

Indigenous Pharmaceuticals, the Capitalist World System, and Civilization

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In 1942, when I was a college sophomore, I absconded to Chicago because I did not have enough money to go to New York to enroll in Worker's School. The Abraham Lincoln School opened in the Loop shortly after I arrived, and I knew I was in the right place when at the registration desk I was able to purchase a bargain subscription to *The Daily Worker*. Having grown up on the delta between the Arkansas and Mississippi Rivers, I registered for the course on race relations and sat in the front row, eager to comprehend the society I had just fled. But the sociologist, who commuted from Madison to teach the course, and the readings by Stalin, Lenin, Marx, and Engels did not speak to my imagination, in sharp contrast to the anthropology course that I was taking a few blocks away at the downtown extension of the University of Chicago. The textbook for this course was Kroeber's *Anthropology*. It was taught by Fay-Cooper Cole who told us about his testimony as an expert witness in the Scopes trial, where Clarence Darrow, the legendary civil liberties lawyer, defended a high school instructor who broke Tennessee state law by teaching evolution. That trial was a part of American popular culture. I had heard about the trial in high school, and had consequently read *The Origin of the Species* because there was also a law against teaching evolution in Arkansas. It was glorious to discover in Kroeber's book and in Fay-Cooper Cole's instruction, a science that provided arguments and data on human evolution, racial variation, and cultural relativity which I could use critically against the racism and bigotry of my own culture.

My reason for telling this story is to pay homage to Kroeber at a meeting of the society which bears his name and also to relate personal history to theoretical concerns to show the reflexivity inherent in anthropological work. Kroeber's textbook revealed a way of looking at ourselves from a species-wide and long term perspective. Many versions of this perspective exist in anthropology. Robert Redfield developed one based on Tonnie's, Weber, and the Chicago sociologists. Eric Wolf has more recently developed another, as has Jack Goody. Fifteen years ago, thinking particularly of Kroeber and Redfield, I organized a conference on Asian medicine with the idea of by-passing ethnological concerns with ritual curing, witchcraft, and sorcery to concentrate instead on the humoral traditions of health care (Leslie 1976). Humoral thinking, codified in classic texts and reflected in domestic practices and oral instructions through many social strata, has ordered health care for thousands of years among the vast majority of humankind. The new anatomy and physiology of the 17th and 18th centuries challenged humoral theories in Europe but the consequences for medical practices were negligible until the closing decades of the 19th century, when research began to generate technology which was dramatically more effective than that of humoral practitioners. Even so, humoral thinking remains a major component of popular culture health care in Europe as well as in the Americas, Asia, and Africa.

It would have been unrealistic to have a conference on humoral traditions in Asian medicine without taking cosmopolitan medicine into account. This system achieved worldwide hegemony in the 19th century and in the present century penetrated to the most remote Asian communities through the commercial distribution of antibiotics and other drugs. Medical ethnology had been inadequate in my view largely because it had failed to grasp the larger context of its subject matter, the long-standing structures of humoral tradition, and the dialectic in this century between the humoral traditions and cosmopolitan medicine. Thus, the conference attempted to frame ethnographic studies of medical pluralism with opening papers on the historical traditions of humoral learning and of cosmopolitan medicine, and with closing papers on the ideology and politics of revivalism.

The revival of humoral medicine, as I discovered in India, involved a concept of civilization different from that of Kroeber and Redfield. In Kroeber's and Redfield's work, a civilization was a large scale historical structure, a real sequence of events and relationships between people. Kroeber was concerned with styles in clothing, food, writing, art, and iconography, and Redfield with the character of peasant life in relation to the historical processes that created and maintained great and little cultural traditions. Like them, I wanted to address generic processes of change that characterize civilizations. Yet in my work on medical revivalism civilizations were also understood as imaginary creations, fictions that defined communities of people who were engaged in struggles for identity, power, and autonomy.

