CAM Cancer Therapies in Twentieth Century North America:

The Emergence and Growth of a Social Movement

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Note: This is the final draft prior to copyediting. There is a correction in the paragraph on Gerson, where the word “license” is replaced with “membership.”

There is little doubt that popular interest in complementary and alternative medicine (CAM) in North America, not to mention other world regions, has grown during the 1990s. The studies of physician David Eisenberg and colleagues were the most prominent in a survey literature that drew attention to the size of expenditures, the scope of therapeutic utilization, and the growth in patient interest during the 1990s.[1] CAM providers have also gained increasing access to insurance coverage and the protections of licensing.[2] The U.S. government has responded to patients’ interest with dramatic increases in funding for research on CAM therapies as well as a comparatively open regulatory policy on food supplements under the Dietary Supplement Health and Education Act of 1994. Popular magazines and Web sites on CAM therapies have proliferated, and the new politics of evidence-based medical integration has in some situations displaced the older politics of quackbusting and suppression. In short, the many changes that can be charted for the 1990s in the United States as well as other countries shore up a claim that there has been a “CAM Revolution.”

However, the focus on the dramatic events of the 1990s may tend to overstate the depth of the transformation. For example, regarding the claim that interest in CAM from patients grew explosively during the 1990s, it would be interesting to document patient utilization and interest throughout the decades of the twentieth century. Although studies for early decades are hard to find, one survey of YWCA members during the 1930s is suggestive of a long-standing interest in CAM. The very sketchy results suggested that an equivalent number of members were seeing chiropractors and

medical doctors, and even more were going to Christian Scientists and osteopaths.[3] Likewise, the essays in this volume show that interest in CAM in the United States has been sustained and substantial throughout the twentieth century.

One of the arenas in which the politics of healing have been most intense during the twentieth century is cancer treatment. There is no known cure for most types of cancer, and yet patients with many of the more common cancers can survive for years before dying. Those factors, together with the growth of cancer morbidity and mortality during the twentieth century, provide a fertile ground for the continued development of alternative cancer therapies. Today, cancer patients are potentially able to access a vast number of alternative or complementary therapies, clinicians, and advocacy organizations.

Before discussing the growth, diversification, and politics of the CAM cancer therapy movement in the U.S., it is helpful to begin with some definitions and categories. First, the terms “complementary” and “alternative” are used here to refer to usage patterns as an adjunctive interventions (complementary) or replacements (alternative) to conventional therapies such as chemotherapy, radiation, surgery, and standard immunotherapies (such as the interleukins). The same therapy may be complementary or alternative depending on how it is used or what the point of reference is. For example, a nutritional program following a lumpectomy is complementary or integrated with respect to the surgery, but it may be used in a way that is either alternative or complementary to a follow-up course of chemotherapy or radiation. Second, there are various classifications of CAM therapies. At the influential Chantilly, Virginia, conference of 1992, seven categories of CAM were articulated: mind-body interventions, bioelectromagnetics, alternative systems (such as Ayurvedic), manual healing methods, pharmacological and biological treatments, herbal medicine, and diet and nutrition.[4] In my own research on CAM cancer therapies, I found most useful four general groupings of therapies: mind-body, immunological and pharmacological, dietary and nutritional, and herbal.[5] Manual healing methods are relatively unimportant in the CAM cancer field, and bioelectromagnetics have a minor, historical place that will be noted below.

The history of the therapies, research, clinicians, and political conflicts is still largely a product of advocates or critics, and the history is largely organized around single therapies and clinicians. The studies are rich and colorful, but with some exceptions there is a frustrating lack of documentation, comparative perspective, and social science analysis. This essay will attempt a broad sweep of the more visible and

prominent CAM cancer therapies in the United States during the twentieth century; the goal is to develop some preliminary understanding of the pattern of social organization, politics, and diversification of the social movement that developed. Specifically, three types of organizational form are examined: 1) networks that developed around specific clinicians and therapies, which characterized most of the early and mid-twentieth century, and continue to exist today; 2) the emergence of a broad-based social movement, especially emerging from the laetrile politics of the 1970s; and 3) the development of medical integration, especially during the 1990s. The analytical framework proposed here can help avoid two types of analytical error: the belief that CAM activity in the U.S. went through a period of quiescence during the mid-twentieth century, and the view that the there was no significant transformation during the late twentieth century.

