

## Oaths And Humours: The reception of Hippocrates

In 1801 Napoleon Bonaparte, First Consul of the French Republic, presented to the Montpellier School of Medicine, one of Europe's leading medical institutions, a bust of Hippocrates, at a time when his theories were being discredited and cast into permanent desuetude (Gourevitch 2003). This mark of reverence coincided with the beginning of the demise of his most prominent theory: humourism. Following Hippocrates's life, the story of the reception of his ideas, and of him as a man, has been atypical, both in magnitude and in form. What inferences can we make about Hippocrates's reception, and from that about classical reception generally?

Two of Hippocrates's ideas managed to influence medical spheres significantly beyond his time—famously his oath, i.e. the Hippocratic oath, and humourism (otherwise known as the theory of the four humours). This essay aims to analyse why each was received, and to explain the implications that this investigation has for reception as a whole. Whilst both ideas were used by doctors and medical professionals for various periods in the millennia following his life, each was done so for fundamentally different reasons. Humourism was adopted because of the perceived value inherent to the theory, whereas the Hippocratic oath was adopted due to its classical roots, and the validation that this brings to an agenda. One is a merit-based reception, and the other is a validation-based reception. However, one rose in popularity while the other began its path to demise in the 18th century, due to the same cause. In such a shift, a key point about reception is highlighted: whilst it may be natural to assume that an increased interest in classical ideas would result in an increase in adoption, as in the Renaissance, during which everything classical was in vogue, this is not always the case. An increased interest in classical ideas, although it often does lead to more use, can also lead to increased criticism of them, and their supplantation by modern ideas.

Not a great deal is known about Hippocrates as a man, besides coming from the island of Kos, and living c. 460 – c. 377 BCE. In fact, the sixty or so works comprising what is now called the 'Hippocratic Corpus', may not have all been composed by one man, but instead by a group of Hippocratic physicians (Porter 1997). In spite of this lack of certainty, the ideas from the Hippocratic Corpus and the Hippocratic tradition managed to spread widely in time and place.

Today, the Hippocratic oath is widely used, albeit in a very revised form, but humourism is consigned to history and pseudo-science. However, four centuries ago, it was a very different story: the Hippocratic oath was all but unheard of, and humourism formed the spine of Western medicine, as it had done for two thousand years. The transition from use to disuse for Hippocrates's theory of the four humours and the converse transition for his oath both occurred at the same time: the late 18th century to early 19th century, and not coincidentally.

Humourism as the foundation for medical theory existed not only through a huge amount of time, but also throughout a large proportion of the known world during that time. Its influence permeated to India and Pakistan, as Yunani medical theory, shaping Islamic medicine in the Middle East, through the 'golden age of Islam', and of course formed the back-bone for all medicine in Europe. Its tenure as the leading medical theory spanned from the Romans, especially after Galen, through the Middle-Ages, all the way up to 18th century Europe. It took until 1543 for it to be first seriously questioned, by Andreas Vesalius in *De Humani Corporis Fabrica*, and then more objections were present in the ensuing centuries, at last being abolished officially in 1858, following rapid progressions in pathology, and, specifically, cellular pathology. For all of this time and in all these places, the theory of the four humours was used in medical spheres purely because of the merit that it was perceived to have as a medical theory: a theory that could explain, diagnose, and treat illness.

It was accepted that disease stemmed from an imbalance of the four humours: black bile, yellow bile, phlegm and blood. The theory explained health and disease in terms of balance, imbalance or corruption of these humours. Diagnosis could be formed from this theory as there were various symptoms indicating the origin of the imbalance. From such diagnosis, treatment could be offered, by rectifying the imbalance; many substances and actions were supposed to affect the balance of humours. Doctors could prescribe a new diet, as well as practices such as blood-letting, purging through emetics, and sweating. Humourism did seem to best explain illness; it was hard to falsify the theory.

Moreover, in spite of its many criticisms during the scientific revolution, no alternative medical theory, which could provide a method of treatment, was presented. There was an emphasis on the individual, as the theory proposed that each person has their own unique balance of humours. These humours were also linked to temperament: choleric, melancholic, phlegmatic, and sanguine; these are adjectives still used today. It was superficially demonstrable: when blood separates, it does indeed separate into four constituent parts, in the colours of the four humours. And once the theory had been in employ for a substantial amount of time, its position was only solidified, especially after receiving endorsement from the Catholic church. But crucially all of these factors led to medics using in the theory because they believed it to be the best theory. The reception of humourism was purely merit-based. In other words, humorism was used as medical theory because it was perceived to have the most value with regard to explaining illness.

