

Transversal: International Journal for the Historiography of Science, 2022 (13): 1-22

ISSN 2526-2270

Belo Horizonte – MG / Brazil

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Article

Surpassing Factual Preservation: An Interpretive Approach to the Constructionist Pharmaceutical History

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Abstract:

This historiographical paper gains novelty by rebutting the medicine-centered methodology frequently employed in the positivist studies of pharmaceutical history. Based on the critiques of current literature, this paper conveys two interrelated points. First, the factual approach adopted by positivist pharmaceutical historians demonstrates the explanatory limitations that the report-like discourses on the history of drugs and medicines are too pedantic to be rationally insightful. Second, the attempts of developing a sociocultural framework for the British history of opium consumption remain an underdeveloped topic for the constructionist historiography of pharmaceutical science. Taken together, the author attempts to hypothesize a research methodology for the constructionist pharmaceutical history by introducing a theory of interaction that uses an interpretive approach to humanize the past of drugs and medicines for the philosophical explorations of the human-centered world. In doing so, pharmaceutical history is able to fully realize its long-wasted potential as an intellectual source of enlightenment.

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Keywords: Historical Positivism; Historical Constructionism; Sociocultural Framework; Interpretive Approach; Theory of Interaction

Received: September 16, 2022. Reviewed: October 20, 2022. Accepted: November 11, 2022.

DOI: <http://dx.doi.org/10.24117/2526-2270.2022.i13.03>



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Introduction

As a study of the past, history can be defined as either the practical manifestation of representational realism or the brainchild of conceptual constructionism. For the historical positivists, the representational realist theory methodologically complements their view that historical memories should be preserved as factually as possible (Gould 1986). In their view, the duty of historians is to “discover and record the most relevant and essential information” that upholds the principle of uncovering most accurate facts (Carrier 2002). Contrariwise, historical constructionists see history as a source of conceptual yet ideological explanations that philosophically enlightens our understanding of the world from the perspective of which

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mankind is the central actor for the historical evolution from the past to the present (Frankel 1957).” Because of this, the historical constructionists emphasize the philosophical rationale in the human-centered history that “[in the case of comprehending the contemporary], there is no way to create comprehensive, plausible, and verifiable explanations without taking [humanized] history seriously into account (Berridge 2008).” In short, historical constructionists use history as the explanatory tool that decodes the pattern of modern world by idealistically exemplifying perceived elucidations for the events of the past. It is this interpretive function of history that permits the constructionist historians to elevate the human minds to a higher level of intellectual capacity when surveying the meaning of the word “reality” as a conceptual realization of philosophy. Such is the ground on which history can be celebrated as being an influential discipline (Tosh 2019).

Unfortunately, the pharmaceutical historians in large part aren’t particularly fond of the historical constructionism. As dictated by the medicine-centered historiography of pharmaceutical science, the loyalty of scholars writing about the histories of pharmacy, pharmaceuticals and medical technologies lies within the positivist idea that “historians are the workhorses of long-term social memory (Carrier 2002).” That is, in the eyes of pharmaceutical historians, the purpose of examining history is to produce factist chronicles that even the tiniest details of past stories occurred in the disciplinary development of medicine are being reported to the fullest extent. Therefore, what we generally observe in the review of existing literature is that pharmaceutical historians are laborious to clarify technical facts at the cost of seriously undermining the formations of explanation and rationale. In the context of professional histories of pharmacy and medicine, the “technical facts” include but are not limited to the newly discovered texts produced by ancient practitioners, pharmacy artefacts, former therapies, and the institutions of ancient medicine that are excessively investigated as the word-to-word reconstruction of data-based history (Richmond and Stevenson 2017). Evidently, the factual methodology of pharmaceutical historians is somewhat comparable to that of the empirical scientists. The way with which the studies on pharmaceutical history are styled by positivism can be likened to the practice of writing scientific report. As might be expected, a pharmaceutical historian will most likely keep the interpretations of knowledge to a minimum because the process of generating explanations requires personal judgement and informed imagination that contradict badly with the fact-based thinking of science.

The emphasis for factualness in pharmaceutical history naturally invites professionalization and specialization that “clinicalization” for the historiography of pharmaceutical science becomes inevitable (Burnham 1999). Expressed differently, the histories of pharmacy, pharmaceuticals and medical technologies are exclusively written by and for the scientifically trained clinicians (Helmstädter 2020a). What this implies is that the research authorship for pharmaceutical history is largely inspired by figures, statistics and numbers. No historical positivist is able to deny that the rules of data-handling must be applied to the historical investigations of pharmacy. The positivist methods of factually presenting the information collected as an experimental report essentially nurture the writing style for some of the most senior pharmaceutical historians in the contemporary. Consequently, historical constructionism, which philosophically facilitates the theorization of sociocultural framework for general interpretation of history, in most cases fails to attract the attention of pharmaceutical historians. The writers of pharmaceutical history, who normally read medicine in their student years, are methodologically accustomed to the fact-gathering research. Furthermore, they neglect the needs of elucidating pharmaceutical history from a philosophical perspective that considers the past of medicine and pharmacy as a subject for sociocultural analysis. The fact that the practice of historical positivism disregards the constructionist interpretation is the Achilles’ heel for many pharmaceutical

historians. Without interpretivist approach of historical constructionism, the historical knowledge of medicines and pharmaceuticals can never achieve its full potential.

The “fact-based methodology” of historical positivism is intrinsically problematic if we see the pharmaceutical history as a sub-discipline of history. Since what we call “the general history” is an outcome of the historical constructionism that personal and theoretical beliefs of evidences are the main feature of writing, three issues are identified when pharmaceutical history is studied by the historical positivists (Hobart 1989).

First, by applying the theory of representational realism in their researches, pharmaceutical historians “strictly adhere to [documentable records and statistics] (Ludmerer 1990).” This explains why they are reluctant to develop philosophical theories for the factual information gathered. Stressing the specialty of a relationship between humanity and therapeutic agents demands them to adopt factist approach that constitutes the foundation of a competent assessment for pharmaceutical history. What it means is that, for some pharmaceutical historians, the scientificness of medicine and pharmaceuticals makes their histories distinctive from the general history that employing the constructionist doctrine for methodology detracts the objectiveness of medical discipline. Thus, as they take pride in their laborious investigations of collecting figures, most pharmaceutical historians lack the vision that pharmaceutical history, like other branches of general history, can be used to unmask the truth of world at a philosophical level. The constructionist view is despised by historical positivists that, in order to produce explanatory power, history must be narrated to mirror historians’ ideologies. Naturally, pharmaceutical history becomes a “personal plaything” of the fact-appreciating professionals. By condemning historical constructionism as being unscientific, the positivist examinations of pharmaceutical history lose the interpretive function which often gives unmatched insight to the understanding of “present reality.”

Second, the medicine-centered approach shaped by historical positivism overestimates the gravity of factual preservation that frequently marginalizes the relevance of the historical studies for pharmaceutical science. Put another way, “what most needs analysis [in pharmaceutical history] is not the dimensions of a problem - the statistical and epidemiological approach has spilled over in historical discussions from its dominance of contemporary scientific writing on [pharmaceutical matters] - but the definition of it (Berridge and Edwards 1987).” The one interesting thing about her remarks is that Berridge indicated the importance of exploring the complex relationship between men and medicines in the light of conceptual interpretation (Plant 1999). Yet, because pharmaceutical historians are mostly the disciple of historical positivism, the realist style of their factual discourses is inherent as well as inevitable. Considering that medicine-centered historiography of pharmaceutical science dominates the methodology of which pharmaceutical history ought to be written as the data report, constructionist survey that ideologically analyze the metaphysical characters of medicine and pharmaceuticals in the context of historical philosophy will remain absent.

