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THEORICA ET PRACTICA: HISTORICAL EPISTEMOLOGY AND THE RE-VISIONING OF THIRTEENTH AND FOURTEENTH-CENTURY MEDICINE

Abstract: *Positivist medical historians, guided by the savoir of modern western biomedicine, have long depicted medieval medicine as an aberration along the continuum of scientific and medical progress. Historical epistemology, founded in the ideas of Cavailles, Foucault, Davidson, and Hacking, however, allows the historian to disrupt this false continuum and to unchain medieval medicine from modern medicine. Postmodernist approaches, such as those sourced in Lyotard, Barthes, and Derrida, allow the historian to further deconstruct medieval and modern medical discourse, revealing a multitude of narrative lenses spinning around biomedical and biocultural strands. In liberating these two medical systems and setting them within the distinct historical and epistemological contexts that both shaped and were shaped by them, the historian can revision the theories, practices, and culture of medieval medicine without having to anachronistically justify them according to modern medical discourse.*

Keywords: *Foucault; medieval medicine; savoir; narrative; Evidence-Based Medicine (EBM)*

Theorica et practica: historická epistemologie a re-vize lékařství třináctého a čtrnáctého století

Abstrakt: *Pozitivističtí historikové lékařství, vedeni savoir moderní západní biomedicíny, po dlouhou dobu líčili středověké lékařství jako odchylku z kontinua vědeckého a medicínského pokroku. Historická epistemologie, založená na myšlenkách Cavaillese, Foucaulta, Davidsona a Hackinga, však umožňuje rozrušit toto falešné kontinuum a odpoutat středověké lékařství od moderní medicíny. Postmodernistické přístupy, jako ty jež vycházejí z Lyotarda, Barthese a Derridy, dávají historikovi další možnost dekonstruovat středověký a moderní medicínský diskurz a odhalit množství narativních optik, jež se prolétají kolem biomedicínských a biokulturních vláken. Tím, že tyto dva medicínské systémy osvobodí a zasadí je do odlišných historických a epistemologických kontextů, jež je utvářely a zároveň jimi byly utvářeny, může historik re-vidovat teorie, praktiky a kulturu středověkého lékařství, aniž by je musel anachronisticky ospravedlňovat vůči modernímu medicínskému diskurzu.*

Klíčová slova: *Foucault; středověké lékařství; savoir; narativ; medicína založená na důkazech (EBM)*

BRENDA S. GARDENOUR
Saint Louis College of Pharmacy
4588 Parkview Place
Saint Louis, MO 63110, USA
email / bgardenour@stlcop.edu

Theorica I: Foucault and the foundations of historical epistemology – truth, knowledge, power, and the history of medicine

Arnold I. Davidson, in "On Epistemology and Archaeology: From Canguilhem to Foucault," qualifies historical epistemology as a "methodologically distinctive strain of the history and philosophy of science," one rooted in the philosophical traditions of Gaston Bachelard, Francois Delaporte, Louis Althusser, and Michel Foucault.[1] Amorphous in both theory and practice and therefore difficult to define categorically, historical epistemology is nevertheless hallmarked by an awareness of the diverse philosophies–and through them the spoken and unspoken assumptions–of a given historical moment and the relationship of these philosophies to historical phenomena, in this case the theory and practice of medicine. In this way, historical epistemology is a multi-dimensional pursuit that examines the deeper structures of abstract knowledge in conjunction with the phenomenological life worlds that it both shapes and reflects,[2] and then sets these reciprocal forces in motion through historical epochs so that we may see change over time. Foucault's work in the history and philosophy of science illuminates these relationships, bringing distant images into sharper relief and clouding those that we have come to accept as true; although problematic, Foucault's approach to history provides the historian with powerful conceptual tools for "doing" historical epistemology.[3]

Foucault's ideas were in constant motion, shifting and rematerializing in a variety of forms from *Madness in Civilization* and *The Birth of the Clinic* to *The Order of Things*, *The Archaeology of Knowledge*, and *Discipline and Punish*, and so it is impossible to formulate from them a unified system; nevertheless, within and between these texts an ascending hierarchy of knowledge can be discerned, with the first level being epistemology, the second being archeology, and the third being genealogy. For Foucault, epistemology is comprised of the theoretical structures, or *epistemonomique*, the conceptual material, or *epistemocritique*, and the fields of application for these structures and materials, or *epistemologique*, within the discourse

[1] Arnold I. DAVIDSON, *The Emergence of Sexuality: Historical Epistemology and the Formation of Concepts.* Cambridge, MA: Harvard University Press 2001, p.193

[2] Edmund HUSSERL, *The Crisis of the European Sciences and Transcendental Phenomenology.* Evanston: Northwestern University Press, 1970 (1936).

[3] In their introduction to *Reassessing Foucault,* James COLIN and Roy PORTER write that "No one should approach Foucault in the expectation that his work contained, potentially at least, an interpretation, a solution, of every historical problem, or even a methodology or a tool-kit." *Reassessing Foucault.* London: Routledge 1998, p. 5.

of a specific scientific discipline. In the context of thirteenth and fourteenth century academic medicine, the *epistemonomique* would be Aristotelian categories and qualities, as well as the theories of sympathies, antipathies, and humors that form the basic foundations of medical theory. The *epistemocritique*, then, would be practical and concrete medical knowledge, much of which was predicated on these theories, and found in treatises such as Rhazes' *Almansoris*, Avicenna's *Qanun*, and Ibn-Jazzar's *al-Musafir*, a medical text that circulated in the Latin west under the guise of Constantine's *Viaticum*.[4] The ways in which these theoretical concepts might operate in the practice of medicine, for example who should receive treatment and how therapy should be applied, constitute the *epistemologique*. These three epistemological elements work together within the discipline of medieval academic medicine to determine medical "truth or falsity," a concept related to Foucault's "will to truth," in which a given dialogical concept is rational and valid, and therefore either true or false, or irrational and invalid, and therefore monstrous.[5]

If epistemology is primarily concerned with intradisciplinary *connaissance*, archaeology, the next level in the hierarchy of knowledge, moves beyond disciplinary boundaries to examine the overarching assumptions shared by several disciplines. These assumptions, which Foucault termed *savoir*, or knowledge, are the "rules that determine what kinds of sentences are going to count as true or false in some domain."[6] *Savoir*, then, exists beyond "truth or falsity" and yet structures the possibilities for "truth or falsity" in overlapping discursive regimes. Digging through historical texts to uncover these deeper structures, what Ian Hacking calls "depth knowledge," reveals the unspoken language that determines the shape of discourse and guides the possibility of scientific inquiry and interpretation.[7] In other words, *savoir* is not the "web of specific sentences that were uttered" in any given historical period, but "what made it possible for those sentences to be uttered (largely regardless of who uttered them)."[8] For example, the

[4] For a general overview of these texts, see Nancy SIRAISI, *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice*. Chicago: Chicago University Press 1990.
[5] Michel FOUCAULT, *The Order of Things: An Archeology of the Human Sciences*. New York: Vintage 1994.
[6] Ian HACKING, "The Archaeology of Michel Foucault." In: *Historical Ontology*. Cambridge, Massachusetts: Harvard University Press, p. 77.
[7] *Ibid*.
[8] *Ibid*. For Foucault's development of these ideas, see: *Madness and Civilization: A History of Insanity in the Age of Reason*. New York: Vintage 1965; *The Birth of the Clinic: An Archaeology of Medical Perception*. New York: Pantheon 1973.

archaeology of the thirteenth- and fourteenth-century academic milieu, which held that ancient textual authorities such as Aristotle could not be questioned, that Aristotelian logic was the highest form of proof and truth, and that Aristotelian modes of discourse were valid above all others, delimited the possibilities of truth and falsity across several disciplines, including theology, natural philosophy, law, and of course, medicine. Aristotelian norms and assumptions determined the shape of discourse in each of these fields; in the domain of medicine, the deep knowledge that Aristotelian methods "proved truth" led to a medical discourse that was predicated on Aristotelian categories and logic and that favored the use and production of Aristotelian-based medical texts such as the Galenic Corpus, Avicenna's *Qanun*, and their progeny. The taxonomy, pathology, and cure of disease, as well as the qualities of *materia medica*–the discursive facts of medieval medicine–were shaped and validated by Aristotelian layers of discourse current in the thirteenth- and fourteenth-century university. This archaeology not only determined what was true and valid, but also what was false and invalid, namely those healing practices or medical texts that did not fit into the Aristotelian schema.