The history of the Hippocratic oath, on the other hand, is very different, yet events important to humourism occurred at very similar times to the oath. Not longer after the death of Hippocrates, the Hippocratic oath ceased to be used, and still was not often cited by ancient scholars. It took until the 1500s for its re-discovery, with its first recorded use in 1508 at the University of Wittenberg, around the same time as Vesalius' objections to humours, and another two centuries for it to be translated into English. Even after 1508 there is scarce mention of it, until the mid-18th century, after which it begins to be discussed more, and used in the medical profession around the same time. Notably, this increase in use for the oath and

the opposite of humourism happen simultaneously. Since the mid-18th century the Hippocratic oath has been taken by trainee medics, and continues to be used now, across the world.

It begins by swearing by the god Apollo and Asclepius and famously declares ‘first, do no harm’, although the Greek actually says “ἐκτὸς ἐὼν πάσης ἀδικίης ἐκουσίης καὶ φθορίας”: ‘I will abstain from all intentional wrong-doing and harm’. It also tells medical professionals to share knowledge, and allow others to do what they specialise in, and to put the patient first, along with outlining doctor-patient confidentiality. Much of it however is quite specific and technical: no abortions, no euthanasia. Many of these sections are no longer used, and the modern day ‘Hippocratic oath’ bears little resemblance to the one written by Hippocrates. But the fact that the title ‘Hippocratic oath’ now belongs to an oath very different to the original (also in the 18th century a highly edited version was used), highlights a key point: the oath was chosen primarily because of the validation which the ancient connection provided, rather than the actual merit of the content of the oath. The classical idea in this case—the Hippocratic oath—had a reception which was validation-based.

In the 18th century it was decided that, instead of drawing up their own oath for medical students to take, the leading professors of medicine would adapt and adopt the Hippocratic oath, since it was estimated that an oath from antiquity would have a greater effect on medical students than a modern one. Even though they could have drawn up an oath tailored to their needs, i.e. one with greater merit, provenance aside (their own oath would cover everything they wanted it to), they opted for the Hippocratic oath. It was perceived to hold authority, purely because of its classical connections; and perceived authority translates to actual authority. Crucially, the oath has not ever been legally binding, and is only a matter of conscience. Medical students in the 18th century were more likely to heed the command of the Hippocratic oath than one sprung from modern contrivance.

The Renaissance produced two events significant to both the Hippocratic oath and to humourism. In Italy, Andreas Vesalius produced compelling evidence against the theories of Hippocrates and Galen, meanwhile in Germany, scholars uncovered the Hippocratic oath once again. Both events occurred in the 16th century, in the Renaissance, a period of history during which the reopening of the classical world, and its literature, art, philosophy, was encouraged. But despite a similar movement, which promoted reading and investigating the classical world, driving both parties in both countries—Vesalius and the scholars—one of Hippocrates's ideas was doubted seriously for the first time, and another rediscovered. This shows that an increased interest in the classical world does not mean that classical ideas are always taken on and hold new influence, nor conversely that they are always discredited and lose influence, since in this case, two ideas of the same man began very different trajectories, all due to the same principle of classical curiosity.

After these two events however, there was not much obvious change to the medical world as a result. Even after William Harvey’s harsh criticism of Galen, disproving his theory of the blood and heart in *De Motu Cordis* (1628), and thus bringing humorism under scrutiny,

it still formed the basis for medical thought and practice for centuries more, underpinning practices such as blood-letting which continued into the 19th century. Humourism endured the first few centuries of the Scientific Revolution, unlike Aristotelian physics and Socratic-Platonic philosophy, because of the relation to medical treatment from medical theory. Although strong criticisms were made, no strong alternative physiological theory, from which doctors could treat patients was formed. It was much easier for doctors to believe in humourism in spite of its flaws than to tell their patients that they had very little idea about how to best treat them. And the Hippocratic oath, although edited to fit Christian teaching, was not widely published, and had very little influence until much later. Despite neither Vesalius's criticisms nor the scholars' discoveries having huge impact on prevailing medical theory, both were land-mark events of importance for each of Hippocrates's ideas, and set in motion the decline of one and the rise of the other.