Third, since the positivist pharmaceutical historians refuse to generate rational explanations of their own, facts and figures presented by their works are often susceptible to misinterpretations. Taking the debate about drug control policy in Britain in the 1970s as an example, the extent to which the research for history of opium consumption was misused by the positivists caused the prohibitionist legislations to be generally ineffective (Berridge and Edwards 1987). As shrewdly noticed by Berridge, “those concerned with present policy have been too intimately involved with the assessment and selection of material from the past (Berridge and Edwards 1987).” What is more, “the statistics of the past have been quoted in comparison with those of the present with little realization of the pitfalls of historical data, the very different cultural and social situations of drug use in historically distant societies (Berridge and Edwards 1987).” The historical factists who do not recognize

history as a theoretical foundation for constructionist interpretations have “a tendency to read the preconceptions and values of the present too directly into the past (Berridge and Edwards 1987).”

Accordingly, as a discipline, the pharmaceutical history is at large belittled by the established academia for not being interpretive enough. Nevertheless, there have been attempts by few social historians of medicine to upgrade the historiography of pharmaceutical science so that the explanatory scope of pharmaceutical history can be significantly expanded. In 1960s, numerous historical specialists tried to “place medicine in a wider social and cultural context (Anderson 2005).” Rosenberg “explored medical history in relation to broad social and political currents (Peckham 2010).” Two decades later, Berridge examined the social history of English opium eating to feed the makings of contemporary drug control policy. Similarly, Neustadt and May also suggested that the history of public health management could be used to “furnish insightful evidence for decision-makers formulating future health policy (Peckham 2010).” In contrast, Brown explained “the British prohibitions of opium” as the social aftermath of what he termed “the conscientious politics (Brown 1973).” And while Harding expounded the emergence of opium addiction in Victorian era from the perspective of moralist ideology, Fay proclaimed that the suppression of British drug trade in Far East was induced by the “Protestant Crusade (Harding 1986; Fay 1971).” Moreover, since the commencement of this century, people like Ng and Kim have all provided us with their own version of historical theories that treats pharmaceutical history as either something intertwined with sociology or the byproduct of imperial bureaucracy (Ng 2016; Kim 2020).

What is self-evident about the studies quoted above is that an “interpretation-based model of constructionist reasoning” has been developed for the pharmaceutical history (with limited success nonetheless). Currently, the author can conclude with much confidence that factual preservation is still regarded as the principal function of a positivist pharmaceutical history. Because history generates relevance and intellectual power for being philosophically insightful in the realm of constructionist ideologies, the factual tradition of pharmaceutical historians marginalizes their importance in the researches that elucidate the structure of present world as the continuation of the past. At the time of writing this essay, the mainstream historians are still indifferent about the theoretical development of pharmaceutical history.

It is against this specific backdrop that the author seeks to introduce the constructionist interpretation for the pharmaceutical historians. The idea is to realize a vision that the purpose of studying pharmaceutical history should be more than just collecting facts. The historiography of pharmaceutical science requires a theoretical revision that the information preserved by the positivist research of pharmaceutical history can be used to explain humanity and world in a wide-ranging context of sociocultural phenomena. Namely, a pharmaceutical historian will need to be intellectually imaginative about giving elucidations so that the explanatory capacity of the pharmaceutical history is not restricted by historical positivism.

By applying the doctrine of historical constructionism in the methodology of pharmaceutical history, this paper introduces the interpretive approach that surveys the past stories of medicine and pharmaceuticals in the light of metaphysical philosophy for humanism. This is to show that our interactions with medical actives in history impact the construction of the contemporary. There exist three tasks for this paper to undertake. First, publications from the *Pharmaceutical Historian* are exemplified to illustrate that factual analyses of pharmaceutical history are incompetent to describe the ontology of medicine in the human-centered language of rationality. Second, as a part of explicating the author’s argument, a historiographical critique for the British history of opium consumption is produced that the constructionist framework of sociocultural interpretation can be theorized. After meeting

the objectives laid out in the first two tasks, this paper is then prepared to propose an “interaction theory” to upgrade the sociocultural interpretation of pharmaceutical history as the third and final assignment. Although social historians of medicines and pharmaceuticals in the 1960s were on the right path to explore the possibility of framing an interpretation-based model of constructionist reasoning, the theoretical development of their works has experienced difficulties. Specifically, their understanding of historical constructionism was still confined to the idea that the sociocultural explanations of pharmaceutical history should only be employed to assess the historical origin of contemporary medical institutions. This gives rise to the perception that discourses for the history of British opium use remain too professional to allow the rational application of pharmaceutical history in wider context.

Needless to say, the methodological poverty of pharmaceutical history favorably creates relevance for writing this paper. Especially, the author ontologically envisages that the interactive relationship between the health-pursuing minds and the existence of diseases initiated the historical dynamics of pharmacy, pharmaceuticals and medical technologies. Understanding such interactive relationship offers the pharmaceutical historians a historiographical opportunity to contextualize the complexities of medicine and pharmaceuticals in the milieu of external world that, in turn, expands the scope of elucidation for the pharmaceutical history by functionalizing the past events in the medical world as a key to address the need of comprehensively explaining the modern humanity.

The Limitation of a Factual Approach: An Alienated Journal of Pharmaceutical Historian

In *Milk of Paradise*, Inglis remarked that “the research this book entailed, although set in motion by personal experience and a cursed curiosity, has been both desk- and field-based. The former attempts, in the main, to reduce opiates, and now opioids, to a number game: kilograms seized, hectares burned, numbers arrested (Inglis 2019).” Such structural explanation of her research proves to be extremely relevant because it indicates the historiographical importance of historical positivism (or as termed by Inglis, “the number game”) in the examinations of pharmaceutical history.

The present view within the academic community is representationally demonstrative of the fact that the “number game” helps the pharmaceutical historians to focus on “the documentations of [clinical] stories and [pharmaceutical] experiences (The American Institute of the History of Pharmacy 2020a).” In consequence, the research methodology through which the discourses for pharmaceutical history are penned is styled in accordance with the principles of positivist professionalism and scientific clinicalism. Unsurprisingly, answering the “scientific questions” about pharmaceutical history in positivist manner becomes the priority for some pharmaceutical historians. It is to be noted that the scientific questions are concerned with quantifiable properties of medicines and pharmaceutical profession. They could include the following: what were the dosage forms used in the ancient medicine? What clinical activities did the physicians carry out? How medicines were administered in ancient times? Questions like these are highly technical that require factist answers. Therefore, pharmaceutical historians are accustomed to the practice that, rather than treating it as a field of the historical study, pharmaceutical history is written in a way that mirrors the factual professionalism of the clinical discipline. What this elucidates is the reason for which the medicines-centered preservation of facts is regarded as the sole research method for the pharmaceutical history (Sur and Dahm 2011). Put simply, when exploring the historical truth of medicines and pharmaceuticals, data and statistics prevail in the “historiographical competition against the doctrine of historical constructionism” since the natures of pharmaceutical history are “scientific and professional (Helmstädter 2020b).” Appreciating scientificness and the professionalness of pharmaceutical history paves the way

to the understanding of why pharmaceutical historians have a clinical way of thinking for methodology. They repudiate, as fiercely as they can, the interpretive approach which, if employed, will appropriately address the complex philosophy of humanity in history. Regrettably, the fact that pharmaceutical history is of positivism makes it a tool for the clinicians to merely develop professionalism, leadership and medical ethics. In plain English, the factual approach narrows pharmaceutical historians' perspective significantly when it comes to interpretation. It mechanistically and pedantically confines the explanatory scope of pharmaceutical history to the scientific domain that the findings of the pharmaceutical historians are often detached from the general reality and common sense.

