in corpore sano*". Engl. tr. F.W.S.

⁹⁴ Herder here uses the famous Latin quotation that 'a healthy mind is in a healthy body' from the tenth satire by the Roman poet Juvenal (ca. 55 AD–ca. 135 AD): Juvenalis, *Satyræ* 10.356.

⁹⁵ Herder J.G. von, qtd. in Unger R. (ed.), *Gesammelte Studien. Zur Dichtungs- und Geistesgeschichte der Goethezeit* (Darmstadt: 1966), vol. 3, 25.

account of the cultural philosopher, Johannes Bierbrodt, then we must see the whole period as a decisive break with traditional knowledge systems:⁹⁶ this break was not found in earlier cosmological and naturalistic accounts. The new way of thinking about the world was expressed in the emphasis on physical anthropology, investigating questions about man's relation to animal physiology, or the general relationship between the mind and the soul. In particular, an important trend in enlightenment and eighteenth-century research was to investigate human behaviour within the constraints of the life world.

Herder's anthropological assumption of the 'double nature of man' – which he conceived as an inseparable physiological and spiritual unity – diverged from the dominant academic discourse, as it continued to be deeply entrenched in Christian theological thought.⁹⁷ It also exhibited the need for a substrate of communication between the anatomical fibres of the brain and the nerves, and the 'irritable' and 'sensible' units of the human physiology, such as the lachrymal glands. This substrate was seen here as transcending the realm of living phenomena, explaining human consciousness and the particular possibility of a spiritual communication with God through tears and emotions. For Herder, the physiology of tears was a prime expression of the special unity between sensitivity, emotion and virtue and, as such, they were reliable and trustworthy *a posteriori* signs of the existence and workings of the soul in the human body.

Conclusion

In this historical *précis*, I have sketched out how Herder's personal interests – strongly shaped through his own biographical background and the condition of his congenital tear duct disease – played right into his pre-occupation with contemporary physiological theory. The new interpretations disseminated by the influential Weimar polymath became related to general physiological theory, as well as to the specific discussion of tears, in that they appeared to him as prime elements which allowed for a discussion both of the workings of the body and of the nature of human emotions. Although he placed a great emphasis on the supremacy and

⁹⁶ Bierbrodt J., *Naturwissenschaft und Ästhetik 1750–1810* (Würzburg: 2000) vii.

⁹⁷ See also Soboth C., "Tränen des Auges, Tränen des Herzens. Anatomien des Weins in Pietismus, Aufklärung und Empfindsamkeit", in Helm J. – Stukenbrock K. (eds.), *Anatomie. Sektionen einer medizinischen Wissenschaft im 18. Jahrhundert* (Stuttgart: 2003) 293–315.

the observable actions of the soul, Herder certainly also shared, and even relied on, Haller's earlier physiological notion of 'irritability' as the basic property of all living body structures. Nevertheless, he went one step further. Herder integrated the concepts of 'sensibility' and 'irritability' as the substrate of the soul, as central features of his 'anthropological physiology', because 'crying', religious belief and gentle emotions found their expression in a primary physiological faculty. These basic physiological assumptions figured strongly in many of Herder's metaphors, such as the 'delicate, irritable nerves' ('zarte reizbare Nerven') or the 'complete atony of the vital functions' ('völlige Atonie der Lebensfunctionen').⁹⁸

Like Haller, who alluded to scholastic and Renaissance views about tears as being secreted from the fluids of the anterior ventricles of the brain,⁹⁹ Herder linked his conception of 'tears' particularly to a discussion of the brain as the pivotal organ of the human body and as a genuine tool of the soul (*Werkzeug der Seele*). For him, this assumption paved the way to consider the idea that tears acted as mediators between the sublime and the actual bodily physiology. However, this step could hardly have been taken without a hidden theological agenda, nor could it have come out of the blue – Herder here was affected by the disease of his own tear duct. His personal views about the physiology of the tears developed from his own observations of the 'psychosomatic' interaction between depressive moods and recurrent instances of crying. To these were added experiences which he had had as a theologian of the 'Age of Sensitivity'.¹⁰⁰ For the philosopher-patient Herder, the physiology of tears became a *tertium comparationis* of the *Elementa physiologiae* as Haller had seen them. Tears appeared at the intersection between fine meditations of the soul, the rough human condition and the worldly materiality of human suffering. It is in this context of the 'double nature of man' that Herder considered *tears* and *crying* as an expression of the residential *internal man in the external* and as mediators between the sublime and the bodily physiology.

⁹⁸ See also the discussion of Herder's position in contemporary cultural discourse about women's nerves and brains in: Stahnisch F., "Über die neuronale Natur des Weiblichen: Szientismus und Geschlechterdifferenz in der anatomischen Hirnforschung (1760–1850)", in Stahnisch F. – Steger F. (eds.), *Medizin, Geschichte und Geschlecht. Köperhistorische Rekonstruktionen von Identitäten und Differenzen* (Stuttgart: 2005) 197–224, esp. 205f.

⁹⁹ Compare, for example, the doctrine on the morphological substrate of the ventricles for the physiology of the senses and emotions in Johann Eichmann (= Dryander; 1500–1560), on which he expounded in Dryander, *Anatomiae hoc est, corporis humani, dissectionis pars prior* (Marburg: 1537), Sig. g., iv.

¹⁰⁰ Cf. Minter, "Literary 'Empfindsamkeit'".

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