For both these ideas, the next important period was the 18th century. During this time, we see the Hippocratic oath take off in use, and the opposite for humourism. Medical schools began to require trainee doctors to swear the Hippocratic oath, and medical professionals began to use Hippocrates himself to add importance to their various perspectives on prognostics, diagnostics, and therapeutics, whether Hippocratic theory actually supported them or not. His prestige, verging on reverence, arguably peaked in 1801, when, as mentioned, a bust of Hippocrates was presented to the School of Medicine in Montpellier by Napoleon Bonaparte. While this was occurring, Hippocrates's theory of the four humours, which for millennia had been his most prevalent idea, perhaps *the* most prevalent medical idea, was in steep decline, soon to be discredited completely. Yet the Hippocratic oath was increasingly being taken across Europe.

It is not a coincidence that this occurred, and the linking factor is the growth of hospitals in the 18th century, and importantly the voluntary hospital movement of the 1710s and 1720s. These were founded and paid for often by secular organisations or wealthy private donors; for instance, Thomas Guy setting up Guy's Hospital in London. Hospitals soon became not just a place for the sick to reside, but also the home of medical research and of teaching to trainee doctors. Having both focusses together brought about rapid advances in medical theory and scientific discovery. Patients were separated into wards based on ailment, examined, and after death often dissected by students of medicine.

Before this shift to voluntary hospitals, the only medical care that was given was by private physicians directly to wealthy individuals or by monks in monasteries. In both cases there is motivation for the 'doctor' to care for the patient as best they could. For the private physician benefits if they treat their patient well, since they get paid more, and a living client can continue to employ a physician. And the monk, in serving God, is likely to offer the best treatment he could, as this is in accordance with the Bible's preaching; Jesus was a healer, and the message of helping the neighbour and the sick frequently crops up. Both types of 'doctor' here are strongly disposed to help their patients as much as possible and to the best of their abilities. But after the emergence of voluntary hospitals, there was a different state of affairs. The new practitioners were not being paid by their patients, and had no motivation to

treat to their best ability, beyond their own moral compass, and the enlightenment spirit of charity.

The Hippocratic oath fills the motivational gap. A means by which new medical students would be likely to treat each patient optimally was required. Thus it was decided that some sort of oath was necessary. As mentioned, a new oath could have been drawn up by the existing leading practitioners which incorporated everything that they needed and was relevant and applicable to the day. But instead, they decided to use the Hippocratic oath, in revised form. The reasoning behind this was that if the oath came from an ancient source, and a respected ancient source, (Cicero and Galen admired Hippocrates, and some ancient authors even claim to trace Hippocrates's heritage back to, paternally, Asclepius and, maternally, Heracles) then it would be more likely to have effect on the medical students. Primarily though, it was the fact that Hippocratic oath comes from the ancient world. Anything that is the product of antiquity has a perceived importance in society, and this equates, for the medics in the 18th century, to the perceived importance of Hippocratic oath, which is what makes it effective, and why it was used.

The irony, in respect to Hippocrates and his reception, is that this effect—that anything ancient is regarded as important and worthwhile—is what kept the medical world ignorant for so long, since they accepted Hippocrates's theories as truth with little questioning, and yet the same effect that they employed with his oath.

The growth of hospitals not only brought about the use of the Hippocratic oath, but also the demise of humourism. Patients of similar symptoms were placed together in wards. Since there was now a far greater number of cases, and could be examined in groups, more scientific conclusions could be drawn. The medical professors and students, on dissecting their corpses, began to realise that the patients from one ward all had lesions of the same organ, and drew the link between the similar symptoms and the diseased organ.

An example of this is tuberculosis: it was first described by Hippocrates as *phthisis*, and called consumption in the 18th and early 19th century, due to the way that it caused the body to waste away. However in the early 19th century, René Laennec managed to draw the link between diseased organs and symptoms, as described (Daniel 2006). Notably, Laennec was a chair at the Hôpital Necker, which was established in 1778, a product of the expansion of hospitals in Europe. Laennec linked the pulmonary lesions, which were found situated on the lungs of autopsied tuberculosis patients, with symptoms of tuberculosis: coughing up blood, weight loss and high temperature. Before this, treatments based on humourism were used: blood-letting, the administration of purgatives and expectorants, and exercise. The conclusion was drawn by Laennec that the respiratory symptoms common to tuberculosis patients were caused by lesions on the lungs, rather than an imbalance in humours. This discovery is represented in the change of name from 'consumption', which describes illness to the whole body, to tuberculosis, which is a direct reference to the pulmonary lesions (tubercles). This shows linguistically the new understanding that symptoms are caused not by an issue with the whole body and its humoral balance, but with a specific organ. It was

predominantly in France that advances in medical understanding of this type occurred; following the revolution, there was a greater expansion of hospitals in France than elsewhere in Europe, in order to serve the poor and to train doctors for the revolutionary and Napoleonic armies.