The major problem with a positivist pharmaceutical history is that it is deprived of the rational capability to elucidate how the sociopolitical structure of a progressing human life is influenced by such factors as pharmaceutical products. The rightful function of pharmaceutical history to explicate the past in a constructionist way is impaired by the factual method that considers positivist documentation of medical data as its only role. What this has caused is that the research contents of pharmaceutical history cannot be integrated with the metaphysical explanations of which the daily events experienced by the humanity are theorized as the studied phenomena (Green, Haddad and Aronson 2018). To rephrase, the fact-based studies of pharmaceutical history are, methodologically speaking, too exceptional to be accepted as a sub-branch of history. Because such exceptional methodology is employed in a discipline that mostly welcomes historical constructionism, the literal and positivist translation of the figures collected, which is usually a pride for many scientists, becomes a curse for the pharmaceutical historians. Their failure of developing a constructionist framework to characterize the past of medicines and pharmaceuticals as the human phenomenon is marginalizing the disciplinary authority of pharmaceutical history.

As it has been reiterated numerously in this paper, the belief shared by many pharmaceutical historians that the knowledge about medicinal products is somehow professionalized wrongfully separates “the history of pharmaceutical world” from “the history of human world.” The former requires sophisticated skills of historical positivism while the latter is just “a linguistic and unscientific imagination of the unlettered (Kertész 2010).” This kind of positivist perception about the difference between pharmaceutical history and human history encourages the professionally trained pharmaceutical historians to think that the constructionist interpretation for the historical reality of human world is too petty to be taken seriously. Understandably, much of their research enthusiasm is devoted to the factual assessment of the historical development in the pharmaceutical world that contextualizing the constructionist explanation for the past of medicines and pharmaceuticals in the matrix human phenomena does not deserve their time and effort. Such is the reason for which pharmaceutical history is alienated by the mainstream academia.

Being detached from the established community of history pressures the pharmaceutical historians to seek theoretical upgrade of historiography that provides the author with an opportunity to write this paper. What we will undertake now is to analyze the most representative articles selected from the *Pharmaceutical Historian*, the international journal for the history of pharmacy. Since its first publication in 1967 the journal has always been viewed as being “specialized” and “professional.” Thus, to the journal's editors, the principal outlook is to promote a historical education in pharmacy by which competence and professional leadership are ensured (Anderson 2017). The implication for defining pharmaceutical history as a part of pharmacy discipline is the introduction of historical positivism that situates the methodology of history in the empirical theory of clinical science. For many experts of social medicine, pharmaceutical history has to be fact-based so that it suits well with data-oriented style of scientific research. In a pedantic way, the explanatory function of history obscures the objectiveness of science that it has no place in the factist fields of knowledge such as medicine. Frankly, historical positivists would like the writings of

pharmaceutical history to be as scientific as possible because the purpose of learning history in healthcare is to theorize the continuous developments of professionalism and leadership. Surely, the “fashionable nonsense” produced by historical constructionism is detrimental to this cause. Hence, the editors of *Pharmaceutical Historian* are mostly inclined to invite “scientific contributions and comments [from the clinicians] (Kletter 2017).”

By semantically appraising the structural linguistics for the essays published in the *Pharmaceutical Historian*, this paper finds that four research themes characterize the scientific surveys of the positivist pharmaceutical history. The first research theme encompasses the personal stories of the historical pharmacists. Throughout decades of journal publication, scholars like Morson, Block and Worling all wrote articles that present the readership with the factual chronicles for some of the most famous figures in pharmaceutical history (Block 2008; Morson 1988; Worling 1998). Despite the potential generation differences, the way in which these pharmaceutical historians wrote their discourses are surprisingly similar. They have almost standardized the structure of research by consistently gathering such factist information as the family origin, education background, apprenticeship, and the professional achievements. As their research objective is to accurately recreate the career trajectories of the historical pharmacists for the purpose of clinically enlightening today’s practitioners, a biographical study of a qualified pharmacist in history virtually offers no interpretation that goes beyond the facts presented.

The second research theme comprises the historical assessment of medicine employments that, as a clear extension of historical positivism, will be inherently technical and factual. For instance, Clarke studied how chloral hydrate was used medically in 19th century Britain (Clarke 1988). Then there was Jackson who analyzed the treatment of poisoning from classical times to late 18th century (Jackson 2000). On the other hand, Guly penned a series of papers that recorded “the drugs taken and used during the heroic age of Antarctic exploration (Guly 2012).” The lessons that we can learn from the works exemplified above are that, for the pharmaceutical historians, factual preservation comes above everything else when investigating the historical administrations of medicines. There is no room for theoretical development that rationalizes the history of medical utilities as an intellectual leverage to lift the burden of the underexplained humanity in pharmaceutical world.

Relating the daily operating procedures for pharmacies in history forms the third research theme that ascertains the historical facts for the professional managements of pharmacy businesses. Wholesale trading activities, medical advertisements, counter-prescribing, dispensing, formulating variety of dosage forms, writing prescriptions and developments of businesses are the typical information which normally constitutes the main essay contents (Cox and Anderson 2018). The technicality of the information presented in these studies forces the pharmaceutical historians to fashion an expression that structurally and linguistically promotes scientific methodology for pharmaceutical history. What has resulted from this is the theorization of historiography of pharmaceutical science that the historical examinations of pharmacy ought to have the professional and clinical connotations. The constructionist interpretation that handles the metaphysical philosophy of history is deemed scientifically inaccurate and therefore disregarded.

The fourth research theme concerns the study for ancient pharmaceutical items. The term “pharmaceutical item” can either mean a medicine or a technological product within clinical science. A 2016 essay by Hardy is a typical example because it assessed “an ointment from a late 17th century Italian medicine chest (Hardy 2016).” Later, Lindeke characterized “four Nuremberg medicinal weights recovered from the wreck of the seventeenth century Swedish warship HMS KRONAN (Lindeke 2019).” The medical properties of the ancient pharmaceutical items have exhausted most of the pharmaceutical historians’ writing effort that the factist methods have to be employed for maintaining the principle of historical

positivism (just like all of the papers in other three research themes). Instead of elucidating the data gathered, the main focus for these essays is to merely exhibit the faithfully documented facts.