Practitioners in India described a renaissance of Ayurvedic medicine that they hoped to bring about. They wanted to renew a system which they said had been degraded by centuries of colonial subjugation. They criticized the British for denigrating Hindu medicine and for promoting an alien system, but added that this contempt was justified, for the tradition was in ruins by the time the colonizers arrived in India. These modern advocates of Ayurveda explained that after the great medical texts were composed in antiquity, the spread of Buddhism had introduced strictures against the dissection of cadavers. Ayurveda was further impoverished by Mogul conquerors who patronized Arabic and Persian medicine based on the classical Greek texts. These Ayurvedic practitioners said that although Greek medicine was derived in antiquity from Ayurveda, it was never as profound or as complete as the mother science.

These practitioners also maintained that Hindu learning declined into ignorance and superstition under Muslim rulers; only internal medicine (*kayachikitsa*) survived from the eight branches of Ayurveda, and its practice was debased by the time of the British conquest. Students had to memorize the entire texts of classic authors, but these texts were largely unrelated to the apprenticeship training in clinical practice. Rote learning degraded the practical skills of antiquity, except for rare individual physicians in remote villages who were said to still possess marvelous ancient therapies. Yet even these practitioners had lost the scientific spirit of the classical period and had come to treat their knowledge as a religious secret. Over the centuries, I was told, a native disposition toward the occult had helped to destroy Ayurveda, and every year powerful therapies continued to be lost as superstitious practitioners died without heirs. The great task of independent India was to recover this knowledge by re-awakening the spirit of Ayurvedic inquiry, and to create a national system of medicine grounded in the unchanging truths of Hindu science. This could be achieved by encouraging the few remaining practitioners with powerful remedies and clinical skills to reveal their secrets. Also, it was to be accomplished by combining instruction in cosmopolitan medicine with study of classic texts so that surgical skills and other lost knowledge that was perfected in antiquity could be restored to Ayurveda.

Advocates of the Greco-Arabic tradition also spoke of a renaissance of indigenous medicine when I first went to India in the 1960s, but their accounts credited Muslim princes with having renewed Indian contacts with Greek science, which they claimed had been the source of Ayurveda in the first place. Under their rule, Muslim and Hindu physicians had learned from each other in a collegial manner. Despite the superstitions that plagued Indian society, Muslim rulers had fostered a vigorous scientific tradition until British colonialism undermined their authority.

This summary of revivalist ideologies is drawn from long conversations with sophisticated practitioners who were often skeptical and ironic. They were perfectly aware of how others discredited their ideas, and to exhibit the complexity of the issues, would recount the philosophical intricacies of their theories, quoting classical Sanskrit, Arabic and Persian texts and translating them into modern biomedical language.

The civilizations that these Hindu and Muslim practitioners were so conscious of were not the objective historical structures that Kroeber and Redfield analyzed, but constructions to explain their own life situations and to legitimate their practices. Civilizations in this sense are "created, dissolved and re-created as groups feel the need of asserting their particularity" (Wallerstein 1979: 162). Self-conscious images of a civilization are inventions with various uses: they may justify newly acquired privileges, summon the courage to confront opposition, or help to salvage pride in accommodating to failure. Traditionalism inspired by these images is a symptom of radical social and cultural change, and an ideological instrument to bring it about.

The traditionalism of medical revivalists in India in the 1960s and 1970s resembled the tissue of nostalgia and self-deception with which I had grown up in the American south, where the tragedies of the Civil War and Reconstruction Period were a part of my family history. We, too, imagined a civilization which was re-enacted every year in Natchez, Mississippi, where people dressed in Antebellum costumes and gave visitors tours of their mansions. A revival of medical science seemed strange, however, giving an ironic twist to ideas about "progress" and the notion that scientific theories and knowledge are historically cumulative, with new theories and knowledge making earlier forms obsolete in a manner quite different from relationships between earlier and later forms of art, religion, or ethical discourse.

The advocates of Ayurveda and of Unani medicine, the Greco-Arabic tradition, wanted to revive ancient science, and referred to a renaissance of Indian culture, borrowing the concept of a progressive movement in European history. Upon inquiry, I learned that a renewed interest in translating and reading antique medical texts had indeed been a part of the Italian Renaissance. Was the longed-for renaissance of Ayurvedic and Unani medicine a useful dream of progress and was it possibly an effective way of improving health care in India?

