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HUMAN NATURE AND IMPROVEMENT OF THE UNDERSTANDING IN WILLIAM CULLEN'S HISTORY OF MEDICINE

I. William Cullen and the Scottish Enlightenment

William Cullen was appointed as a professor of medicine at Edinburgh in 1757, after a few years during which he taught chemistry at the University of Glasgow¹. His acquaintance with Hume is well known: they both were members of the Edinburgh Philosophical Society and of the Select Society, but even before moving to Edinburgh, Cullen had openly supported Hume's appointment to the Chair of Logic and Rhetoric at Glasgow². Moreover, Cullen was Hume's physician and popularised the famous scene of Hume's death, of his good humour and irony, in contrast with the common image of the infidel scared by death³.

¹ A detailed, though non recent, biography of William Cullen is provided by J. THOMSON, *Life of William Cullen*, Edinburgh, Blackwood, 1859, I-II.

² The reasons for Hume's unsuccessful efforts to be appointed to a university chair are described by R.L. EMERSON, *The «Affair» at Edinburgh and the «Project» at Glasgow: the Politics of Hume's Attempts to become a Professor*, in *Hume and Hume's Connexions*, ed. by M.A. Stewart, J.P. Wright, Edinburgh, E.U.P., 1994, pp. 1-22. The interplay between medicine and philosophy in the Scottish Enlightenment has been emphasised in R.L. EMERSON, *The Philosophical Society of Edinburgh 1748-1768*, «British Journal for the History of Science», XLVII, 1981, pp. 133-176.

³ On the construction of the image of Hume's death see A. SMITH, *Letter to Strahan*, 9 November 1776, in *Correspondence of Adam Smith*, ed. by E.C. Mosner, I.S. Ross, Indianapolis, Liberty Fund, 1987, pp. 286-287, and M. MALHERBE,

Hume's influence on Cullen's thought is more controversial. Cullen used to define himself as a dogmatist, expressing somewhat provocatively his trust in medical theory and deductive reasoning. For this reason, the common-sense philosopher William Hamilton emphasised Cullen's use of generalisation and Cullen's biographer, John Thomson, called him a «systematist»⁴. Dogmatism appears obviously at odds with Hume's scepticism, but there are however similarities between Hume and Cullen: Cullen used theory – or better reasoning – to discover those limits and strictures of medical thinking which were not yet evident to experience and observation. Theory provided a sort of mental experiment by which it was possible to test medical knowledge and ascertain its effectiveness. This method has been called sceptical, as it actually undermines the scientific tradition and received knowledge and aims to discover its fallacies⁵. In this sense Cullen was one of Hume's few disciples.

I wish now to argue that Hume's influence on Cullen can be extended to history too. Hume's historical writings were imbued with his philosophical ideas, as in the last fifty years scholarship have shown⁶. Although Hume's philosophical works were not widely read,

Hume ou la mort du sceptique, «Rivista di storia della filosofia», LXVII, 2012, pp. 187-201.

⁴ «Cullen's mind was essentially philosophic. Without neglecting observation, in which he was singularly acute, he devoted himself less to experiment than to arrangement and generalization [...] though not an experimentalist, Cullen's philosophy was strictly a philosophy of experience. The only speculation he recognized as legitimate was induction. To him theory was only the expression of an universal fact; and in rising to this fact, no one, with equal consciousness of power, was ever more cautious in the different steps of his generalization» (W. HAMILTON, *On the Revolutions of Medicine. In Reference to Cullen*, in *Discussions on Philosophy and Literature, Education and University Reform*, ed. by S. Tropea, Bristol, Thoemmes, 2001, I, pp. 238-256; quotation at p. 239).

⁵ On Cullen's scepticism see M. BARFOOT, *Philosophy and Method in Cullen's Medical Teaching*, in *William Cullen and the Eighteenth Century Medical World*, ed. by A. Doig, J.P.S. Ferguson, I.A. Milne, R. Passmore, Edinburgh, E.U.P., 1993, pp. 110-132.

⁶ For a pioneering analysis of the presence of Hume's philosophy in the History see D.F. NORTON, *History and Philosophy in Hume's Thought*, in *David Hume: Philosophical Historian*, ed. by D.F. Norton, R.H. Popkin, Indianapolis, Bobbs-Merrill Company, 1965, pp. XXXI-L. Norton was criticising a standard view then widely popular, according to which Hume wrote about history spurred by his love of fame, but actually giving up any philosophical ambition. This thesis is also accepted by M.A. STEWART, *Hume's Intellectual Development*, in *Impres-*

his *History* reached a larger public and appeared more palatable and suitable for students; for these reasons it could have been chosen as a model for popularising medical ideas in a classroom⁷.