Clinician-Based Networks

Among the early twentieth-century alternative cancer therapy traditions, two of the most influential in the United States were inaugurated by John Beard and William Coley. Beard, a professor of embryology at Edinburgh University, developed the theory that aggressive, undifferentiated embryonic cells (trophoblasts) were placed under control by pancreatic enzymes, but cancer could emerge from remaining undifferentiated cells.[6] The theory led to a long series of enzymatic treatments of cancer. Although Beard did not have a significant contemporary following in the United States, his theory influenced subsequent generations of American clinicians and researchers, including the dietary programs of dentist William Kelley and physician Nicholas Gonzalez, the bacterial program of physician Virginia Livingston, and the laetrile research of physician Ernst Krebs, Sr., and scientist Ernst Krebs, Jr.

In the 1890s New York-based physician William Coley inaugurated another research and therapy tradition in the United States, when he used live Erysipelas, a form of *Streptococcus pyogenes*, to create a febrile reaction in cancer patients that, in some cases, led to long-term survival.[7] Coley's therapy has subsequently been reinterpreted in immunological terms, and he has been recuperated historically as a founder of cancer immunotherapy.[8] However, he was also interested in nutritional approaches to cancer as well as the controversial theory that cancer was an infectious disease caused by a pleomorphic (form-changing) microbe that would be described today under the rubric of cell-wall deficient bacteria.[9] At the time stable categorizations of fungi, bacteria, and

viruses were less well accepted than today, and some scientists and clinicians believed that microbes could undergo phases of development that stretched from “filterable” (viral-like) phases to full-blown fungi. At the height of the bacterial revolution in medicine, many mainstream clinicians believed that cancer was an infectious disease, but the theory fell out of favor by the 1920s. One reason for the decline in support for the infectious theory is that microbial cultures of tumor samples did not yield a stable specimen, and consequently many researchers came to interpret the cultures to be the result of secondary infection or contamination rather than a pleomorphic infectious carcinogen. Another reason is that by the 1920s hereditary and environmental interpretations of cancer etiology were beginning to congeal alongside the growing practice of radiation therapy; together they provided an alternative theory-therapy package to biological treatments based on the infectious theory.[10]

During the 1920s one of, if not the, first substantial North American networks of CAM cancer therapies emerged around the infectious theory. The Canadian physician Thomas J. Glover and his partner Tom Deaken developed a serum and, with the support of a surgeon named Michael Scott, had a substantial network of clinicians using it, with some success, on cancer patients.[11] Given Coley’s affiliation with Memorial Hospital (today Memorial Sloan-Kettering Cancer Center) in New York, his support of Glover and his interest in the serum were critical. Although Coley mobilized some critical support in the cancer field, including interest from Charles Mayo, he eventually parted ways with Glover due to the latter’s secretive approach to his work and his almost paranoid concern with gaining fame and fortune from his serum. Coley’s toxins, which evolved into a killed mixed bacterial vaccine, had a more lasting impact. During his lifetime the vaccine was used not only at Memorial Hospital but also at the Mayo Clinic and by clinicians in both in the United States and Europe. After his death the vaccine continued to be used at Memorial Hospital until the 1950s and is still used today in some locations.

Both Glover’s serum and Coley’s toxins did not die a “natural death” in the sense of losing a following due to negative clinical studies or to displacement by a clearly more efficacious therapy. Instead, both became early instances of what the sociology of science literature refers to as suppression.[12] In other words, elite and powerful medical networks worked actively to halt the development and use of the therapies.[13] The details are narrated elsewhere,[14] but it is sufficient to say at this point that by the 1920s and 1930s radium-based therapy and surgery were institutionalized to the point that immunologically-based therapies posed professional and financial challenges to the

dominant networks. Coley had the position and potential influence to alter the direction of cancer research and treatment, but his death in 1936 foreclosed that possibility. Although his son continued to use the therapy at Memorial Hospital, during the 1950s Cornelius Rhoads, the director of the hospital and a leading chemotherapy advocate, ordered the cessation of the treatment. Due largely to the efforts of Coley's daughter, Helen Coley Nauts, the therapy continued to be used in some places, including China.