Foucault argues that archaeology, or deep knowledge, informs and shapes scientific discourse; as such, it is at the level of archaeology that the historian can unearth the underlying modes and structures that catalyze scientific change. Heroic scientific inquiry and discovery in and of themselves do not drive the progress of scientific knowledge. Instead, it is the *savoir* behind the sciences that shifts, expands, and contracts the possibilities for truth in discourse and allows for new ideas to compete with and, in some cases, replace older ones.[9] By focusing on the deeper knowledge behind discourse rather than the acts of individuals, it is possible to avoid both objectivist and positivist approaches that tend to flatten the history of medicine into a grand narrative leading from the genius of Hippocrates to the glorious now of western biomedicine, as if all were neatly pre-arranged. Historical epistemology deconstructs such a narrative, allowing truth and falsity, success and failure, to have equal voices in the complex discourse of

[9] The idea that scientific concepts are replaced by new ones and, in effect, cease to exist was introduced by Bachelard and elaborated upon by Jean CAVAILLES in his *Sur la logique et la théorie des sciences*. Paris: Presses Universitaires de France 1960. Discontinuity theory in historical epistemology will be discussed at length below. See also DAVIDSON, *The Emergence of Sexuality*, p. 129, and David Jalal HYDER, "Foucault, Cavaillès, and Husserl on the Historical Epistemology of the Sciences." *Perspectives on Science*, vol. 11, 2003, no. 1, p. 119.

diverse historical moments, while exploring both ruptures and continuities within and between discursive regimes.

By way of example, let us briefly examine the heart as concept in late-medieval and early modern medical and cultural contexts. Thirteenth- and fourteenth-century medical discourse was guided by the textual authority of Galen, the philosophical authority of Aristotle,[10] and the belief that the human body was open to the spiritual and physical macrocosm of which it was an integral part. In the second century CE, Galen conducted a broad range of animal vivisections that served as the foundation for his treatise, *De Usu Partium*, which circulated widely in the late-medieval academic milieu, albeit in abbreviated form.[11] In this text, Galen distinguished between the veins and arteries, as well as the venous and arterial blood that they contained, and postulated that the pulse, which was observable, was produced in the arteries themselves. The heart did not pump, but sucked blood from the liver through the veins; once in the heart, this venous blood would be revivified with *pneuma* and flow out through the arteries, never to return. Where did it go? Humoral theory, central to medieval medicine, held that excess blood was burned off through strenuous exercise or purged, in the case of women, through menstruation. Blood could also be cooked, a process that Hippocrates termed *krasis*, into other humors useable by the body.[12] Like liquid in a lava lamp, humoral blood waxed and waned in the body in response to various factors, such as diet, weather, regimen, therapy, and emotions–the Galenic non-naturals. Because humoral theory held that blood could be transformed and evaporated and burned like fuel, there was no need for it to return to the heart and be recycled. Within this guiding *savoir*, the heart was not–and in fact *could never be*–a pump. Such an idea would have been not only invalid according to late-medieval archaeology, but also monstrous.

The *savoir* of the later Middle Ages, furthermore, ascribed values and functions to the heart that existed along the interstices of medicine and

[10] Heart and blood were closely related because of the medieval theory of sympathies. Following the Aristotelian system of qualities, the heart was red, moist, and warm, just as blood was red, moist, and warm; both heart and blood, therefore belonged in the same Aristotelian category and were expected to function in similar ways.

[11] Luis GARCÍA BALLESTER – John ARRIZABALAGA (eds.), *Galen and Galenism: Theory and Medical Practice from Antiquity to the European Renaissance*. Burlington: Ashgate Press 2002.

[12] Volker LANGHOLF, *Medical Theories in Hippocrates: Early Texts and the Epidemics*. Berlin: Walter de Gruyter 1990, p. 79–84.

theology. The heart was not only an organ, but also–and perhaps more importantly–the seat of emotion and a source for the passions of the soul that could both cause illness and evoke cure within the human body.[13] Nourished within the macrocosmic heart, the state of the microcosmic soul influenced the health of the physical body; for this reason, the passions of the soul were as much a concern for physicians as for theologians. The interrelationship between the heart, the passions, and the body led to the medical belief that overly-ardent and unrequited human love could cause illness. Those suffering from an erratic pulse, loss of appetite, listlessness and despair were diagnosed with a disease known in medieval Islamic medicine as *al-Ishq* and in the Latin west as *hereos*, or lovesickness.[14] For medieval Christians, the heart was also the locus of ardent religious devotion and adoration which, like lovesickness, physically manifested itself in the body. The Virgin Mary's heart was pierced seven-fold as Christ's sacred heart was pierced to redeem the world, while the hearts of the pious were softened by compassion and warmed in prayer. In the later Middle Ages, mystics such as Lutgard of Aywières, Margarete Porete, and Julian of Norwich would seek ecstatic union with Christ, meditating on the dove-hole of His heart.[15] Lutgard longed so ardently for Christ that her heart seemed to burst, rupturing her side and soaking her tunic with blood.[16] The physicality of mystic union with Christ is further witnessed in the case of saintly Clare of Montefalco, an Augustinian nun who claimed that Christ had come to her in a vision and planted His Cross in her heart.[17] After Clare's death in 1308, her fellow sisters conducted an autopsy in which they discovered the instruments of

[13] For medical treatises in this tradition, see GALEN, *On the Passions and Errors of the Soul*. Paul W. Harkins - Walther Riese (trans.). Columbus: Ohio State University Press 1963. RHAZES, *The Spiritual Physick of Rhazes*. Arthur J. Arberry (trans.). London: John Murray 1950.

[14] On lovesickness in Islam, see Michael DOLS, *Al Majnun: The Madman in Medieval Islamic Society*. Oxford: Clarendon Press 1992. For lovesickness in the medieval west, see Mary Frances WACK, "The Liber de heros morbo of Johannes Afflacius and Its Implications for Medieval Love Conventions." *Speculum*, vol. 62, 1987, no. 2, p. 324–344.

[15] On the metaphor of the dove-hole, see BERNARD OF CLAIRVAUX, *Sermons on the Song of Songs*. Collegeville: Liturgical Press (Cistercian Publications) 2005.

[16] Thomas CANTIMPRÉ, *The Life of Lutgard of Aywières*. Margot King (trans.) Toronto: Peregrina Publishing, 1989.

[17] Enrico MENESTÒ (ed.), *Il processo per la canonizzazzione di Chiara da Montefalco*. Perugia: Quaderni del centro per il collegamento degli studi medievali e umanistici nell'università di Perugia 1984; also see mention in Nancy CACIOLA, "Mystics, Demoniacs, and the Physiology of Spirit Possession in Medieval Europe." *Comparative Studies in Society and History*, vol. 42, 2000, no. 2, p. 268–306.

Christ's passion *physically emblazoned* on her heart, evidence of its centrality in ardent devotion and love.[18] In opening Clare's body, the sisters and physicians found exactly what they had expected, what they already believed to exist and what they knew they would find. In this way, both the gaze and discourse of medicine were conditioned by the archaeology of the later Middle Ages, a tangled web of theological, spiritual, and philosophical assumptions that delimited the possibilities for understanding the nature and function of the heart.