Although revivalism is backward-looking it is not necessarily reactionary. Marx argued in one of his best-known essays that the revival of Roman styles in the Napoleonic period was an effective way of legitimating progressive bourgeois reforms. Meanwhile, in the 1960s and 1970s, the Western world was being told wonderful stories about traditional medicine and "barefoot doctors" in Maoist China. A leading Indian revivalist even persuaded the government of Sri Lanka in the 1960s to propose an Asian Health Organization to the People's Republic of China. It would have corresponded to the World Health Organization, but instead of being dominated by physicians trained in cosmopolitan medicine, it would have promoted Ayurveda and other Asian systems.

Although my research in India began in 1961, I did not think of it under the rubric of medical anthropology until ten years later, when I organized a conference on humoral traditions throughout Asia. For many anthropologists, Ben Paul's collection of essays, *Health, Culture and Community*, was the pivotal work that contributed during the 1960s to the formation of a special field of medical anthropology. It grew out of a course at Harvard to persuade doctors and other professionals in international medicine to learn local concepts of health care so that they could adapt public health projects to the cultures of the people they wanted to help. Since the concepts of medical revivalists in India resembled those of folk practitioners and of the urban popular culture, their program of integrating humoral and cosmopolitan medicine appeared to be, from the perspective of Paul's book, a kind of indigenous medical anthropology. This thought intrigued me as I talked to the faculties of Ayurvedic and Unani colleges, government bureaucrats, and sophisticated urban practitioners. Furthermore, as these were middle-class people in a capitalist society, it was apparent that the revivalist rhetoric justified their claims to professional status and their efforts to enhance their share of the medical market.

By 1980 I realized that my field work had begun at the end of an era for Ayurvedic and Unani medicine. The rhetoric of the revival originated among British Orientalists in Bengal in the 1820-30s and became a self-consciousness program of Indian cultural nationalists in the last quarter of that century. It had accelerated in the 1920-30s as modern Ayurvedic and Unani colleges were founded and governmental committees were appointed to recommend policies toward the indigenous medical systems. The climax of the movement followed Independence when a committee of the Ministry of Health was appointed to recommend policy for indigenous medicine. This committee, headed by a respected allopathic physician and former Director of the Institute of Hygiene and Tropical Medicine in Calcutta, recommended the full revivalist program to create an integrated national system of humoral and cosmopolitan medicine. Instead, only token gestures were made by the government as new committees were appointed. In 1960, the premiere colleges which had symbolized since the 1920s the program to integrate traditional and cosmopolitan medicine were closed by student strikes. The students denounced instruction in humoral theory and practice and demanded a full curriculum of cosmopolitan medicine. The government's response was to transform both institutions into regular medical colleges.

Nevertheless, an extensive system of Ayurvedic and Unani colleges remained in place all over India, and factional disputes to control these schools and other institutions, such as associations of practitioners, were a problem in every state and city that I visited. I was trying to understand these conflicts, and the malaise of the revival movement, without realizing that I had begun observing the drama after its denouement. Human affairs take narrative form through our own stories and those of other individuals, and through stories that account for our customs and place in the world. The inherited forms of these stories guide our selective observation of the world. A problem for all the social sciences is to find narrative units of observation, and to determine where we have entered as observers of a historical sequence.

My research included visits to factories which manufactured Ayurvedic and Unani drugs, and to conferences for practitioners which were sponsored by drug companies. Leaders of the revival movement had begun to manufacture Ayurvedic medicines for commercial distribution in the 1880s and possibly even earlier. Advertisements from that period quoted vaidyas who endorsed commercial products, and Ayurvedic drug companies published their work in company magazines and brochures.

This practice continued into the period of my Indian research and I was able to study materials of this type, including full-scale books published by drug companies, and earlier documents in the British Museum and the India Office libraries in London. I thought of these documents only as creations of the political struggle to secure state recognition of indigenous medicine, including patronage for colleges and research programs, laws to register practitioners, and a place for them in governmental health service. Thus, I incorrectly identified the drug companies as peripheral to the professionalization of medicine. Perhaps a long-standing writer's block was really a blessing, for I do not need to retract essays that I failed to write. The essays on professionalization and revivalism that I did write are not wrong, but they lack a critical insight into the pervasive economic interests that sustained these processes.