Cullen was the only professor at the Edinburgh Medical School to teach history of medicine. In fact, the standard medical *curriculum* was shaped on the model adopted at Leyden and was based on Boerhaave's physiology. Courses also included *materia medica* or practice of physic, but no formal teaching on the history of medicine was given within the university.

Physicians were obviously not unaware of the historical fashion of the period, but they did not think it necessary to include history in the official *curriculum*. John Gregory, Cullen's colleague at the chair of Institutions of Medicine, suggested medical doctors read more widely, especially studying Latin and Greek literature and eventually finding insights in ancient medical literature.

It may be reasonably expected, that every gentleman should be acquainted with the history of the science which he professes [...]. A thorough knowledge of the history of physic, by discovering the sources of the maxims and remedies adopted in practice, will naturally make a physician suspicious of those which were introduced by false reasoning or superstition. Yet it must be owned, that some valuable remedies have sometimes been discovered in consequence of absurd theories. Another advantage attending a knowledge of the history of physic, is its bringing

sions of Hume, ed. by M. Frasca Spada, P. Kail, Oxford, O.U.P., 2005, pp. 11-58. On the contrary, a substantial coherence in all Hume's writings has been affirmed by C. SCHIMDT, *David Hume: Reason in History*, University Park, Pennsylvania Univ. Press, 2003, and R.L. EMERSON, *Hume's Intellectual Development: Part II*, in *Essays on David Hume, Medical Men and the Scottish Enlightenment*, Farnham, Ashgate, 2009, pp. 103-126. This thesis is also confirmed by Hume's juvenile *Historical Essay on Chivalry and Modern Honour* (ed. by J.P. Wright, in *Hume on the origin of «modern honour»: a study in Hume's philosophical development in Philosophy and Religion in Enlightenment Britain*, ed. by R. Savage, Oxford, O.U.P., 2012, pp. 187-209), showing that the interest in history was not a sort of second-best choice after the unsuccessful results of his philosophical career.

⁷ For a general outlook on the science of history in the Scottish Enlightenment see especially D. FRANCESCONI, *L'età della storia. Linguaggi storiografici dell'Illuminismo scozzese*, Bologna, Il Mulino, 2003; M.G.H. PITTOCK, *Historiography*, in *The Cambridge Companion to the Scottish Enlightenment*, ed. by A. Broadie, Cambridge, C.U.P., 2003, pp. 258-279; D. PERINETTI, *Philosophical Reflection on History*, in *The Cambridge History of Eighteenth-Century Philosophy*, ed. by K. Haakonsen, Cambridge, C.U.P., 2006, pp. 1107-1140.

us acquainted with some efficacious remedies which time and other accidents had thrown into disuse⁸.

Gregory also suggested that students not neglect mathematics, Latin, Greek and their native language in order to have access to any medical work. Rather than to university students, the advice seemed directed towards graduate medical doctors, needing to continually improve their practice and it was implicit that professional physicians would be able to devote little of their time to classical readings. History was therefore thought of as an erudite and occasional interest, not as an essential part of medical education.

On the contrary, Cullen systematically devoted a few lectures of his courses to the history of medicine. We know from several surviving manuscripts that he regularly dealt with history of medicine from 1770 and some drafts on the utility of the history of medicine confirm that he studied this topic for the whole of his academic career⁹.

II. *Cullen's history of medicine*

Cullen's lectures covered the period from Hippocrates to the French eighteenth-century physician Hoffman and sketched a history of medical theories, focusing on the key transformations in medical thinking, together with their consequences on treatments and healing. Cullen identified seven periods, each characterised by a specific medical idea and, more precisely, by a particular sort of compromise between theory and practice. I shall now focus on the first four – all related to ancient medicine – as examples of Cullen's discussion and use of historical narration.

First period (Greek medicine before Hippocrates): medicine emerged as a discipline strictly connected with religion. Illness was

⁸ J. GREGORY, *Lectures on the Duties and Qualification of a Physician* (1772), Philadelphia, Carey, 1817, pp. 88 and 89 f.