On October 22, 1887, William and Robert Chambers published the following in their *Journal of Popular Literature, Science and Arts*: "The heart is not the source or seat of the emotions…it is simply a hollowed out muscle, which expands to receive the blood from the veins, and contracts to propel it again through the arteries. It is merely a natural pump…The heart does not feel emotion."[19] What has led to this change in perspective? "A familiar history of science," Ian Hacking writes, "would tell us a tale of heroes," [20] one in which the actions of a solitary genius might change the course of history across the centuries. Perhaps the most likely hero in this positivist drama would be a seventeenth-century man named Dr. William Harvey, Lumleian Lecturer at the London College of Physicians and personal physician to King James I, whose findings relative to the circulation of the blood were introduced in a treatise entitled *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*. First published in Latin at Frankfurt am Main in 1628, Harvey's treatise circulated widely in both the medical and scientific communities in England and on the Continent.[21] Almost immediately, his theory that the heart acted as a pump sparked controversy among learned physicians, only a small percentage of whom would accept such a radical departure from established medical tradition.[22] Harvey's observation that the heart and blood move, however, had been made by earlier physicians

[18] See Katharine PARK, *Secrets of Women: Gender, Generation, and the Origins of Human Dissection*. New York: Zone Books 2006.
[19] William CHAMBERS – Robert CHAMBERS, *Journal of Popular Literature, Science, and Arts*. Edinburgh: W & R Chambers 1887, p. 683.
[20] HACKING, "The Archaeology of Michel Foucault," p. 77.
[21] Linda PAYNE, "'With much nausea, loathing, and foetor': William Harvey, Dissection, and Dispassion in Early Modern Medicine." *Vesalius: Acta Internationales Historiae Medicinae*, vol. 3, 2002, no. 2, p. 45–52.
[22] On the oposition to Harvey, see Roger Kenneth FRENCH, *William Harvey's Natural Philosophy*. Cambridge: Cambridge University Press 1994.

and anatomists, including Herophilus and Erasistratus, Galen, Ibn-Nafis,[23] Michael Servetus, and Andreas Vesalius, as well as anyone who had butchered an animal, killed another person in battle, or watched a vivisection. If the pumping action of the heart was so readily witnessed, why wasn't it postulated and accepted *before* the seventeenth century? What elements led to its ultimate acceptance, at first among an elite group of physicians, and what can account for this rupture?

The traditional narrative in the history of science would have held that Harvey, a brilliant individual, used his own unique powers of observation and keen intelligence to see that which had never been seen before and to interpret this vision for the scientific community. Starting from this premise, it was Harvey and his discovery that ultimately created a new way of understanding the heart and its function in circulation, which is in part true, but makes a symptom into a cause, which is problematic. From the perspective of Foucauldian archaeology, it was not Harvey's individual efforts, but the deeper structures of the seventeenth-century–particularly the tension between Aristotelian-Galenic textual authority and Baconian methods that emphasized observation and experimentation in the acquisition of knowledge–that opened new possibilities of truth and falsity across the disciplines. Harvey's treatise reflected both of these epistemologies; a committed Aristotelian, he began with the whole organism, "as that which has to be explained, and to proceed backwards in time to its ultimate beginnings, almost prime matter."[24] He combined the authority of Aristotelian deduction with direct and careful observation and the collection of data, a hallmark of what would become known as the Baconian method.[25] In effect, his treatise was double-coded, thereby speaking to Aristotelians who might accept his theory based on the structure of his arguments as well as those proponents of the new science who saw the power of observation and experimentation as primary epistemologies.[26] Ultimately, proponents of the scientific method who traced their roots to Bacon would come to dominate scientific discourse

[23] Peter E. PORMANN – Emilie SAVAGE-SMITH, *Medieval Islamic Medicine*. Washington: Georgetown University Press 2007, p. 47.
[24] FRENCH, *William Harvey's Natural Philosophy*, p. 327.
[25] French argues that Harvey's use of observation and experimentation did not make him a Baconian; as an Aristotelian, there was much in the *Novo Organum* that he would untenable. FRENCH, p. 326.
[26] On the postmodernist theory of double-coding, see discussion below; also, Charles JENCKS, *The Language of Post-Modern Architecture*. New York: Rizzoli 1977.

and reconstruct Harvey as one of their heroes, which required the erasure of his fundamental Aristotelianism, thereby sterilizing him for a new age.

Harvey's theory of the heart as mechanical pump, which spoke two languages of authority in its own milieu, would have had little influence in the fourteenth century. Medieval scholars would have recognized the validity of his arguments because they were rooted in Aristotelian discourse; however, because the authoritative discourse of Galenic anatomy was tied directly to humoral theory, Harvey's mechanistic conclusions would have been invalid. The primary function of blood was fuel, which could not be recycled, rendering the concept of heart-as-pump untenable. Also impossible was the idea that the heart was "merely" an organ and not the seat of emotion and religious devotion. That Christ touched Clare of Montefalco's heart was a physical truth, proven in a dissection of the organ itself. Staring into Clare's bisected heart, Harvey would have seen the conjunction of the four ventricles and a series of valves, while Clare's sisters saw the Cross with Christ crucified and the *arma Christi* ringing Him like a halo. In both cases, it is archaeology that delineates truth and falsity and guides empirical observation and scientific inquiry, and not the other way round.

In both the late-medieval and early-modern worlds, it is archaeology that shapes medical discourse, delimiting what is and is not possible at a given historical moment. Epistemological modifications in medical discourse stem not from the acts of brilliant individuals, but from changes in the "rules according to which [biological] discourses formed their objects, defined their concepts, and constituted their theories."[27] If the truth or falsity of a medical claim is subjective to the savoir that shaped it, then each medical claim must be examined within this larger context; since each historical context has its own savoir, it is not productive to judge one medical truth by a the archaeology of a different period. The question becomes not whether a medical concept is true or false, but instead why it was deemed to be true or false in a particular historical moment, why it is not held to be true or false at another historical moment, and why the truth or falsity of a medical concept concerns the historian and his or her audience so.

All of this, of course, exists at the level of discourse; human history, however, takes place in space and time and involves actors both real and imaginary on a phenomenological stage. Such is the problem addressed in Foucault's final level of knowledge, genealogy, in which very real human actors are not only subject to discourse, which is over again subject to deeper

[27] DAVIDSON, *The Emergence of Sexuality*, p. 195.

structures, but also play an active role in generating this discourse and the institutions that support it. Foucault argued that the creation and control of language within discursive communities was an extension of abstract power that had very real consequences in human society. In *Madness and Civilization* (1961), for example, the creation of the categories of madness led to the "othering" of those defined as mad and the creation of institutions for their coercion and control. This argument was continued in an elaborated form in *Discipline and Punish* (1975), which examined the ways in which discursive regimes of power guided ideas about, institutions for, and the punishment of the constructed other. In both of these examples, the consequences of human action are real, but self-aware and self-willed human action is almost entirely absent. This is, perhaps, the central problem arising from Foucault's genealogy for the philosopher and the historian: the role of human agency. For Foucault, humans are never free from discursive regimes of power and the institutions–physical and verbal, visible and invisible–that they create, and what human agency exists is bound and shaped by the archaeology of each historical moment. But certainly human beings are not mere slaves to invisible forces that control our actions in the material world, the agents of power are not wholly abstract and invisible, and individuals as well as communities have made very real differences both within and beyond the archaeologies of their historical moments. Where Foucault leaves off, the historian must pick up, carefully weaving together facts and fictions in cultural, historical, and ideological contexts, while putting a face on the agents of power and change, subject and object, health and illness, medicine and healing.