By the late 1970s it became clear that the revivalist momentum was exhausted, yet the commercial production of indigenous drugs was continuing to expand. It became clear that what brought medical revivalism forward in the 19th century and led it, in the 20th century, to create a system of professional institutions for humoral medicine, was the profitable market for Ayurvedic and Unani medicine.

The revivalist ideology died after a burst of enthusiasm following Independence because the middle classes would not participate. Even the children of the revival's leaders went to regular medical schools or chose a different profession altogether. Unlucky youths who failed to be admitted to the allopathic colleges in the 1950s and 1960s attended the indigenous medical schools and some still do, but they treated these schools as backdoors to cosmopolitan medical practice, and having had to suffer the revivalist rhetoric in their training, they were particularly scornful of it. Thus, with individual exceptions, the urban middle classes that dominate Indian society came to be embarrassed or annoyed or bored by the rhetoric of Ayurvedic and Unani revivalism.

While this was occurring, the private Ayurvedic and Unani drug companies enjoyed a burgeoning market based largely, I believe, in the urban middle classes, although I do not have survey data to prove this point. Dr. Kurup, who served during the 1970s in the Ministry of Health as an advisor on Indian Systems of Medicine, estimated in 1980 that 3,000 private companies manufactured approximately three and a half million kilograms of traditional pharmaceuticals annually. He estimated the value to be more than 50 million rupees. These companies also produce proprietary medicine and other products such as food, soap, hair tonic, and cosmetics, which they package and advertise as Ayurvedic and Unani preparations and which account for a major portion of the profits.

The proprietary medicines frequently have English names, although they are advertised as new preparations based upon the scientific principles of Ayurvedic or Unani medicine. For example, one of the most popular over-the-counter tonics in India is *Liv-52*, manufactured and advertised as an Ayurvedic medicine by the Himalaya Drug Company. This company was founded by Mohammed Manal, who belonged to a family of Hakims (Unani physicians) in Dehradun. He sold raw materials from the Himalayan forests to drug companies for a number of years before he and his brother moved to Bombay in 1930 to open a factory. The first major expansion of their company occurred in 1953 when they introduced the liver medicine that Mohammed Manal invented on his fifty-second attempt to find a satisfactory formula. In 1961 the company built a second large factory in Bangalore, in southern India. The head of the Himalaya export department worked out of an office in a stylish modern building complex in central Bombay. A German by birth, he had become an Indian citizen and had been employed by the Indian branches of the Squibb and Pfizer companies before joining Himalaya. He said that *Liv-52* was exported to 26 countries, with the Soviet Union the largest foreign customer; within India Himalaya employed approximately 300 detail men to visit doctors and leave

samples of their products.

Livotrit, to "liven up your liver," is produced by the Zandu Pharmaceutical Company, another enterprise with headquarters in Bombay. The Zandu catalogue includes many traditional Ayurvedic preparations with citations from Sanskrit texts, but its most profitable products are the modern Ayurvedic drugs such as *Livotrit*; *Rheumayog*, which is available with gold for more severe cases of rheumatism; *Vigorex*, a sexually stimulating "non-hormonal restorative tonic for men and women;" *Ovoutaline*, a "unique uterine tonic that helps ovulation," etc. Zandu Bhatt, the company's namesake, was an Ayurvedic physician to the Maharaja of Jamnagar. One of his grandsons moved to Bombay to start an Ayurvedic drug company in 1910. The costs were more than the family anticipated and another Gujarati family furnished capital and business skills to get the company into production. In 1919 several other partners joined the company and these families continue to own most of the business.

The company built a new factory in the 1930s, which is still productive, and opened a second plant in 1980 in the Vapi industrial park, approximately 70 kilometers from Bombay. Dr. K. M. Parikh, who currently takes a lead in company affairs, earned a degree in chemistry at the University of Munich and his youngest son is studying in the United States. Parikh frequently visits this country and Europe looking for markets for Ayurvedic medicines and other products such as flavorings. The largest market for Zandu is in Gujarat, Maharashtra and other states in western India, but an anthropologist has reported that a curer among the Nyole of Uganda particularly recommends and dispenses Zandu medicines (Reynolds-Whyte 1982: 2061).