In this way, modern pathology was born. The cause of illness was not an imbalance in humours, but a diseased organ. More and more evidence of this sort, along with discoveries made by microscope, began to discredit humourism. By the turn of the century, humourism had greatly lost favour, and in the following decades would lose favour all together. Its existence as medical theory completely and finally came to an end in 1858 with Rudolf Virchow's *Cellular Pathology*. It was through the explosion of hospitals resulted in the decline of humourism.

The new hospitals of the 18th century brought one of Hippocrates's ideas to the fore, meanwhile pushing another in the opposite direction, and within a century the prevalence of each had swapped completely. The reception of each has been important for medical thought ever since Hippocrates lived, but the nature of their receptions has been different.

The theory of humourism's reception was the type we most often see: using an idea for the value it seems to have. This is why themes from the *Odyssey* and elsewhere find themselves in literature today; they are ideas that are seen to have artistic and literary merit, irrespective of their provenance. But the Hippocratic oath was used in the 18th century, and is used today, because it came from the ancient world. In the same way as many government buildings are classical in style, because of the connections to Athenian democracy. The doctors could have drawn up a new oath that would have more inherent value for them, but the Hippocratic oath was used because the classical connections made it seem important. So the two types of classical reception are highlighted: one from the perceived merit of an idea, regardless of classical links; and one from primarily the relation it has to the classical world.

However it is not always as clear cut as the Hippocrates scenario presented. In many cases, the two reasons for reception merge, and it's hard to see where one ends and the other begins. The reception of Roman law as *Ius Commune* from the 16th to 19th centuries in Europe was indeed mostly, but not entirely, merit-based, but whether Latin remains ubiquitous in our legal system purely because of the merit of the language is far more dubious. The notion of 'Pax Britannica' lies in the grey area also. During the birth of the *Republique* in the 18th century, Roman literature and imagery pervaded the contemporary French revolutionary culture: the paintings of Jacques-Louis David; the revolutionaries who, in the words of Karl Marx (1898), 'performed the task of their time in Roman costume and with Roman phrases, the task of unchaining and setting up modern bourgeois society'; and the manifestations of the huge influence the Roman Empire had over Napoleon, notably the commission of the Arc de Triomphe, artwork such as Andrea Appiani's *Apotheosis of Napoleon*, and the new Roman-style military. The boundary between merit-based reception and validation-based reception that a classical provenance provides is unclear in this case. The ideals and structure of the Roman Empire seem to have appealed to Napoleon, by their

merit alone; the ostentatious display of them, however, appears to be sourced from an attitude more in line with the latter form of reception: to validate Napoleon's actions and ambitions.

This is indeed very similar to the aforementioned installation of the bust of Hippocrates at the Montpellier School of Medicine. Initially, Hippocratic vitalism and the Hippocratic tradition, which, as Fielding Garrison (1966) notes, is essentially the spirit of 'clinical inspection and observation', appealed in Montpellier. But vitalism in Montpellier was not too similar to Hippocrates's 'vitalism'; it was just the case that the Montpellier vitalists managed to associate their theories with the ancient physician. As a consequence, a bust was installed by Napoleon to represent the fact that their theory and attitude related to those of Hippocrates, in order to validate their ideas. Much like Napoleon's reception of the Roman Empire, one idea is received in different ways and for different purposes, by different parties, and the reception manifests and is presented in different ways accordingly.

Returning to humourism and the Hippocratic oath, we can assess, in light of the other investigations, the proposition that humourism was received purely for its merit and the oath purely for the validation which its ancient provenance provides. There is certainly a strong basis for this argument, but consider the following: humourism, even after serious criticisms had been made, continued as the theory upon which treatment was offered, partly because its ancient roots allowed patients to trust in it. And the Hippocratic oath does have elements of great value to the medical profession, and so its reception surely did have aspects of merit. In this, we see that even the examples which seem perfectly to illustrate the two types of reception described, have aspects or details where its not black and white. Most examples of reception occupy the grey area; the distribution lies on a spectrum. Humourism and the Hippocratic oath demonstrate elegantly the ends of this spectrum, highlighting how classical ideas are received based on either inherent merit or based on the *perceived* importance of ancient ideas and the uses that this connection can offer. The two ideas of Hippocrates both had prominent receptions, yet one was merit-based and the other was validation-based. It is an example where one factor impels the demise of one idea, and simultaneously the rise of another, both of one man, who lived 2,500 years ago.

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