Theorica II: The linguistic turn beyond Foucault – postmodernist discourse, the decentered narrative, and double coding in the history of medicine

An historical epistemology that rests in the epistemological, archaeological, and genealogical structures of Foucault offers a meaningful approach to the history of medicine, both modern and pre-modern.[28] While Foucault's non-systematic theoretical framework allows for the liberation of previously

[28] It is interesting to note that where we once categorized the history of medicine as ancient, medieval, renaissance, early modern, and modern, we now group eras before the twentieth century as pre-modern. This trend is perhaps a reflection of the shifting academic landscape which demands utility and relevance of its disciplines and fields of inquiry; for scholars of "bad medicine," so to speak, there is strength in numbers.

occluded narratives in the history of medicine, it simultaneously ensnares the historian–and human history–in a closed linguistic system that denies human agency in the processes of change. Deeply rooted in the linguistic theories of Ferdinand de Sassure, as well as Nietzsche and Heidegger, Foucault argued that we are fundamentally trapped in language, that our reality is constructed and constricted by levels of discourse. Because humans "cognize wholly in language," and there is nothing beyond that language, the articulation of ideas is "limited to the preexisting possibilities allowed by the subject's linguistically constructed reality."[29] Such a closed linguistic system all but eliminates the possibility for human agency in the innovation of new ideas, as well as our own ability to understand the discursive regimes of the past, dooming us to infinite levels of futile discourse without understanding.[30]

The Foucauldian approach, it would seem, leads the historian of medicine to an ideological and methodological impasse; postmodernist theories associated with the linguistic and narrative turns, however, provide the historian with several balls of thread to follow through this Daedalean philosophical labyrinth. When set into motion, Lyotard's destruction of metastructures, Barthes' deconstruction of the text through multi-disciplinary lenses, and Derrida's decentering of text and reader might allow us to imagine the history of medicine as an endless chain of decentered signifiers oscillating around a multifaceted and invisible core, much like the double helix of DNA. Here, the fulcrum represents an abstract and unattainable historical "truth," while the nucleobases that form and inform the larger organism represent an ever-replicating collection of narratives generated through postmodernist theory. Around the core labeled *medieval history of medicine*, then, there exist several narrative lenses: that of theology and the individual theologian, medicine and the individual physician, the patient and those around him or her, and–perhaps most importantly–the multiple lenses of the modern reader.

[29] Michael L. FITZHUGH – William H. LECKIE, "Agency, Postmodernism, and the Causes of Change." *History and Theory*, vol. 40, 2001, no. 4 (Theme Issue: Agency after Postmodernism), p.64.

[30] Our "search for the deep ontological ground hidden by discourse as well as any attempt to resuscitate the lost intelligibility of a discipline that was taken seriously in another age" dooms us to infinite levels of futile discourse without understanding. Hubert L. DREYFUS – Paul RABINOW, *Michel Foucault: Beyond Structuralism and Hermeneutics*. Chicago: University of Chicago Press 1983, p. 14.

In his seminal work, *La condition postmoderne: rapport sur le savoir*, first published in 1979, Jean-François Lyotard argued that the advanced technology of the modern world had produced myriad and prolific ways of communicating ideas, such that no controlling set of ideologies–or ideologues for that matter–could be said to guide discourse.[31] Sweeping narratives such as "Romanticism" and "Marxism," therefore, were no longer tenable frameworks for understanding the past, just as overarching structures could tell us nothing of the present. With the death of the *metanarrative*, there must also be a destruction of the *metastructures* associated with grand concepts such as "progress," "healing," and "illness," all of which are far too complex for a simple narrative to convey their multivalent meanings. In the place of these meta-frameworks, we are left with communication that is primarily linguistic and symbolic, continually questioning itself, churning and changing second by second like a rolling cloud of ideas. This cloud did not, however, roll without purpose; according to Lyotard, symbolic and linguistic communication suggested a central truth, but one which human beings could not attain because of our limited intellectual capacity.

In Lyotard, the focus of history becomes decentered; with metanarratives rendered obsolete, history becomes the provenance of the individual and his or her own unique experiences. Historians such as Emmanuel LeRoy Ladurie and Carlo Ginzburg, working within the same *savoir* as Lyotard, explored the archives in search of these long-obscured individuals, an approach that necessitated the techniques of the *Annales* school and the use of non-traditional sources such as inquisition processes, deeds, and charters.[32] Micro-historians, as they came to be called, argued that history is best told at the local level, not because the individual served as a Hegelian instantiation of social structure through which we might discern larger historical truths, but because the individual experiences embodied in archival texts reflected an inherently relative lived history, making our understanding of the past more intimate. Even at this very intimate level, however, the historian is confronted with the problem of reading the structured experience of a distant other through his or her own modern structured experience; thus the first spinning pair in our double helix–the text and reader.

[31] Jean-François LYOTARD, *La condition postmoderne: raport sur le savoir.* Paris: Editions Minuit 1979.

[32] Emmanuel LeRoy LADURIE, *Montaillou: village occitan de 1294 à 1324.* Paris: Gallimard 1975. Carlo GINZBURG, *Il Formaggio e i vermi: Il cosmo di un mugnaio del Cinquecento.* Roma: Einaudi 1976. Peter BURKE, *History and Social Theory.* Cambridge: Polity Press 2005, p. 41, *passim.*

The deconstruction of the fundamental interface between text and reader became the focus of postmodernists such as Roland Barthes and Jacques Derrida. For both, human experience is linguistic and symbolic, "mediated by organized discourses" and signifiers, and made manifest in stories and embodied in texts.[33] The historian's reading of these texts must of necessity be shattered into myriad mirrored shards. In his essay, "The Death of the Author," Roland Barthes proposed that we must liberate the text from the tyranny of the author, much as Lyotard had freed history from the metanarrative. Barthes claims that to "give a text an Author" and to interpret a text solely through the lens of that author is to "impose a limit on that text, to furnish it with a final signified, to close the writing."[34] With the removal of the singular authoritative vantage point of the author, "the claim to decipher a text becomes quite futile," and the reader is empowered to interpret the text as an individual entity; because a single text will have, over time, a nearly infinite number of readers, it will have as many interpretations from a multitude of disciplinary angles, all of which are valid in their own right, and all of which spin around the central text much like the nucleobases in our double helix.

In 1966, Jacques Derrida delivered an address at Johns Hopkins University entitled "Structure, Sign, and Play in the Discourse of the Human Sciences," in which he introduced the ideas of deconstruction and decentering.[35] At the level of the text–beyond which there is nothing–deconstruction seeks binary oppositions and alternative interpretations formerly obscured by authoritative criticisms and grand narratives. Through close reading, Derrida sought these oppositions not only in what the author had included in the text, but also in what he or she had left out, allowing lacunae to act as signifiers. Within each text, then, these binary opposites spin and fracture around empty cores, allowing for myriad interpretations. Just as there is no privileged position from which to interpret a text, there is no genesis and no closure to discourse. Without traditional Western teleology as an anchor, discourse and human history are freed from an absolute chronology and are thus decentered. According to Derrida, because "reality" and "truth" do not exist objectively or eternally, we are continually substituting one

[33] David B. MORRIS, "How to Speak Postmodern: Medicine, Illness, and Cultural Change." *The Hastings Center Report*, vol. 30, 2000, no. 6, p. 8.
[34] Roland BARHTES, "Death of the Author." In: *Image, Music, Text*." Stephen Heath (trans.). New York: Noonday 1977.
[35] Jacques DERRIDA, "Structure, Sign, and Play in the Discourse of the Human Sciences." In: *Writing and Difference*. Alan Bass (trans.). London: Routledge 1966, p. 278–294.

decentered center for another in an endless chain of signifiers and spinning interpretations.

From one perspective, the linguistic theories that serve as the foundation of postmodernism must of necessity truly doom the historian of medicine to infinite levels of futile discourse. The rejection of human agency and fixed reality, the continual questioning of discursive modes and meanings, the loss of narrative frameworks, the destructuring of texts down to individual words and phrases–all of these things decenter the historian and all but eliminate his or her ability to say anything meaningful about the past or present. While postmodernist theories cannot suffice as a building medium in and of themselves, however, they can serve as a corrective and even constructive element in a broader methodology, and can provide us with alternative lenses, such as double-coding and narrative medicine, through which to view the history of medieval and modern healing.