The positivist practices adopted by pharmaceutical historians are dictated by the applications of pharmaceutical history. The conventional belief is that the histories of healthcare professions are used to develop clinical leadership and professional competence (Metcalf and Stuart 2013). With this in mind, it is easy to see how pharmaceutical history serves a scientific cause which consolidates the medical authorities for the practitioners. Its function is to assist the optimization of patient-centered care by utilizing the positivist methodology that recognizes history as a “knowledge reservoir” for the continuous professional development of the clinicians. Because of this, the luxury of framing the interpretivist constructionism in the historiography of pharmaceutical science cannot be afforded by the scientifically-trained historical specialists of pharmacy. They will have to be factually accurate so that the tone of their works theoretically safeguards the data-based empiricism commonly observed in the practices of healthcare professionals. As the result, in order to reinforce the scienceness of pharmaceutical history, pharmaceutical historians are encouraged to employ the medicine-centered historiography. After all, for the qualified practitioners, the purpose of being historically conscious is to further an evidence-based thinking in clinical setting.

Fundamentally speaking, pharmaceutical history is under-developed because it fails to rationally illuminate the present with its explanatory theories. It is overwhelmingly satisfied with factual description that its understanding of our reality is both pedantic and rigid. Pharmaceutical historians are only interested in such questions as how we can authentically retell the stories of the past events for the medical world? By answering questions like this as the historical positivist, they maximize the factuality for the histories of pharmaceuticals, pharmacy and medical technologies at the cost of eliminating theoretical richness of history. What they have done essentially is to “professionalize” pharmaceutical history for clinical science. And since scientists only speak in the language of numbers and figures, pharmaceutical historians write in a style that data outnumbers the words. They adopt the positivist method of inductive reasoning to reflect the factist historiography. The integrative and constructionist logics which form the basis of the historical argument is nowhere to be seen in their studies.

Having reviewed the literature in the *Pharmaceutical Historian*, what we can conclude is that historical positivism makes the discipline of pharmaceutical history theoretically unimaginative when constructing a methodological system for analysis. Rather than assessing the humanistic ontology of pharmaceutical history, they prefer to factually approach “their research subjects in positivist dimensions.” The rationality behind this is the disciplinary categorization of pharmaceutical history as the sub-branch of clinical science that the contents of investigations must be data-based. Thus, pharmaceutical historians methodologically abandon the constructionist reasoning which normally will grant history a distinctive academic influence. A positivist historiography offers no explanations that provide us with the ultimate insight to the philosophical meaning of humanity from the historical perspective. Eventually, the fact-preserving discourses on the pharmaceutical history will be vulnerable to laypeople’s superficial yet incorrect interpretations. It is for this reason that the leading journals in this discipline (e.g., *Pharmaceutical Historian*) becomes the victim of scholarly alienation. The dismissal from the fellow historians is the single biggest limitation that specialists surveying the histories of pharmaceuticals, pharmacy and medical technologies will have to face.

The English History of Opium Eating and the Employment of Sociocultural Approach

When explaining the personal motivation for writing the *Milk of Paradise*, Inglis has mentioned that half of the book's contents is concerned with the "the human stories of addiction and recovery, of war, and treatment from both ends of the doctor-patient spectrum, but above all, the existential needs that drive humanity to seek the temporary relief opiates provide (Inglis 2019)." In my view, the most interesting thing about her comments is the constructionist indication of why human-centered interpretation is important for the history of opium. She has effectively stressed that drug historians need to focus on the sociocultural relationship between opium and men if they want to fully understand the existence of narcotic in human life. The so called "sociocultural relationship" connotes a historiographical development that uses the doctrine of historical constructionism to transform the methodology of pharmaceutical history.

Arguably, the inherent nature of history is defined by a collective of human activities that is entangled with all facets of human life. An examination of history is therefore really an examination of how humanity had participated in such activities as cultural production, construction of social relationship, consumption of goods, ideological moralization, and intellectual undertakings. The accumulations of the human activities as the integrative experiences forge the history. What this means is that the essence of history is a comprehensive system of humanistic phenomena that requires historians to observe it through a sociocultural lens. The same thing can be said about pharmaceutical history. Pharmaceutical historians should employ the appropriate approach which addresses the sociocultural comprehensiveness of human activities involved in the historical progression of the pharmaceutical profession. In all honesty, the idea that pharmaceutical historians are the custodian of clinical healthcare is only a partial picture of what pharmaceutical history is really about. Just like all other sub-branches of history, the function of pharmaceutical history is to philosophically expound how humanity has culturally and socially sophisticated itself from a state of nothingness. Medicines and pharmaceuticals, in this case, are a theoretical foothold for the pharmaceutical historians to develop their constructionist interpretations.

Indeed, historical constructionism was a central theme for Berridge when she attempted to write a sociocultural history for the English opium eating in the 70s. To quote her own words, the objective of "Berridge analysis" was to examine "the process whereby opium, a drug once freely available and openly sold in every type of shop, gradually became restricted, and its regular users classified as ill or deviant in some way (Berridge 1977a)." What is revealing about her research objective is that she did not intend to restrict the discussions surrounding the opium use in 19th century Britain to the scientific realm. As an astute social historian of medicine, she had a firm grasp with the notion that the tangibility of pharmaceutical products was never the foundational core for pharmaceutical history. Rather, it was our metaphysical and intangible perceptions about medications that shaped the continuation between the past and the present for the health-prioritizing society. As a matter of course, the crafts of constructionist historians were appropriately employed in her investigations to which her explanations for English opium consumption were no longer "pharmaceutical." She recognized the sociocultural comprehensiveness of a human-centered pharmaceutical history by exploring "the debates about drug use within nineteenth century British society (Berridge 1977b)." She surveyed "the public and official reactions for the working-class opiate consumption in the nineteenth century England (Berridge 1978a)." She studied the cause-and-effect relationship between the myths of East End opium dens and the emergence of anti-opium sentiment (Berridge 1978b). Taken together, these exemplified works have demonstrated how the historiography of pharmaceutical science was perceived by Berridge. Her highly celebrated writing, *Opium and the People*, provided "the

context for the evolution of current UK drug control policy” that framed the history of English opium consumption as a sociocultural reflection of the humanist society (Plant 1999). In the book, it was argued that “professionalization of pharmacists and medical men, the debate over the India-China opium trade, the temperance movement, and the class bias in society all affected the way later Victorians perceived the drug (Parssinen 1982).” All of the factors listed in the book that she believed to be the cause of British anti-opium movement were humanistic in nature. Berridge must have realized that her version of opium history was founded upon a constructionist foundation of interpretive approach. As rightfully pointed out by Walton, *Opium and the People* viewed “[the opium problem] from a perspective of social pathology which arose from the preoccupations of increasingly vociferous nineteenth-century reformers, and from the mainly twentieth century association of opiates with recreational rather than medical uses, and with deviant sub-cultures (Walton 1983).” The main message conveyed here is that the moral condemnation of opium by Victorian public was the result of a comprehensive yet dynamic social context. In essence, a spot-on examination of pharmaceutical history needs a methodological assistance provided by the human-centered doctrine of historical constructionism.