⁹ A sample of Cullen's courses was published in *The Works of William Cullen*, ed. by J. Thomson, Edinburgh, Blackwood, 1827, I, pp. 1-444; the section on the history of medicine is at pp. 365-415. For manuscript notes about the history of medicine see especially: National Library of Scotland, MS 3535, pp. 1-17; Royal College of Physicians of Edinburgh, CUL 2/2/8; National Library of Medicine, 2931004R; Glasgow University Library, MS Cullen 324.

mostly treated in temples; healing was much affected by religious beliefs and by a naive empiricism, based merely on «instinct, spontaneous cures, accidental errors, and random trial»¹⁰. Treatments relied on the natural force of the body to restore health; strictly speaking, physicians could not intervene, as they have no clear knowledge of the human body. The only means to built up a medical understanding was personal experience, but this was too poor and uncertain to establish a successful medical practice.

Second period (Hippocrates): philosophy contaminated medicine and gave birth to Dogmatism. The word «Dogmatism» is not used by Cullen as a polemical term, but refers to the role played by a theoretic account of the human body as a foundation of medicine. The outline of this dogmatic system was provided by Hippocrates' works, where we find «the most part of diseases distinguished, and names given to them; many of them had been carefully observed, and, in regard to them, many aphorisms or general conclusions had been formed; many nice and difficult operations of surgery had been practised»¹¹. Cullen admitted that Hippocrates' plan was not detailed, but was however the first attempt to combine personal experience and knowledge of general principles. The novelty of Hippocrates' tradition lay in its revealing the need to enlarge personal observation with the reading of medical books, in order to be acquainted with less frequent medical cases.

Third period: formal empiricism emerged in Egyptian medicine. It was an open criticism to dogmatism and was described as a kind of practice in the light of personal experience only, with no reference to non-personal knowledge. In the context of ancient medicine, this stubborn refusal of theory basically meant a refusal to admit the importance of anatomy. While this choice appeared senseless and absurd to Cullen and to any modern physician, anatomy was largely neglected in Egypt because it was considered impious to touch a dead body. In this case superstition forbade anatomical investigations and made anatomy itself a suspicious field of study. Therefore, Dogmatism was bitterly rejected and Empiricism became synonymous with an anti-theoretical interpretation of medicine.

¹⁰ *Works of William Cullen*, p. 371.

¹¹ *Ivi*, p. 375.

Fourth period (Asclepiades' methodic medicine): in the opulent Imperial Rome, patients were mostly rich and got used to luxury. They did not tolerate pain and physicians largely prescribed placebos. The result was the emergence of a «mild medicine», aiming to avoid strong treatments and to cure *jucunde*, gently and pleasing¹².

In sketching this history, Cullen's goal was not strictly informative: he passed rather rashly through the centuries and only described very famous or highly-controversial figures, such as Galen and Paracelsus. Moreover, he spent few words for medical practice and chemistry. His interests appeared mostly philosophical.

He traced a history of «opinions». His narration dealt with ideas about the method of medicine, its connection with other disciplines (anatomy, chemistry, surgery), the reactions and expectations of patients, the polemics among physicians, and finally the political control over medicine. Cullen's history of medicine was a truly non-material one, since practical aspects were completely neglected. Like Hume, Cullen thought that opinions were the key points of historical explanations, in so far as they produced radical changes in the understanding of medicine. Among opinions, prejudices and conventions were considered at length: anatomy was neglected in Egypt because of a religious belief and mild treatments spread in Rome because they were suitable to rich patients' expectations. Prejudices were not simply exposed: their origins were explained and their consequences described. They were part of the relevant opinions of the age and of the historical material to be analysed.

Like Hume, Cullen described history in terms of opposition of parties: not Whig and Tories, but empiricists and dogmatists, quarrelling over the fair use of a knowledge not based on personal experience. Both Hume and Cullen aimed to give an impartial and impassionate account, describing weak and strong points in both positions¹³. Cullen thus noted that Hippocrates, the father of Dogma-

¹² Ivi, pp. 370-384; the history continued with the fifth period (Galen), the sixth period (Paracelsus and chemical medicine), and the seventh period (iatrochemistry, iatromechanics, Harvey).

¹³ «Extremes of all kinds are to be avoided; and though no one will ever please either faction by moderate opinions, it is there we are most likely to meet truth and certainty» (D. HUME, *History of England*, ed. by W.B. Todd, Indianapolis, Liberty Fund, 1983, VIII, p. 323). On Hume's impartial history, see especially N.

tism, was more successful in proposing a plan and a method for the future enlargement of medical science, rather than a concrete improvement in common practice. Moreover, it was pretty difficult to follow closely Hippocrates' ideas: his works were «extremely dissimilar and unequal; they present us sometimes with reflections which discover much sagacity, but they are hardly any where well connected or digested, and very often discover a childish frivolity»¹⁴.