Charles Jencks' theory of double coding, first introduced in his 1977 *The Language of Post-Modern Architecture*, has allowed for the development of a double-stranded approach to understanding medical history and practice.[36] In the field of architecture, double coding is the embedding of one architectural style in another, which produces a hybrid building that speaks two different languages to several different audiences simultaneously, thus allowing the double to become multiple. In the history of medicine, double coding could apply to a medieval medical manuscript, with its textual accretions from Greek and Arabic languages, and with overlays from pagan, Islamic, and Christian cultures. Take for example Ibn-Jazzar's medical compendium for travelers, *al-Musafir*, itself a composite of Greek, Latin, and Arabic sources, which was then translated into Latin in the late eleventh century by Constantine the African, and then copied and commented upon by medical students in thirteenth-century universities. This text, with its multiple codes, would speak differently to the medical professor, to the medical student, and to the theologian who borrowed a copy of the text. Another example would be thirteenth- and fourteenth-century canonization dossiers containing medicalized miracles that were rooted in the authoritative languages of both medicine and theology; the authors of these miracles relied on double coding in order to prove the miraculous to papal clerics trained at university and conversant in one or both of these authoritative

[36] Charles JENCKS, *The Language of Postmodern Architecture*. New York: Rizzoli 1979.

discursive regimes.[37] These same miracles, however, when read to an audience of supplicants on the feast day of the saint would speak in different tongues dependent on the individual experiences and current circumstances of the hearer.

In both the medieval and modern milieux, double coding is inherent in the interrelationship between the biomedical and biocultural models, the first of which is the domain of learned or "official" medicine, and the second of which is comprised of the multiple cultural, social, economic, and individual forces that shape the culture of healing in and beyond official medicine.[38] Returning to our earlier metaphor, we might imagine the biomedical and biocultural models as two strands in the double helix, ever spinning around a decentered core. These two strands, while perhaps closer in the medieval world, began to separate with the establishment of faculties of medicine at medieval universities, the professionalization of medicine, and the processes of licensure that began in the thirteenth century.[39] At this juncture, learned medicine began to define itself as the only valid form of healing while marginalizing apothecaries and barber surgeons and actively persecuting traditional healers such as midwives. In the medieval biocultural strand that surrounded and interacted with learned medicine we might imagine the cult of the saints, local and official healing rituals both sacred and profane, as well as economic forces associated with agriculture and warfare, family dynamics, and individual disposition. In the modern milieu, the biomedical strand is dominated by Western scientific biomedicine, which seeks objective truth in bench research and algorithmic decision making, and that sees the human body as a physical and chemical machine that occasionally malfunctions, the result of which is a state we call "illness." The modern biocultural perspective, which "takes as its provenance the large, unruly public discourses, from advertising to the experience of the sacred, in which culture extends its shaping power over health and illness," acknowledges the validity of the biomedical viewpoint while simultaneously moving beyond and around it, arguing that illness is not merely the "mal-

[37] Brenda GARDENOUR, *Medicine and Miracle in the Later Middle Ages: The Reception of Learned Medicine The Reception of Theory-Rich Medicine in the Hagiography of the Latin West*. Notre Dame: Notre Dame University Press (forthcoming).

[38] David B. MORRIS, *Illness and Culture in the Postmodern Age*. Berkeley: University of California Press 1998.

[39] Luis Garcia-Ballester, Michael R. McVaugh, Agustia Rubio-Vela "Medical Licensing and Learning in Fourteenth Century Valencia." *Transactions of the American Philosophical Society,* New Series, vol. 79, 1989, no. 6, p. i-128.

function of a biophysical mechanism," but instead is "the unique experience of a meaning-making and embodied cultural being."[40] Modern bioculture, like that of the later Middle Ages, includes healers and healing practices considered non-medical by physicians and other biomedical authorities, but nonetheless vital to the patient and those around him or her.

While the history and practice of medicine have long focused on the authoritative voice of the physician and his art, increasingly it is the voices of the biocultural strand, and particularly that of the patient, that are shaping the way we understand the complexities of concepts such as illness, healing, and empathy. This turn towards patient narrative is a product of Foucault, Lyotard, Barthes, Derrida, and a postmodernist agenda that advocates for the deconstruction of authoritative regimes of power while liberating the hitherto inaudible voices of the past and present. This does not mean, however, that the biomedical model ceases to exist; on the contrary, patient narrative–whether the miracle tale from the fourteenth century or a modern account of electroconvulsive shock therapy–is in continual conversation with the authoritative languages and practices of learned medicine.[41] Postmodernist theory allows us to see in these narratives not only the individual viewpoints of the patient, but also the myriad influences that shape his or her perceptions of the multivalent, amorphous, deconstructed, and decentered metastructures of medicine, disease, and healing.

The passage from Foucault through postmodernism is the movement from the binary to the plural. Decentering and deconstruction have opened the history of medicine, broadly construed, to a wide variety of disciplines and liberated the voices of those once unheard beneath the powerful discourses of authority. Problematically, the historian of medicine is now faced with a multiplicity of viewpoints swirling around an unattainable, relative, and perhaps non-existent truth. Furthermore, if we are to hold fast to postmodernist theory, we are bound by a closed linguistic system that limits human agency in processes of change. The amorphous nature

[40] David B. MORRIS, "How to Speak Postmodern: Medicine, Illness, and Cultural Change." *The Hastings Center Report*, vol. 30, 2000, no. 6, p. 8.

[41] Roger Cooter rails against this in "After Death/After-'Life': The Social History of Medicine in Post-Postmodernity." *The Social History of Medicine*, vol. 20, 2007, no. 3, p. 441–464. Patient narrative in the social history of medicine is merely the "other side of the same coin of the older history of medicine conducted from the top down. By the very nature of that oposition, the idea of a patient-orientated history of medicine could only reveal more stories about the exercise of power and the reproduction of power relations by the medical profession, including stories of resistance which simply reinforced the same notion of power." p. 447.

of postmodernism, with its propensity to fracture, shift, and loop back to the theoretical, makes it difficult for the historian to speak critically about concrete facts, moments, and ideas. Roger Cooter sees in this the potential death of the history of medicine. In his "After Death/After-'Life:' The Social History of Medicine in Post-Postmodernity," Cooter argues that postmodernist approaches have limited the abilities of the medical historian, and particularly the social historian of medicine, to engage with the realities of the biomedical model and to effect meaningful change in the modern world. Because of the reactionary nature of postmodernist theory, it can never exist free from the tyranny of the authority against which it rails. The time has come, he argues, for the history of medicine to (once again) root itself in the Foucauldian dialectic of Power/Knowledge and to take as its new focus the biosciences and biopolitics. Cooter's detractors, including Jonathan Toms, argue that such an approach merely repackages and reinforces the same constrictive and authoritative system that Cooter himself seeks to destroy.[42]

Ultimately, all of these infinite voices–that of the medieval physician, the cancer survivor, the Beguine nurse, the pharmacogeneticist, the faith healer, the mentally disabled individual, the social historian, and the empiricist–are narrative elements in a larger chain of human discourse that spans centuries of written and material culture, and each of them is valid and necessary for a holistic understanding of the past and present. Just as no one narrative should take precedent, so also no single theoretical approach to the history of medicine should dominate the discussion; instead, all of these lenses might be imagined circling strand after strand, text after text, spinning–always spinning–against and alongside larger social, cultural, and intellectual forces.