In eastern India one of the oldest and largest Ayurvedic companies is Darbur Pvt. Ltd., founded in 1884 in Calcutta by a physician trained in cosmopolitan medicine, Dr. S. K. Burman. It is managed today by five of his great-grandchildren, four of whom have degrees from universities in the United States, ranging from business administration and industrial management to pharmacy and mechanical engineering. In the 1960-70s Darbur could not meet the increasing demand for its products and built new factories in the state of Bihar and in an industrial park outside New Delhi. The company thus expanded its regional market throughout North India. Like Zandu and other companies, its profits are largely from popular tonics and over-the-counter medicine, with its most profitable product an Ayurvedic hair oil; oiling the hair after bathing is an important health care practice.

Among the estimated 3,000 private companies in India, approximately a dozen are equal in size to the three previously mentioned. Smaller companies have correspondingly smaller local markets and while Zandu and Darbur products can be purchased in cities throughout India and even in New York and Berkeley, their sales are primarily regional. In contrast, a single company, Hamdard, dominates the market for Unani products throughout India. This company is a public trust and its profits support a number of enterprises favored by Hakim Abdul Hameed and his brother Hakim Mohammed Said, who directs Hamdard enterprises in Pakistan. One of their competitors estimated that Hamdard accounts for at least 70 percent of the total market for Unani medicines in India and an even greater proportion of the market in Pakistan. Like the Ayurvedic companies, Hamdard was a modest family enterprise until the post-Independence period. In the communal strife that followed the partition of India, the factory in Delhi was relocated to the heart of the Muslim district. Mohammed Said moved to Pakistan to manage affairs there, while his brother remained in Delhi. The company became a public trust and as it expanded its profits were used to fund a number of philanthropies, the most conspicuous being a campus of institutions that includes a modern hospital, a college to train Unani physicians, an institute for Islamic civilization and a modern pharmaceutical college.

This pattern in which profits from the commercial production of indigenous medicine are used to support a college and other institutions clearly identifies the economic forces that originated and sustained Ayurvedic and Unani revivalism. In South India, an Ayurvedic physician, P. S. Varier (1869-1944), initiated a pharmaceutical company in 1902. He had become an apprentice to an allopathic physician after deciding in 1889 to manufacture Ayurvedic medicines "on a modern line." The enterprise prospered and its profits were used to start a school that integrated Ayurveda with cosmopolitan medicine, a charitable hospital, a journal, a troupe that performs Kathakali dance dramas, etc. Patronage for these institutions continued and expanded as the Aryavaidya Sala became a large company with branches and franchise outlets. While its primary market remains in South India, the sanatorium at its headquarters in Kottakal draws patients from other parts of India, Europe, and America.

The companies which I have discussed prospered after Independence and after the death of their founders, but other companies have failed or have declined after an initial period of success. Gananath Sen (1877-1944) was trained in Ayurveda and in 1903 earned a Licentiate in allopathic medicine in Calcutta. He was elected President of the All India Ayurvedic Association in its third meeting in 1911 and re-elected in 1920. Meanwhile, he wrote several books in Sanskrit which were widely read among revivalists because they combined Ayurveda with modern anatomy and physiology. He founded the Kalpataru Ayurvedic Works in 1914 and as the company became profitable he used its earnings to found a charitable clinic and, in 1932, an Ayurvedic College and Hospital. When I visited these institutions twenty years after his death, they were vacant and neglected. The company was then managed by one of his grandsons, but it failed to prosper in the post-Independence period in the manner of the other companies I have described.

A final example of the role of pharmaceutical companies in the revival of indigenous medicine is the Ayurveda Rasashala. It was managed by a society formed in 1924 to supervise an Ayurvedic College and hospital which had opened in Poona during the non-cooperation movement initiated by Gandhi in 1920. The company began as a pharmacy for the hospital and college. These Ayurvedic institutions were part of a nationalist university, or Mahavidyalaya, with three other branches that taught commerce, engineering, and the arts and sciences. Within a year or so the other branches faltered as the families of students worried about their future careers and had their children return to regular colleges. In 1932 the Mahavidyalaya revived in response to another call by Gandhi, and this time it was led by the Ayurvedic branch, which had managed in the 1920s to attract students more than the other branches. The British closed the school almost immediately and imprisoned various students and faculty members. They were soon released, and although the other colleges closed, the Ayurvedic College re-opened and even gained limited state recognition a few years later. By Independence the Ayurveda Mahavidyalaya in Poona was well-established. Although it does not thrive today as it did in the 1950s and 1960s, it grants degrees through the University of Poona. My point is that the survival and relative success of this Ayurvedic school in the 1920s and 1930s was grounded in part on the earnings of its pharmacy, which was reorganized in the 1930s and has subsequently opened as a commercial enterprise.