Finally, any dogmatic plan of medicine required constant references to other sciences, and especially to anatomy, which were still embryonic in Hippocrates' time, and therefore almost useless. Finally, Cullen reported a case of excessive dogmatism:

from theory [Erasistratus] avoided bleeding and purging, two of the most powerful remedies then known, and at all times since acknowledged to be such. This is always a strong mark of the abuse of theory, when it excites too strongly either attachments or prejudices with regard to general remedies¹⁵.

While Cullen endeavoured to present himself as an impartial spectator of the dispute between empiricists and dogmatists, he indirectly revealed why it was important to study the quarrel. He recognized the fallaciousness of medical systems not grounded on careful observation and experience and, in doing so, he was implicitly criticising modern dogmatism, e.g. iatrochemistry and iatromechanics, whose explanations started from a theoretic principle and not from well-ascertained facts.

On the other hand, pure empiricism, that is a complete absence of theory, was equally harmful, firstly because it was limited to the physician's personal experience. Secondly, the plan of a pure empiricism was somewhat deceitful, as no medical fact could be interpreted «without» theory and empiricism then led to an explanation in the light of a poor theoretical background.

III. *Hume's and Cullen's Histories*

While dogmatism did not afford a reliable guide, it was however

PHILLIPSON, *Hume*, New York, St. Martin's Press, 1989.

¹⁴ *Works of William Cullen*, p. 376.

¹⁵ *Ivi*, p. 377.

conducive to the acquisition of a good method. Some forms of reasoning are in fact unavoidable and therefore reasoning must be clear, sound and safe¹⁶. Reflection on personal experience is too limited to allow a full development of medical reasoning, therefore Cullen recommended to turn to history, and especially to medical systems proposed in the past, in order to discover their strictures. The study of the history of medicine should train the students' mind and foster critical reasoning.

According to Cullen, the study of the theory of medicine was especially useful, because systems afforded general and comprehensive ideas of the animal economy, from which students could draw consequences, developments, and possible treatments. Ancient medicine was not supposed to teach eternal truths or to warn against common mistakes, but to provide a further field of discussion and to maximise the occasions to build up a sound method of reasoning before entering real medical practice.

Therefore, according to Cullen, history of medicine was not *magistra vitae*, did not teach directly what to do and what to avoid, but afforded material for discussion, for raising doubts and questions. In Hume's words, history «improve[d] the understanding»¹⁷, since it gave further occasions to foster logical skills; it enlarged the field of study, like an «enlarged mirror» presenting multiple images¹⁸. History was not supposed to be a mere collection of facts – this task was best suited to antiquarians – but historical analysis consisted in an interpretation and implied therefore a degree of reasoning and reflection. History was a philosophical activity in so far as it constantly required the use of the relation of cause and effect, seeking for an explanation of facts and transformations. History was therefore a distinctive intellectual exercise: through the relation of cause and effect, it connected ideas which were not similar and did not originate in the same time or place. The cultivation of history broadened the understanding because it created new relations between facts, which would not have been immediately connected¹⁹.

¹⁶ Ivi, p. 417.

¹⁷ D. HUME, *Of the Study of History* (1741), in *Essays Moral, Political, Literary*, ed. by E.F. Miller, Indianapolis, Liberty Fund, 1987, pp. 306-311: p. 307.

¹⁸ HUME, *History of England*, ed. cit., VII, p. 150.

¹⁹ Christopher J. Berry has argued that the emphasis on uniformity and regula-

Moreover, Cullen encouraged students to formulate their own personal systems, extracting from medical authors the ideas they found most convincing and re-arranging them in an original form. Cullen was aware that the product might not be particularly attractive, as students are seldom clever enough to create a good system. However, once again he stressed the importance of the process of construction of a personal system: the goal was not to make discoveries, but to become aware of the fact that all medical theories are provisional and are acceptable until they receive too many strong objections. This exercise on medical theory should teach that any conclusion is potentially wrong; therefore the acquaintance with history should persuade students that no system is completely unquestionable and that some weak points in a system do not imply that medical theory is completely useless.

According to Cullen, the study of history prepared students for a correct interpretation of facts, because it excluded two common mistakes, excessive confidence or absolute lack of confidence in theoretical systems. In Hume's words, history taught that all human institutions are precarious and continually changeable²⁰. Human products did not necessarily evolve from a worse towards a better model: Hume and Cullen could agree on the fact that history showed no signs of constant and unavoidable improvement²¹. On the contrary, according to both history showed that progress emerged from the constant revision of existing opinions and beliefs.

If Cullen's lectures well illustrated his belief that history allowed a good exercise to improve the understanding, it is reasonable to think that he also agreed on the other two functions Hume attributed to history: to amuse the fancy and to strengthen virtue.