Practica: Historical epistemology and the detangling of medieval medicine from modern medical discursive regimes

Over the past two decades, the history of medieval medicine, with dates ranging roughly from the seventh century to the fourteenth and a geographical span encompassing the Dar al-Islam, Western and Eastern Europe and the Mediterranean basin, has become a vigorous field of study. As a field of inquiry it is not only expansive, but also complex; medieval scholars must

[42] Jonathan TOMS, "So What? A Reply to Roger Cooter's 'After Death/After-'Life': The Social History of Medicine in Post-Postmodernity.' " *Social History of Medicine*, vol. 22, 2009, no. 3, p. 609–615.

encounter the past through a broad array of sources, including artifacts of material culture, such as surgical tools and votive offerings, the architecture and geographical orientation of hospitals, healing shrines, and leper colonies and in some cases, evidence from paleopathology.[43] The most vital sources for medieval medicine, however, are the myriad manuscripts that have survived largely through accident and are now housed in archives across the globe. Composed in Arabic, Hebrew, Greek, and Latin as well as vernacular languages such as Occitan, Low German, Old and Middle English, and written by hand using inconsistent forms of abbreviation that sometimes amount to a secret code, these sources present the medieval scholar with several challenges. First, the medievalist must travel to distant archives in order to access these sources, although this is slowly changing with the digital revolution; such travel requires time and funding. Second, once at the archives, he or she must have a working knowledge not only of the appropriate so-called dead language, but also of paleography and codicology, in order to be able to decipher, date, and contextualize the manuscript itself. All of this takes place even before the intricate processes of interpretation and synthesis necessary in the production of new knowledge about the past. The training of a medieval historian and research in medieval medicine are both, perforce, arduous and time-consuming. In the present and ever-shifting academic milieu which increasingly focuses on relevance, utility, and profitability, the study of medieval medicine, and with it all pre-modern medicine, has come under question. To what end, some would ask, is such an investment of time and money, both commodities in short supply after the global financial crisis of 2008? In light of the modern western biomedical achievement, the sheer strength of the biomedical strand, what purpose can be served by studying the history of old, irrelevant, in fact *failed* pseudo-medicine?

Historical epistemology as sketched in very broad strokes above offers theoretical viewpoints and intellectual tools that can help us untangle the biases inherent in these questions, re-envision the history of medieval medicine as valid within its own specific rationality, and liberate the voices of the past that they might speak meaningfully in the present. I will begin by contextualizing the very questions themselves within the discursive community of mainstream western biomedicine as taught in modern Anglo medical schools. As a discursive regime, academic medical discourse defines

[43] See Monica GREEN, "Baths, Blossoms, and Bones." In: *Medieval Academy News: Online, 2010* [online]. 2010. Available at: <http://www.medievalacademy.org/medacnews/2010-1news/GreenGoddess.html> [cit. 5. 1. 2011].

itself, its theories, and its practices by a set of shared assumptions of which its members are acutely aware (epistemology), as well as by overarching beliefs and ideals that connect it with scientific culture broadly construed of which its members are far less aware (knowledge/*savoir*). It is the deeper level of *savoir* that guides medical inquiry and delineates truth or falsity which, in turn, shapes both medical theory and practice. In modern medical discourse, "truth" must be "proven" by the most recent medical research, which in turn yields data that can be validated beyond human subjectivity and applied in clinical practice. This truth constitutes unquestionable authority, a "regime of truth" driven by and for medical power.

This culture of hyper-modernity,[44] provable truth, and utilitarianism is relevant to our discussion of medieval medicine not because of any continuity between past and present, but because the view that medieval medicine is failed medicine and that its history is, therefore, irrelevant is cast from and rooted in this very perspective. Furthermore, untangling the hidden warp and weft of modern medicine reveals the ways in which the traditional narrative of the history of medicine is bound to and by these deeper structures. By unchaining the narrative of medieval medicine from that of modern medicine, we liberate it from the modern discursive regime of truth, allowing medieval truth and falsity to exist as they were constructed in the academic medical milieu of the thirteenth and fourteenth centuries. In this way, medieval medical theories and practices deemed "monstrous" by modern *savoir* become logical and natural when contextualized within their own specific medieval rationality.[45] Released from modern delineations of truth and falsity, unbound from the narrative of modern biomedicine, the history of medieval medicine is no longer simply an esoteric tale of failed attempts at understanding disease and the body, but a cluster of narratives centered on healing practices that are legitimate, although far different from our own.

The specific rationality of modern medicine has been shaped by a network of historical phenomena native to the twentieth century, a full assessment of which is beyond the scope of this inquiry. An exploration of the changes in Anglo-centered biomedical education in the twentieth and early twenty-first centuries, however, will reveal the emergence of key epistemolo-

[44] For hypermodernity in general, see Gilles LIPOVETSKY – Sébastien CHARLES, *Hypermodern Times*. Cambridge: Polity Press 2005. For hypermodernity in medicine, see Rodney James GIBLETT, *The Body of Nature and Culture*. New York: Palgrave – McMillan 2008.

[45] See Richard KIECKHEFER, "The Specific Rationality of Medieval Magic." *The American Historical Review*, vol. 99, 1994, no. 3, p. 813–836.

gies within medical discourse and, through these, the deeper structures guiding modern medical delineations of truth. Our story begins with Abraham Flexner[46] and his 1910 *Report*, commissioned by Henry Pritchett of the Carnegie Foundation and members of the American Medical Association (AMA), which proposed a drastic reform of North American medical education from the classroom to the clinic.[47] His survey of institutions across the United States and Canada found that many medical students were unprepared for the rigors of medical school and that the education provided by many of these institutions was lacking in substance. Of particular concern for Flexner was the minimal role played by the hard sciences in medical instruction; in response, he advocated for a medical curriculum founded on anatomy and physiology, pathology, and pharmacology and supported by the humanities, including the history of medicine.[48] Hard sciences studied in the classroom were to be reinforced in clinical training which was to take place in a teaching hospital attached to a university. Every element of the curriculum, he argued, should be oriented toward clinical practice and the fostering of the physician-patient relationship.

Through the twentieth century, medical education became ever-more firmly ensconced in the university system and was increasingly focused on scientific research. Bench research in medicine received generous physical and fiscal support from the university not only because it brought notoriety and prestige to the institution, but also because it garnered government grant money. In 1910, Flexner had argued that the goal of medicine, which was both a science and an art, was better clinical practice; medical research, likewise, was to be directed towards this clinical end. By the mid-twentieth century, however, medicine came to identify itself as predominantly scientific in orientation, and medical research was to be conducted for the ad-

[46] Thomas Neville BONNER, *Iconoclast: Abraham Flexner and a Life in Learning*. Baltimore: Johns Hopkins University Press 2002.

[47] Abraham FLEXNER, *Medical education in the United States and Canada: A report to the Carnegie Foundation for the Advancement of Teaching with an introduction by Henry S. Pritchett*. New York: Merrymount Press 1910. The American Medical Association used its own standards to determine the validity of medical schools and published the results in its mouthpiece, the *Journal of the American Medical Association*. The AMA, through the work of Flexner, effectively became the accrediting body of for higher education in medicine. See Charles E. ROSENBERG, *The Structure of American Medical Practice*. Philadelphia: The University of Pennsylvania Press 1983, p. 65–66.

[48] Molly COOKE – David M. IRBY – William SULLIVAN – Kenneth M. LUDMERER, "American Medical Education 100 Years after the Flexner Report." *The New England Journal of Medicine*, vol. 355, 2006, no. 13, 1339 (1339–1344).

vancement of knowledge that was quite often distant from medical practice. The discovery of the double helix by Watson and Crick in 1953, for example, heralded the advent of molecular medicine, which further drove a wedge between the lab bench, the classroom, and clinical practice.[49] Subsequent advances, including DNA polymerase in 1956, the role of double-x chromosomes in sex differentiation in 1961, and the publication of the first catalogue of genetic disorders, *Mendelian Inheritance in Man* in 1966 signified changes at the level of archaeology, wherein deeper structures had shifted to accommodate new truths.[50] In the life-world, this shift shaped a new type of medicine, one in which the body was no longer a larger structure that could be interpreted through human touch, vision, or narrative, but a fragmented collection of tiny mechanisms that might only be revealed through the most advanced technology. Physicians and medical students were faced with a rapidly-changing sea of technical information, with each wave altering or overturning previous findings. Memorization could no longer suffice for the student, and personal experience was no longer sufficient for the practicing physician. The question of how to make efficient use of so much scientific data, these endless chains of shifting facts, became paramount. The answer was an algorithm known as Evidence-Based Medicine, or EBM.