In the 1920s a cynical Ayurvedic physician criticized the annual meeting of the All India Ayurvedic Association as a conclave to promote the drug companies owned by its leading members. Upon an initial reading, the criticism seemed unduly harsh. I was not inclined to criticize the people I was studying in the way I had been eager to criticize my own community when I discovered anthropology. I and probably most anthropologists work with a double standard. We know less about the cultures we study than our own and are thus inclined to withhold judgement. Even more importantly, we are responsible for

the cruelty, stupidity, and inequity of our own society to a greater degree than we are responsible for the faults of other societies. And, of course, my training at Chicago with Redfield, Tax, Washburn, and others was saturated with the liberal perspective that advocates self-criticism but tolerance for others. Now, looking back, I think that I should have given more weight to the Indian critic.

My argument is that entrepreneurs who began the large-scale commercial production of Ayurvedic medicines in the 1880s were stimulated by their observation of the market for imported British patent medicines. They were encouraged by the Swadeshi movement, which advocated that Indians boycott imported goods and buy products manufactured in India.

From the 18th century urban practitioners of Ayurvedic and Unani medicine had combined what they learned of European practices with their own therapies. This was easily continued through the 19th century because European physicians continued to use humoral concepts and therapies despite their lack of scientific validity. In various parts of India, innovative practitioners and other entrepreneurs started pharmaceutical companies. With the profits they began to professionalize indigenous medicine by publishing journals and tracts, founding schools, and translating classic texts into vernacular languages. To publicize their cause and to lobby for state recognition, they evoked images of Indian civilization with golden ages of Ayurvedic and Unani science, and their ideas suited the rising national consciousness.

In the present century Gandhi and Nehru were not sympathetic to medical revivalism but other nationalist leaders supported it. The market for pharmaceutical products was the resource that fueled and sustained the effort to create institutions that would dignify Ayurvedic and Unani medicine in competition with the increasing market for cosmopolitan medicine.

After Independence, laws were passed to register indigenous medical practitioners and colleges were founded with state support. State policies were equivocal toward indigenous medicine, however, and cosmopolitan medicine clearly dominated the system of health services. The social, economic, and political advantages of affiliation with allopathic medicine claimed the loyalties of the middle classes as the Ayurvedic and Unani schools appeared progressively obsolete, shabby, and peripheral. The revivalist rhetoric that appealed to several generations of Indian nationalists grew stale with repetition and finally began to appear ridiculous. This does not mean, however, that the ways in which people experienced their bodies or that their humoral understanding of these experiences changed. The commercially sophisticated and well-managed companies that produce Ayurvedic and Unani medicines appeal to these experiences and understandings, and their stylishly packaged products appeal to the middle class conviction that "modern" things are valuable on their own account.

The double standard which I have cultivated is an ambiguously good thing. I admired Senator Kefauver's exposé of the irrational profits and monopolistic behavior of pharmaceutical companies in the world market, and later criticism of these companies' practices in Third World countries for failing to caution physicians and the public about side-effects and for dumping obsolete drugs into less-regulated markets. Yet in my own study of Ayurvedic and Unani revivalism I have neglected the irrational aspects of commercialization and the central role of drug companies in sustaining the revival movement. If I were planning today another conference on the comparative study of humoral traditions in Asia, I would include researchers who have studied the commercial production of traditional Chinese and Kanpo health care products, which are manufactured for regional and international markets. We should compare the history and role of this traditional medicine industry in Asia with allopathic companies. They implement radical breaks with

many aspects of humoral thinking and practice in these societies. We need to understand their effect on popular health cultures, and the degree to which they irrationally distort the economy of health care. This kind of research may open a new chapter in medical anthropology, for companies are marketing traditional medicines in African countries as well, and all these phenomena are related to phytotherapy and holistic medicine in Europe and the Americas.

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