By having *Opium and the People* as a case in point, what we can learn from it is that British opium utility in 1800s was not only a medical problem but also a matter of sociocultural ecology. The complicated milieu had interacted with British drug ideologies that occasioned the moralist crusade against opium in the late 19th century. Clearly, the problem of how opium was banned in Britain was not “pharmaceutical” any more. Again, it came down to the philosophy of men in the historical setting. As far as historians are concerned, history, in a philosophical sense, is composed of a humanity that characterizes itself as a sociocultural creature (Schoenherr and Burleigh 2015). Such is the reason why Berridge focused on the factors which socially, culturally, politically and ideologically transformed people’s attitude towards opium in 19th century Britain. Basically, she constructed a methodology for the history of English opium use that puts “human beings” at the center of research. *Opium and the People*, which primarily utilized the social status of opium in Victorian Britain as a surgical instrument to dissect the sociocultural anatomy of the cognitive human mind, stressed the vitalness of analyzing pharmaceutical history from the constructionist perspective. In the book, Berridge proposed that the UK drug control policy in the 1970s was shaped by the evolution of a social attitude observed in the 19th century. Highlighting the contemporary addiction conditions and policies in Britain as a continuation of the past indicates interpretive constructionism in the sociocultural historiography of *Opium and the People*.

Then, it becomes pretty self-explanatory that, when writing the English history of opium employment, Berridge defied the idea of which pharmaceutical history should be a clinical discipline. In the first pages of *Opium and the People*, the readership has been told that “the author kept the technical language to a minimum (Berridge and Edwards 1987).” Obviously, she refused to write the book in the scientific language. By choice, she decided to shy away from medicine-centered narrative which, if used, would force the author to pen *Opium and the People* as another positivist discourse. Fortunately, what we now see in this book is actually the development of an explanatory model that discussed the English opium usage in 1800s as a cultural aftermath of the ideological transformation within the Victorian society. That being so, she explained how the drug control policy in UK evolved to the present stage by employing a sociocultural approach to generate comprehensive interpretations that recognized the ideological and intellectual complexities of humanity in pharmaceutical history. In doing so, she rightfully brought the history of pharmaceutical world back to the history of human world.

The “humanization” of opium history by the constructionist “Berridge analysis” enlightened many of her colleagues. Through the explorations of personalities and religious conscience, Harding introduced a moralist theory that elaborated medical denunciation of

addiction in Britain in late 19th and early 20th centuries as a consequence of manner reformation (Harding 1988). In comparison to what Harding did, Strang, however, later examined the heated debates which was aroused by Thomas De Quincey's *Confession of an English Opium Eater* (Strang 1990). Subsequently, Holloway penned a sociopolitical history for the Royal Pharmaceutical Society of Great Britain that, revealed for us, the embedding of humanist phenomena in the pharmaceutical world (Holloway 1991). Lastly, in recent past, Bonea and her team illustrated "how complexly interconnected the worlds of science, medicine, and technology were with society, religion, government, and family life (Bonea et al 2019)"

In a nutshell, with Berridge included, all of the historians mentioned above demonstrated that pharmaceutical history and human history are inextricable. The foundational human activities that structured civilizations since the dawn of time have always included the manufacture, supply and consumption of medical products. This is the precise reason that pharmaceutical history, on the whole, needs to be humanized. A pharmaceutical history without the constructionist investigations of humanity is, by definition, incomplete. As such, the duty of pharmaceutical historians should be more than preservation of facts because pharmaceutical history has always been an important thread that unmask how the fabric of the human-centered historical reality was entwined together. The pharmaceutical historians must be able to frame an elucidative methodology that treat the factual preservations of pharmaceutical history as a starting point to understand the comprehensiveness of human history. Our relationship with medicines must be understood as something that is deeply entangled with the social, cultural, political and ideological facets of human world. The humanization of pharmaceutical history inspires historians like Berridge to theorize a sociocultural approach that focused on the constructionist interpretation. They placed our experiences with medicines in a complicated system of reasoning to address the integrative humanness of history. By doing so, they established a philosophy for the pharmaceutical history that a continuity between the past and the present determines how the medical facet of reality shapes the human world. Hence, with the application of a proper explanatory framework, medicine's age-old stories can facilitate us to comprehend the ontological characters of humanity at metaphysical level.

Regrettably, the success which Berridge and others alike achieved in exploring the possibilities of developing a constructionist method for pharmaceutical history is unfruitful to say the least. To date, the verdict is that sociocultural histories of pharmaceuticals, pharmacy and medical technologies are "under-explored (The American Institute of the History of Pharmacy 2020b)." The truthfulness of this verdict lies in the fact that, although medical historians including Berridge have attempted to break the chain of historical positivism, the scope of interpretation which they assumed in their discourses continued to be clinical and narrow. While *Opium and the People* was written to inform the prescription of drug regulation policies in the contemporary, Harding based his assessment for the "problematic addiction" in the 19th century Britain on a proposition that "drug history is a medical matter (Berridge 1999)." Controlled use, therapeutic dependence, withdrawal techniques and tolerance which are technical subjects often found in the clinical studies remained the key topics of discussions in Strang's paper. Also, as proclaimed by Holloway, the motivation for writing sociopolitical history for the Royal Pharmaceutical Society was to enlighten "the future generations of pharmacists (Holloway 1991)." The consistency of how scholars surveyed pharmaceutical history is self-evident that the major focus of research is still the professionalism of healthcare even though some constructionist efforts have been made for the methodological introduction of sociocultural interpretation. In this regard, people like Berridge, Harding, Strang and Holloway failed to completely escape the view that pharmaceutical history is for professional applications only. Inescapably, this has impaired the interpretive capability of the pharmaceutical historians to philosophically resolve some

of the “big questions” in “general history.” What the author actually means by this is that theorizing the making of humanity characterizes the rationality of history. The “big questions” correlate the existence of mankind with the external matrix of sociocultural phenomena that helps us appreciate the philosophical generalness of human historicity. For the constructionist pharmaceutical history, the “big questions” are the ones that explore the formation, the dynamics and the prospect of humanist society from the medical perspective. Examples may include the following: what could the consumption of medicines by the British people in 1800s tell us about their living standard? Could the self-medication practices within the lower social order of British society in 19th century signal a class-reconstruction? How the healthcare professionals in history represented the progressiveness of a civilization? As one would imagine, most of these questions cannot be answered by the existing literature of pharmaceutical history. Specially, the writings for the sociocultural history of opium consumption continue to be partially factist that they fail to live up to their explanatory potential. Merlin’s *On the Trail of the Ancient Opium Poppy* is a perfect illustration of this because its contents seem to be way too professional and botanical (Merlin 1984). Even Berridge has turned her eyes to the clinical aspect of opium history in the beginning of this century (Anderson and Berridge 2000). To the best of my knowledge, the only works that can, to an extent no less, respond to the big historical questions are *Anxious Times, Empires of Vice* and *Milk of Paradise*. They shared a striking similarity in methodology that they all used the pharmaceutical history of opium as a way to expound the rationale of human-centered world. Certainly, this is something that senior drug historians didn’t do in the past. Neither Berridge nor Harding have comprehensively interconnected the past of pharmaceutical world with men’s general experiences. Likewise, Strang, Merlin and Holloway merely regarded opium as a medical item needing positivist investigations. On the account of this, their interpretations were partially professional that there was no way to fully transcend the already-established narrative of which pharmaceutical history was presented as an explanation for the affairs of medical humanity. But the strength of *Anxious Times, Empires of Vice* and *Milk of Paradise* exactly relies on this fact that Berridge and her contemporaries haven’t journeyed into deepest part of historical constructionism. The authors for these three books have in effect used the pharmaceutical history to address the multifaceted properties of the human-centered reality. Their historical examinations for “human phenomenon” which manifests in social, cultural, religious, moral, political and ideological spheres were thoroughly performed in a comprehensive system of all existences that put emphasis on the all-embracing nature of the constructionist history.