The term evidence-based medicine was coined in an article, "Evidence-Based Medicine Working Group: Evidence-based medicine: a new approach to teaching the practice of medicine," which was written by Gordon Guyatt and his colleagues at McMaster University and published in the Journal of the American Medical Association in 1992.[51] Four years later, a leading scholar in the field of EBM, Dr. David Sackett, defined EBM as "the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence from systematic research."[52] In this system, the practicing physician evaluates, diagnoses, and prescribes treatment for a patient based on the most recent and convincing scientific research as represented in the clinical literature.

[49] Paul STRATHERN, *Crick, Watson, and DNA*. London: Arrow 1997.
[50] Ronald J. TRENT, *Molecular Biology*. Edinburgh: Elsevier Publishing 2005, p. 2. See also, Susan LINDEE, *Moments of Truth in Genetic Medicine*. Baltimore: Johns Hopkins University Press, 2005.
[51] Evidence-Based Medicine Working Group. "Evidence-Based Medicine: A New Aproach to Teaching the Practice of Medicine." *JAMA*, vol. 268, 1992, no. 17, 2420–2425.
[52] David SACKETT, *Evidence-Based Medicine: How to Practice and Teach EBM*. 2nd edition. London: Churchill Livingtone 2000.

While EBM claims to take into consideration "patient values," the emphasis is clearly on clinical evidence.[53] Nowhere is this more evident than in the EBM algorithm, which has five steps: assess the clinical problem presented by the patient and construct a clinical question from the case; conduct appropriate research on the question; assess the validity and applicability of the evidence gathered; apply this knowledge in the treatment of the patient; self-assess one's personal performance and its effect on the outcome of the case.[54] Fundamentally, the EBM process is meant to keep physicians abreast of the most recent research in medical science and, through this, to provide patients with state-of-the-art medical care.

EBM, which represents a paradigm shift in medical practice and education, developed in response to very modern problems, including: the "daily need for valid information about diagnosis, prognosis, therapy, and prevention;" the limitations of traditional sources which are often out of date, incorrect, overwhelming in volume and unsystematic in approach; and the differential between the physician's clinical experience, which increases over time, and his or her "up-to-date knowledge," which often decreases over time. [55] Perhaps the most potent impetus behind the proliferation of EBM is the limited amount of time that the average practitioner can dedicate to researching clinical problems (only a few seconds per patient) and to general reading in medicine broadly construed (roughly one half hour per week).[56] In the fast-paced world of modern medicine, efficiency in finding and assimilating evidence is key. While EBM developed in response to such recent phenomena, it nevertheless also speaks to Flexner's 1910 authoritative injunction that medical education and practice be founded in scientifically-oriented medical research and that all elements of medical education be focused on clinical outcomes. From both standpoints, EBM seems to make clear, sound, and rational sense. Like any system, however, it has significant limitations, not the least of which are the complications that arise from applying an algorithm to the highly-complex and often chaotic problem of human disease and suffering. Proponents of EBM claim that the purpose

[53] Mita GIACOMINI, "Theory-Based Medicine and the Role of Evidence: Why the Emperor Needs New Clothes Again." *Perspectives in Biology and Medicine*, vol. 52, 2009, no. 2, p. 234–249.
[54] David SACKETT, "Evidence-Based Medicine: What It Is and What it Isn't." *British Medical Journal*, vol. 312, 1996, no. 71, p. 71–72. Also see Sharon E. STRAUS *et al*., "Evidence-Based Medicine: How to Practice and Teach EBM." Edinburgh: Elsevier Press 2005, p. 3–4.
[55] STRAUS *et al*., "Evidence-Based Medicine," p. 3.
[56] *Ibid*.

of this system is to provide the best and most efficient medical care to the patient, whose culture and viewpoints play a significant role in the process; in practice, however, it is scientific research and externally validated statistical data that prove most vital to determining therapy, and the human patient beyond the mechanical body is lost in a world of evidence, outcomes, and assessable products.

Under the Foucauldian gaze, the *dispotif* of EBM reveals elements of the deeper archaeological assumptions that shape it. The first assumption is that medicine is objective. While the physician uses his or her own clinical experiences to shape elements of practice, decisions are to be as objective as possible and rooted in clinical research. Emotions, spirituality, and/or value judgments on the part of the practitioner are not objective and therefore have no valid role to play in medical theory or practice.[57] The second assumption is that science itself is objective, based on validated data generated through laboratory and clinical research; in other words, science yields verifiable truths that exist beyond human subjectivity. Only the most recent research is valid, and truths yielded by this research displace all previous research findings. Simultaneous truths in this schema are impossible, and data yielded by "non-scientific" means is of necessity invalid. The third assumption is that the physician alone is qualified to discern between true and false within this discursive regime of power. Physicians, because they are in possession of "medical facts" are vested with "the ultimate authority to decide what to do based on those facts."[58] The patient is merely the object of the clinical gaze,[59] and his or her body–separate from any subjective experience–is but a collection of microscopic machines that can be separated, repaired, and replaced to restore what we call health. Lastly is the assumption that "health" is the natural state for the human body, that illness is the negation of that state and therefore an aberration to the natural order of things. With such a premise, physical suffering can serve no spiritual or abstracted purpose; on the contrary, pain is valuable only as a signifier of

[57] This view is slowly being repudiated by individual physicians such as Robert M. VEATCH, whose book, *Patient Heal Thyself: How the New Medicine Puts the Patient in Charge* (Oxford: Oxford University Press 2009), argues that all medical practices–even those that are based squarely on science and seem objective in their banality–involve value judgments on the part of the physician. The value judgments that should take precedent, he argues, are those of the patient.

[58] VEATCH, *Patient Heal Thyself*, p. 6.

[59] On the medical gaze see Michel FOUCAULT, *The Birth of the Clinic: An Archaeology of Medical Perception*. New York: Pantheon Books 1973.

disorder within the body that, having served its purpose, should be eliminated as quickly as possible.[60]

Such assumptions shape not only how we define medicine and medical truth in the tyranny of the present, but also how we judge, categorize, and define healing practices in the recent and distant past. It is here that concepts derived from postmodernism can aid the historian in decentering discourse and multiplying narratives to reveal a richer, deeper, multivalent vision of medicine and its history. Mainstream western biomedicine–the biomedical strand–accepts only its own methods and epistemologies as valid, a viewpoint that has held firm despite repeated attempts over the past several decades to integrate medical humanities courses, many of which focus on medical ethics, into the medical curriculum.[61] A postmodernist approach complicates this viewpoint, first by introducing the biocultural strand spinning alongside and in conversation with western biomedicine, and second by liberating the myriad voices within it. For example, healing practices labeled "non-medical" by medical authority and discounted as statistically irrelevant according to the algorithmic model have no place in biomedical discourse. In shifting our gaze to the biocultural strand, however, practices such as herbal medicines, vibration therapy, Chi Gong and Tong Ren,[62] Ayurveda, acupuncture, meditation and prayer are liberated from the authoritative discursive regime of biomedicine. No longer merely "alternative" medicines, such practices and the narratives that surround them have validity within their own cultural and historical contexts.