When writing that history is amusing reading, Hume meant that it

city in the course of nature and of human affairs confirm the close affinity between Hume's philosophical and historical writings (C.J. BERRY, *Hume, Hegel and Human Nature*, The Hague, Nijhoff, 1982, pp. 57-68). On Hume's opposition between historians' and antiquarians' tasks see also E.C. MOSSNER, *An Apology for David Hume, Historian*, «PMLA», LVI, 1941, pp. 657-690.

²⁰ «... mutability that has attended all human institutions» (HUME, *History of England*, ed. cit., II, p. 304). On the historical sources of sceptical philosophy in early modern philosophy and in Hume see R.H. POPKIN, *Skepticism and the Study of History*, in *David Hume: Philosophical Historian*, cit., pp. IX-XXI.

²¹ HUME, *History of England*, ed. cit., I, p. 64; III, p. 306; IV, p. 37; VII, pp. 104-105; VIII, p. 63.

was palatable for the general public and not for scholars only. Analogously, Cullen thought that history was suitable for young students, as it was instructive, but not too specialist. He presented history as a light exercise in reasoning, from which non-physicians could also profit and learn.

Moreover, Hume wrote that history strengthened moral virtue, since it was an occasion to examine human nature and to exercise humanity, in order to practice moral sense. Therefore, history provided a sort of training for moral understanding as well²². Likely, history was not only a theoretic exercise, but also had practical implications, as it allowed people «to distinguish what is tolerably palpable and applicable, from what is speculative and uncertain»²³. History thus mastered a sort of medical wisdom, a capacity to recognise quickly wild hypotheses or quackery and to opt for a more reliable treatment. Therefore, physicians could become not only more learned, but also wiser, because they soon became aware of the possible consequences of a treatment. Echoing Hippocrates' aphorism – *primum non nocere* – Cullen warned students that skilful physicians could thoroughly foresee the evolution of a disease or the effects of treatment only if they had previously examined a number of cases, all different from one another, that personal experience could not afford. The intellectual abilities practiced in history had a practical result, as they allowed individuals to avoid useless or harmful treatments. Far from being an erudite interest, history emerged as a necessary part of real practice.

Cullen thus suggested the study of history aiming to acquire a cautious and reflective approach and to be warned against the risks of false explanations or fancy treatments. Cullen could have thought that the goal of history was «a necessary preparative» to the study of medicine,

by preserving a proper impartiality in our judgments, and weaning our mind from all those prejudices, which we may have imbibed from education or rash opinion. To begin with clear and self-evident principles, to advance by timorous and sure steps, to review frequently our conclusions, and examine accurately all their consequences [...] are

²² On history as a literary genre especially suitable to exercise humanity see M.S. PHILLIPS, *Society and Sentiment. Genres of Historical Writing in Britain, 1740-1820*, Princeton, P.U.P., 2000, especially pp. 62-73.

²³ *Works of William Cullen*, p. 435.

the only methods, by which we can ever hope to reach truth, and attain a proper stability and certainty in our determinations²⁴.

In this passage from the first *Enquiry*, Hume meant that the positive result of scepticism was the habit of carefully analysing ideas before accepting them; analogously, for Cullen, history provided a cautious attitude towards medical theories. They both believed that a truly philosophical – that is critical – approach could be developed through history and especially through a critical exercise on opinions and ideas from the past. This training was part of the personal education of students, as well as of the instruction of the general public. Following Bolingbroke's famous definition – history is philosophy teaching by examples – both Hume and Cullen popularised philosophy through history and contributed to the dissemination of a historical sensitiveness. Cullen's emphasis on history and his teaching in university classrooms allowed Hume's scepticism to reach a wide audience, a goal which Hume's philosophical works had not achieved.

ABSTRACT. – This paper explores the parallelism between David Hume's ideas about history and the lectures on the history of medicine delivered by William Cullen from the 1770s. While history was a popular and widely read genre in eighteenth-century Britain, history of medicine was mostly neglected or considered no more than mere erudition. On the contrary, Cullen thought of history as an essential part of the medical curriculum: he aimed to provide students with a chance to test their intellectual faculties, to analyse medical issues in a historical perspective, and to practise a sound method for medical investigations. In doing so, he interpreted history as an occasion for «improving the understanding», as suggested by Hume's famous essay *Of the Study of History* (1741).

²⁴ D. HUME, *Enquiry concerning Human Understanding* (1748), ed. by T.L. Beauchamp, Oxford, O.U.P., 2000, p. 112.