Developing the Theory of Interaction: An Interpretive Approach to a Constructionist Pharmaceutical History

With a lengthy literature critique, the author has managed to assert that a positivist pharmaceutical history is impaired by the scientific methodology. The fact-based approach greatly limits the functional potential of the pharmaceutical history as an explanatory source for inspiration and enlightenment. Following the doctrine of historical positivism mechanistically has cost the pharmaceutical historians their disciplinary acknowledgement within the mainstream academia. Owing to this reason, there is an urgent need for pharmaceutical history to upgrade its historiography that a constructionist writing style is to be fashioned. Undeniably, drug historians in the 70s pioneered the historiographical upgrade for pharmaceutical history by associating opium consumption with the human phenomenon that generated integrative interpretations at a sociocultural level. Yet, they only achieved a partial success because the aim of their elaborations was to enrich our understanding for medical humanity. By not completely humanizing men’s relationship with the narcotic as a

historical matter, they failed to answer the “big questions in general history.” Briefly, the under-explored sociocultural approach ought to receive a theoretical revision so that the pharmaceutical history can be used to address the comprehensiveness of the human-centered reality. The illuminating works such as *Anxious Times*, *Empires of Vice* and *Milk of Paradise* have motivated the author to invite the possibility of introducing an interpretive approach for the constructionist pharmaceutical history. Developing a novel theory of interaction is the key to the framing of the interpretive approach. As argued by the author, “the humanization of history” is the defining characterization of the interaction theory that permits us to hypothesize pharmaceutical history as a means of decoding the sociocultural structure for the world. In the final part of this essay, the author will explain what the humanization of history is and how we can apply the theory of interaction in the explanatory model of pharmaceutical history.

The conceptualization of ontology for pharmaceutical history determines the way with which we humanize the past of medicines, pharmaceuticals and clinical sciences. Seven decades ago, Butterfield suggested that humanity is featured at the center of history (Butterfield 1949). Bloch later paraphrased his words by declaring that “history is the product of human action, creativity, invention, conflict, and relationship (Little 2020).” If we were to accept the construct that human beings are the solely actor of history, it can be said that “human action, creativity, invention, conflict, and relationship” have stemmed from the “reciprocal actions in the continued progress of human existence.” Then, history undergoes a process of humanization which can be perceived as the dynamic state of human interactions. Everything occasioned in the past was the outcomes of different types of human interactive activities that has created “different types of human-centered history.” For example, the interactions between human minds have forged our political history. The interactions between human creativity and men’s needs for expression have shaped our cultural history. And while social history is all about the interactions between human productivity and the desire to engineer settlements, it is the interactive relationship between humanity’s wellness-pursuing mind and the bodily onsets of pathological abnormalities that have formed the basis of pharmaceutical history. Based upon the humanization of history, the theory of interaction appraises the past in terms of what mankind had done. For the pharmaceutical historians, the centuries-long stories of how medical world have progressed should be appropriately recognized as the outgrowth of human behaviors.

The interaction theory promotes the humanization of history. Humanity in the past interacted with all kinds of disorders in diverse ways to achieve the disease-free survival. Furthermore, what we observe is a comprehensive historical profile of mankind’s disease-securing activities that pharmaceutical history can be used to represent a matrix of complicated sociocultural phenomena. Put differently, in order to maintain health, human beings have the active mental power to interact either with their internal consciousness or the external surroundings that medically shapes the progressive trend of the general history.

To be specific, pharmaceutical history is first and foremost a premise for the political studies. Given that the interaction theory humanizes the historical events, the establishments of medical institutions can be treated as something ensuing from the interactive relation between people’s want for health and the realized objective of medical standardization. Then there is a humanized hypothesis to explicate the technological advancements in pharmaceutical history. Our appetite for remedies and the intellectual imaginations of mankind mutually produced influences upon one another to induce the historical innovations of the medical scientists. For sociology, practitioners’ self-awareness and the changing structure of society shared an interactive relationship that occasioned the emergence of the professional boundaries. In a word, as dictated by the theory of interaction, a constructionist pharmaceutical history is humanized that it becomes an interwoven web of human activities formed by our survival instinct to eradicate disorders. Hence, the

pharmaceutical historians are tasked with a campaign to place the investigation of medications in a reality that includes every aspect of human life if they desire to surpass the clinical realm of medical sciences. The doctrine of historical constructionism establishes that the human-centered assessments of pharmaceutical history cannot be methodologically dominated by the factual approach. Data and figures are incompetent to mirror the humanness of medicines and pharmaceuticals in the sociocultural fabric of reality. A positivist pharmaceutical history cannot inform us about the simultaneous manifestations of medical happenings in the multiple dimensions of general reality. The fact-based approach, which methodologically determines the research style of historical positivism, only allows the pharmaceutical historians to mechanistically clarify the details for a single event in the pharmaceutical history from a pedantic perspective. It produces scientific enquiry that divorces historical facts from the humanistic milieus. Inevitably, if a constructionist consensus is reached that the pharmaceutical historians are to provide critical insight to the ontology of human world by investigating the “medicine through time,” the introduction of an interpretive approach should become a must.

With the conceptualization of a humanized pharmaceutical history, the theory of interaction develops a theoretical framework of interpretive constructionism to tackle four unavoidable issues commonly observed in the historiography of medicine.

First, a reasoning method should be selected for the constructionist interpretation. Since the factist studies of the pharmaceutical history currently use inductive argument to produce “data reports” that supplement clinical science, they simply cannot stand the assertion that historical thinking shall journey into the territory of philosophical deduction (Osimani 2013). This is to say that, for the “clinical researches of pharmaceutical history,” the concluding remarks must be based on the scientific certainty which, according to the professionals, is solely ensured by figures and numbers. To elaborate, the collections of numerical data and technical facts are “perfectly sufficient” for pharmaceutical history because the findings can be inductively expressed in a quantifiable and evidence-based way. For the historical specialists of pharmacy and medicine, the positivist quantification of research results guarantees the scientific competence as most of them are influenced by the precautionary principle that is commonly adopted in the studies of professional leadership to inform the risk-free practices of pharmaceutical clinicians (Zebroski 2016). Promoting the scientificness of analysis for continuous professional development in clinical practices explains why pharmaceutical historians in the contemporary are inclined to offer a word-for-word induction of the factual evidences collected. In the end, a scientist will always proudly proclaim that “the facts speak for themselves without fail (Caldwell 1980).” Conversely, a constructionist pharmaceutical history, which is structurally qualitative and methodologically deductive, is deemed by the induction-loving positivists as both unquantifiable and unscientific. But overestimating the importance of the factual pharmaceutical history and the inductive reasoning seriously degrades the function of historical knowledge to illuminate human understanding of external world because “access to a symbolically prestructured reality cannot be gained by observation alone (Outhwaite 1988).” No matter how it is being celebrated by the scientific community, historical positivism and inductive reasoning are “ill-suited to reflect the nuance and variability found in human interaction (Outhwaite 1988).” The inability of factual induction to humanize the past is detrimental because history encompasses the interconnected web of human activities in the former period. Therefore, as proposed by the theory of interaction, historians need to employ hermeneutics that “sketches out ways of representing the complex activities and events of the past (Little 2020).” In practice, “their accounts need to be grounded on the evidence of the available historical record, and their explanations and interpretations require that the historian arrive at hypotheses about social causes and cultural meanings (Little 2020).” Thus, it goes without saying that, as humanity is an ideological creature of sociocultural complexity, all branches

of history (including the pharmaceutical ones) are the constructionist product of philosophical rationality if the metaphysical humanness within the stories of the past is to be stressed.