In modern context, perhaps the most valuable theoretical and practical contribution of postmodernism is the liberation of the patient's voice from the authority of the physician. Patient narrative, which is inherently double-coded, links the biocultural and biomedical strands and is valid in both contexts. The increased emphasis on the individual and his or her story is changing not only the experience of illness for countless people who once suffered in silence and isolation, but also the medical gaze which is slowly coming to value the process of narrative in the practice of modern medicine. Narrative medicine, as it has come to be known, "fortifies clinical practice

[60] This opinion is quite clear in Veatch, who states that "Only those with a distorted theology claim[ed] that the suffering was so good for one's character that the pain should be endured." VEATCH, *Patient Heal Thyself*, p. 5.

[61] Delease WEAR, "Creating Difficulties Everywhere." *Perspectives in Biology and Medicine*, vol. 50, 2007, no. 3, p. 348–362.

[62] Tom TAM, *Tong Ren Therapy: Beyond Acupuncture*. New York: Oriental Cultural Institute 2007.

with the narrative competence to recognize, absorb, metabolize, interpret, and be moved by the stories of illness;"[63] the processes of telling and listening to stories of illness is both therapeutic for the patient and instructive for the physician, who comes to empathize with the patient and, perhaps, discern therapeutic approaches that are meaningful for the patient within his or her own individual context. Narrative medicine moves beyond the harried approach of EBM to engage with patients as autonomous, unique, acculturated beings, not merely as examples of disease states. This shift from general diagnostic categories to individual patient therapy harkens back to Hippocrates and humoral medicine, which argued that each human body had its own unique state of humoral balance and therefore health. In practice, then, the physician had to be intimately familiar with his patients and their emotional states, living conditions, family dynamics, daily diets, and full histories in order to determine diagnosis and therapies, each of which was perforce unique to each patient. Narrative medicine is one return to this emphasis on the individual patient; genomic medicine, in which each human body is truly a unique organism, is yet another.

While historical epistemology has facilitated the deconstruction of the authoritative discourses of modern biomedicine, allowing the single to become a decentered chain of spinning pluralities, it has also allowed for the liberation of medieval medicine from modern medical discourse. Modern medical epistemology and archaeology negate the possibility of the positive and meaningful existence of medicine in the Middle Ages because, from the vantage point of the biomedical strand, medieval medicine was not only false, but monstrous, and therefore *not medicine at all*. Veatch provides an example of this modern medical bias in his introduction to *Patient Heal Thyself*, in which he describes all pre-modern medicine as primitive in its ignorance of the scientific notions of "cause and effect. It believed in the power of evil spirits, magical forces, and bewitching. It had no understanding of scientific evidence."[64] He goes on to state that "modern medicine is nothing if not scientific. At its best it refuses to tolerate, without scientific testing, folk beliefs about causes and cures."[65] So here we have the dialectic between modern (scientific-rational-objective-valid) and non-modern (un-

[63] From the "Mission Statement of the Program in Narrative Medicine" at Columbia University, College of Physicians and Surgeons.
[64] *Ibid.*
[65] *Ibid.*

scientific-irrational-subjective-invalid) as seen through the lens of modern biomedicine.

Modern and medieval medicine, however, are rooted in two very different life worlds, each of which is shaped by its own unique set of epistemologies and archaeologies, and little can be gained by using one system to qualify or disqualify the other. To view one system through the *savoir* of the other only reinforces our own belief systems regarding the human body, nature, truth, and proof. For example, when Veatch describes pre-modern medicine as a realm of "evil spirits" devoid of any understanding of "cause and effect," he is guided by modern *savoir* concerning the bounded body and the validity of modern scientific methods. Because medieval conceptions of cause and effect do not align with modern ones, and medieval theories and practices do not fall into modern medical categorizations, medieval medicine cannot exist as "real medicine," and must therefore be superstition, magic, or monstrosity. Part of Veatch's dismay and disapprobation perhaps stems from the positivist belief that medicine has evolved along a continuum, and that all true medicine is linked across time and space as it grows ever more perfect. Medieval medicine, however, does not fit into a streamlined logical narrative from the great man, Hippocrates, to the wonders of nuclear and genetic therapies. It must, therefore, have been a mistake.

Historical epistemology, founded in the ideas of Cavailles, Foucault, Davidson, and Hacking allows the historian to disrupt this false continuum and to unchain medieval medicine from modern medicine. In liberating these two medical systems and setting them within the historical and epistemological contexts that both shaped and were shaped by them, the historian can explore the theories, practices, and culture of medieval medicine, as well as the deeper knowledge that guided them, without having to anachronistically justify them according to modern medical discourse. Gone is the need for a lineage of great men through the millennia; gone the need to emphasize successes and ignore failures in the service of the modern narrative of medical history. What remains are two systems, valid in their own rights, equal and rational. This is the true power of historical epistemology, for it forces us not only to acknowledge the validity of otherness, but also to question the validity of our own constructs. For those who hold the same biases as Veatch, such a prospect is threatening. For to accord the medieval physician status as a learned man of medicine, to give credit to the complexity of medieval medical education, to grant medieval medicine validity *as medicine* within its own rational system is, ultimately, to question our modern belief in scientific progress, the efficacy of modern

medicine, the perfectibility of the body, and the unquestionable authority of the modern physician.

While historical epistemology allows for the liberation and validation of medieval medicine and its history, postmodernist approaches simultaneously complicate the narrative of medieval medicine itself. Historians of medicine have often focused on the twelfth-century translation movement, the development of faculties of medicine in medieval universities such as Paris and Bologna, the rise of medicine as a profession, and the theories and practices associated with the university-trained physician.[66] Moving away from the medieval biomedical strand, however, reveals a world of healing beyond the authoritative voice of the physician and learned medicine, one populated by apothecaries and barber surgeons, folk healers, midwives, and family members, all of whom might provide meaningful health care to individuals in times of suffering.[67] Talismans, amulets, relics, and healing rituals such as those seen in the tenth-century Lacnunga texts and Stephen of Bourbon's thirteenth-century account of the cult of Saint Guinefort were as much a part of the fabric of medieval healing, if not more so, as learned medicine, which was available only to the wealthy or those in urban areas, such as Barcelona and Valencia, that had public physicians appointed by the local government.[68] Historians such as Debra Blumenthal working with archival sources such as inquisition texts and canonization dossiers have attempted to liberate the narratives of patients and healers from discursive regimes of their original authors, providing yet one more set of lenses through which we might re-vision medieval healing. And then there are the viewpoints offered by theologians and supplicants, saints and sinners, on the relative value of health compared with the spiritual and redemptive value of suffering, a condition that was in some cases considered a divine gift, and often seen as evidence for God's continual presence in the physical realm.

Critics of Foucauldian and postmodernist approaches to understanding texts and contexts have argued that theories such as decentering and

[66] Nancy SIRAISI, *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice*. Chicago: Chicago University Press 1990; Cornelius O'BOYLE, *The Art of Medicine: Medical Teaching at the University of Paris, 1250–1400*. Leiden: Brill 1998.

[67] Monica GREEN, *Women's Healthcare in the Medieval West: Texts and Contexts*. Aldershot: Ashgate Press 2000.

[68] Richard KIECKHEFER, *Magic in the Middle Ages*. New York: Cambridge University Press 1990. Karen JOLLY, *Popular Religion in Late Saxon England: Elf Charms in Context*. Chapel Hill: University of North Carolina Press 1996. Michael R. MCVAUGH, *Medicine Before the Plague: Practitioners and Their Patients in the Crown of Aragon, 1285–1345*. Cambridge: Cambridge University Press 1993.

deconstruction have not only destroyed the grand narrative, but also the ideas of concrete truth, leaving a vacuum that cannot be filled. If historians were to adhere strictly to modernist and postmodernist theories without a solid grounding in historical context as revealed in textual and material culture, these accusations would be valid. A mindful weaving together of both philosophical and historical approaches, however, allows for engagement with present and past through myriad vistas in an ever changing world of shifting signifiers and relative truths, while remaining grounded in the endless permutations of human experience.