Often, in an effort to pen a human-centered constructionist history, historians “turn to the best available theories in the social and behavioral sciences to arrive at theories about causal mechanisms and human behavior” since the explicit facts are normally absent in the historical enquiry (Little 2020). So, the rational theories produced by the historians “ultimately depend upon theoretical reasoning (Little 2020).” The phrase “theoretical reasoning” refers to the deductive arguments because history is all about the rational surveys of concepts and ideologies (Nozick 1994). Under most circumstances, notions and ideas lack the tangibility that normally characterizes numbers and figures. In simple terms, they are too abstract to be analyzed by induction.

The deductive framework of reasoning transcends factual induction in areas where the humanization of constructionist history dominates. The methodological superiority of deduction allows it to treat the tacit messages implied in the historical documentations as “the superstructure” when theorizing “the describable laws” in human phenomena (Audi 2001). As historians seek to understand the essence of past events in an abstract form, they will have to deductively base their examinations of historical occurrences on a foundation of which the meaning, the immediate outcomes and the long-term effects of history are interpreted rationally and philosophically. To paraphrase Dietl, deduction completes historical explanation by surpassing the statistical information that ignores the intelligibility and the subjectiveness of humanity (Dietl 1968). By fully exploiting the potential of deductive reasoning, constructionist interpretation commands disciplinary authority for history. Hence, the pharmaceutical historians ought to employ deductive argument when writing the sociocultural histories of medicines and pharmaceuticals on the ground that the exactness of the number-based data cannot reveal the complicated human minds. The pharmaceutical historians must derive objective explanations from the rational deductions, not from the scientific gathering of facts. Given that the theory of interaction humanizes the pharmaceutical history, the human interactions, which in most cases cannot be numerically represented, are to be explored by constructionist approach. This means that the scholars surveying the pharmaceutical history will have to be academically imaginative in generating the deduction-based interpretations.

Second, an explanation of pharmaceutical history, which is formed by the interpretive constructionism, requires a comprehensive perspective. The common sense is that the complexity of history exceeds the competency of a single outlook (Kelly 2013). In the words of Ridgway, “everything is history (Ridgway 1975).” The present is “what has been (Ridgway 1975).” Thus, every facet of reality makes up the integral system of historical happenings that history itself becomes a matrix of complicated and mutually interactive human phenomena. Inclusiveness, comprehensiveness and integrativeness are some of the terms that characterize the attribute of history. It is in this sense that historical explanations are to be produced from the encyclopedic perspective because history almost encapsulates every aspect of human life. Historians need to act like a polymath as their intellectual capability to rationalize the historical experiences is greatly influenced by their intellectual appreciation of the humanized reality. Therefore, surveying history becomes an undertaking that sees the past as a system of diverse facets. Each of these facets requires historians to have different skill sets for investigations that “specialist knowledge” will need to be “borrowed” from a wide range of research disciplines. For a start, historical surveys are integrated with the studies of political science. Historians also collaborate with scholars researching the social relations to offer an account on societal structure and class differentiations. In addition to the study of society, it is no secret that historians have always allied themselves with the researchers of international relations. Meanwhile, Nunn has argued that the economic

assessments need to have a cultural comprehension of history (Nunn 2012). In brief, the relevance of historical explanations relies on the relevance of the theories and the ideas which historians employ to relate the totality of history from an interdisciplinary and comprehensive perspective. On this account, manifesting the diversification of viewpoints in the historical interpretation addresses the complexity of humanized history. If the interaction theory is to be applied in the writing of constructionist pharmaceutical history, the historiographical understanding of what determines the humanization of medicines and pharmaceuticals has to be prioritized. Academics recounting the sociocultural developments of pharmaceutical sciences must realize that a constructionist pharmaceutical history surpasses the scientific perspective. When the positivists produce a medicine-centered narrative, the pharmaceutical history is simply deprived of ways to mirror the whole of general reality. As revealed by Berridge, “there is a danger in stressing the [medical theme] in connection with the [pharmaceutical items] that doctors come to be seen as some autonomous body, working out their designs on [medicines] in an isolated way, for in reality the medical profession merely reflected and mediated the structure of the society of which it was the product (Berridge 1999).” What is indicated in her argument is that the humanization of medical history entails a multidimensional reflection of general reality. As the constructionist pharmaceutical historians, we need to demonstrate how the interactive activities of the human actors caused the formation of sociocultural relations at a level of which medical ideas integrated with the comprehensive system of humanistic existences (Berridge 1999). Ergo, there is a practical requirement for pharmaceutical historians to develop an all-embracing perspective that shows the history of medicines and pharmaceuticals is in fact embedded in the overall structure of the sociocultural world.

The historiography of *Anxious Times* is a perfect illustration of how medical history is used to uncover the cultural sensibility of the Victorian British. The book’s authorship did not historically inquire the psychological wellness of the Victorian society in the light of professional science. On the contrary, by having an exhaustive outlook, they penned a sociocultural history for the “diseases of modernity” in Victorian Britain that interlaced medications with humanity. They analyzed “literature, medicine, science, and popular journalism in the 19th century England” to produce a multidisciplinary book for the history of medicine (Bonea et al. 2019). Their work is a milestone because it methodologically confirms the potential of the constructionist pharmaceutical history as a powerful piece of equipment to decode the human-centered reality.

Third, a question exists as to the limit of interpretive approach. Candidly, when compared to positivist method, there is no bound to which the constructionist interpretation of pharmaceutical history explains the phenomena of the past. As dictated by the theory of interaction, strands of mankind’s reciprocal activities are mutually interwoven together to form a web of multifaceted history. Along these lines, arguments which are made to help us understand the ontology of pharmaceutical history can be used to elucidate how general reality is humanized by historical experiences. Because consumption of medicines is an unavoidable part of behavioral profile of our daily life, the historical experiences which we had with the drug-takings shape our humanistic identity in the contemporary. Comprehending the humanness of medical ingestions necessitates the capability of which the constructionist pharmaceutical historians explore the sociocultural relationship between humanity and medicines at the macro-level. Consequently, by interpretively assessing the contents of pharmaceutical history, the rationalization of necessary truth can be offered for the examinations of the large-scale patterns of a continuously developing world that give human-centered answers to the abstract and philosophical questions generated by the observations of the past. These questions are termed by the author as the “big historical questions.” Inquiring them will help the historical constructionists understand how humanity evolved to its present state. Although the significance of big historical questions has long

been accustomed by the constructionist historians, the novelty of this paper is the proposition that the sociocultural evolution of mankind can be explained by the pharmaceutical history. Surveying such matters as the social implications of drug use, the establishments of medical institutions, the professionalization of clinical practitioners, and the politicization of medical trades facilitates the formation of knowledge foundation upon which the medically-specialized theories for the progressions of humanity can be conceptualized. In other words, with the utilization of interpretive approach, the contents of constructionist pharmaceutical history are indispensable in illustrating the human phenomena both in the past and the present. Therefore, the explanatory scope of the interpretive constructionism is theoretically boundless for pharmaceutical history.

Fourth, in order to master the interpretive approach, pharmaceutical historians must undergo necessary trainings. According to Walsh, “[a constructionist historian] cannot simply reproduce the historical data (Walsh 1960).” He must have the philosophical skills for uncovering the rational principles that underlie the developmental pattern of general history. On this ground, the job of constructionist pharmaceutical historians is to obtain some sort of competency in the study of ideas. This is because intellects and thoughts permit them to develop a capacity for “the formal articulation of reason” that consolidates the function of pharmaceutical history as a platform for promoting the faculty of humanized explanations (Walsh 1960). That being so, constructionist pharmaceutical historians are able to “elevate empirical contents [of pharmaceutical history] to the rank of necessary truth, thereby giving the elucidations of the past a transcendental quality of human-centered idealism (Simon 2019). In simple language, before writing constructionist articles worthy of journal publications, pharmaceutical historians are required to read philosophy so that they can acquire the interpretive approach to comprehend metaphysically the humanization of the existential past.

The theory of interaction is particularly illuminating for this essay’s readership because it interprets the constructionist pharmaceutical history as the dynamic collective of human phenomena manifested in time and space. It shows that the past of pharmaceutical world is about the elaborations for wide-ranging human activities. These activities represent men’s continuous efforts to eradicate diseases that are an inclusive part of human history. Philosophically speaking, our understanding of how humanity had attempted to cure physiological abnormalities can be abstractly refined since pharmaceutical history serves to be a unique lens for examining the whole of reality. The interaction theory recognizes pharmaceutical history as the process whereby humanity interacted with the pathology of bodily dysfunctions continuously. Having ascertained that mutually interactive relations between human activities makes pharmaceutical history inherent in the facets of general history, analyzing the interaction-centered process of how diseases were treated by ancient doctors allows pharmaceutical historians to view the past of pharmaceutical world from a perspective that mirrors the overall structure of history in an all-inclusive manner. The doctrine of historical constructionism provides the pharmaceutical historians with necessary toolkits to do whatever is required in the constructionist research.

By applying the interaction theory in the history of opium use in 19th century England, this essay hypothesizes the practicality of developing the interpretive approach in the constructionist surveys of pharmaceutical history. The most important point is that pharmaceutical historians should not confine themselves to the pedantic documentation of facts and figures. Instead, they need to peruse the evidences in a manner of which the rational is discovered within the real. The “rational,” which is the elemental properties of the humanized interactive activities occurred in the historical sphere of the pharmaceutical world, are to be analyzed philosophically for the purpose of examining the fabric of reality. In the Empires of Vice, what we actually see is that, as a notorious drug, opium was in fact deeply entangled with the political facet of human life. Kim has used the sociopolitical characters of

the narcotic to portray for us a bottom-up picture of colonial bureaucracy in Southeast Asia in late 19th and early 20th centuries that clearly surpasses the usually assumed scope of drug history. Based on this, the author is confident to assert that the impacts of pharmaceutical consumption clearly have infiltrated into every aspect of human-centered reality in the formation of what we call history. Even though the constructionist methods are conventional in mainstream academia, investigating the pharmaceutical history interpretively remains novel because it combines medical perspective with the humanistic historiography. Thus far, no one has given any serious thought about reading the human history from the professional view point. Hence, a constructionist pharmaceutical history will demonstrate how the sociocultural advancements of humanity can be observed through a medical lens. The historical explanations for a particular medicine can be extended to other branches of history that will permit the constructionist pharmaceutical historians to address the comprehensiveness of a complicated historical reality. The factualness of medications and pharmaceuticals is useful only if it can fully participate in the sociocultural interpretation of the constructionist history. All in all, the theory of interaction humanizes the facts collected by pharmaceutical historians that the discipline can finally emerge as an enlightening source of comprehensive explanations.

Concluding Remarks

The disciplinary function of history can either be the faithful reconstruction of the factual past or the rationalized interpretation of the human-centered world. These two functions fashion the historiography for all sub-branches of historical assessments. The research method of a positivist historiography is different than that of a constructionist historiography. While historical positivists employ the representational realist theory to develop a factual approach, the historical constructionists explore the idealist framework in the hope of formulating an interpretive approach. The marked methodological distinctions between which the positivists and constructionists write history determine how historians achieve intellectual authority within the mainstream academia. Currently, there is a shared view that the renowned influence of history is to be found in the constructionist research. But the conventional practice of pharmaceutical historians remains factual because they see the writings for the history of medical world as a supplementary enterprise for clinical science. Their positivist mindset is lethally detrimental for the theoretical prospect of pharmaceutical history as a medicine-centered historiography of pharmaceutical sciences is both pedantic and mechanistic. What the positivist methodology has produced is the historical discourses overly emphasizing the importance of data collection. The layout of most papers on pharmaceutical history bear striking similarities to that of the experimental reports. In some extreme cases, they are too professional to be even considered as historical studies. As revealed by a literature critique of journal publications for the *Pharmaceutical Historian*, a positivist pharmaceutical history restricts itself in the factist space that it fails to decode the structure of human world at level of which the past is treated as the foundation for the contemporary and the future. Instead, it is only interested in the literal descriptions of the facts gathered (as evidenced by the positivist publications in the *Pharmaceutical Historian*). Interpretations that stress about the humanization of pharmaceutical history are generally absent. It is on this ground that this essay introduces the interpretive approach. By taking inspirations from the researches on the sociocultural history of opium, this essay proposes a theory of interaction that humanizes the past of medicines and pharmaceuticals. This is to say that, since the whole of general history is forged by facets of interactive relationship, there is a need to recognize humanity as the central actor for the historical evolutions from the past to the present. These interactions are mutually entangled together to form the complicated web of comprehensive human history. Based on this, we need to appreciate the

elaboration of pharmaceutical history as a human-centered collective of medical activities that requires rational, idealistic and philosophical inquiries. Such is the purpose of introducing interactive theory. It fulfills the role of establishing a constructionist historiography for pharmaceutical historians that methodologically mirrors the humanistic and idealist nature of pharmaceutical history. Thus, by employing a deductive reasoning for rationality, pharmaceutical historians can “amplify” their knowledge to expand the explanatory scope for pharmaceutical history through the employment of interpretive approach. In doing so, they could then potentially offer a new perspective for examining the general reality that utilizes the historical facts about medicines. As it should come as no surprise to anyone, the interaction between men and diseases is a historical relationship that, if elucidated properly, can provide us with a unique insight to the philosophical making of human world. This is something that cannot be achieved by the factual approach.

Acknowledgements

I am grateful for the masterful works produced by Virginia Berridge, the research supports provided by the Society for the History of British Pharmacy and the Royal Pharmaceutical Society, and the complete collection of *Pharmaceutical Historian* archived by the International Society for the History of Pharmacy. I would also like to express my sincerest thankfulness to Dr. Ian Cubbin from the National Pharmacy Association for introducing me to the academia of pharmacy history.

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