Another prominent, but more controversial, network that emerged during the 1930s was the group of supporters around Royal Raymond Rife, an inventor who had investigated foreign laboratories for the U.S. government during World War I and who subsequently developed a non-ionizing electronic frequency device and a high-powered microscope.[15] He claimed that the microscope allowed him to follow microbial pleomorphism and to identify tumor viruses, and likewise that his machine was able to kill the infectious agents without harming the patients. Rife's work attracted researchers at prominent institutions such as Northwestern University, the Mayo Clinic, McGill University, and the University of Southern California, particularly those who still advocated a microbial etiology of chronic diseases such as cancer and arthritis.[16] By the late 1930s Rife's medical colleague Milbank Johnson had opened three clinics in California, and Rife was manufacturing the electronic frequency instrument for more general distribution. After a period of suppression, Rife again began leasing out machines, and before the second wave of suppression in the 1960s Rife's company had leased out ninety machines across the country. The network was therefore quite large, but it was also so heavily suppressed that very little work in Rife's tradition survives today.

After World War II another generation of figures in the bacterial/vaccine tradition became prominent. Physician Virginia Livingston was at the center of a substantial network of researchers who published peer-reviewed literature on the topic of a pleomorphic cancer microbe, mostly from the 1950s to the 1980s.[17] Livingston and colleagues also developed an approach to cancer treatment that combined her autogenous vaccines with dietary interventions; the clinic that she founded remains open today in San Diego. Less prominent but still in the bacterial tradition was the work of Gaston Naessens, a French biologist who developed a high-powered dark-field microscope and studied what he believed were blood-borne microbial flora (a continental European variant of the research tradition of cancer and microbial etiologies). After experiencing problems with the French authorities for his therapies during the

1960s, he moved to Quebec, where he developed an injectable formula that he claimed was efficacious in cancer treatment.[18]

The bacterial etiology/bacterial vaccine group of networks represents only one strand in the pre-laetrile networks of alternative cancer therapies. There was also a wide variety of pharmacological/biological therapies for cancer.[19] During the mid-twentieth century the most prominent was Krebiozen, a drug that was extracted from the serum of horses that had been injected with the bacterium *Actinomyces bovis*. The therapy had been introduced into the United States by a Yugoslavian physician and his brother, but it gained popularity only when a respected scientist, Andrew Ivy of the University of Illinois, supported it in 1951.[20] Ivy's battles to gain support for clinical trials of the drug and Food and Drug Administration approval for its use lasted into the 1960s, and indeed he continued the struggle until his death in 1978, even though the advocacy left him isolated and discredited. At its peak the network of supporters included Illinois legislators and labor leaders, patients and clinicians, and members of the U.S. Congress. In 1961 a data set submitted to the National Cancer Institute included 4,000 patients, a figure that gives some size of the network.[21] Yet, Ivy did not set up an out-of-country clinic, as occurred for the Hoxsey therapy (discussed below), and unlike the laetrile movement the extensive network of supporters did not crystallize into a social movement with organizations that were capable of surviving changes in leadership. As a result, Krebiozen is more or less a historical phenomenon, unlike many of the other therapies discussed in this section.

Another of the influential pharmacological/immunological group of therapies is the work of Emanuel Revici, a Romanian physician who in 1947 came to New York via Mexico.[22] Revici pioneered a nontoxic, lipid-based chemotherapy and has increasingly received historical recognition for his original research and thinking, especially as a pioneer in research on the therapeutic potential of selenium.[23] In the hospital that he ran from 1955 to 1978, Revici also provided an opportunity for Lawrence LeShan to develop his pioneering approach to the psychotherapy of cancer.[24] Revici, like the other advocates discussed here, suffered from various forms of suppression, including in his case a temporary loss of license shortly before his death in 1998 at the age of 102. He left behind a small network of supporters as well as widespread recognition in the CAM cancer therapy movement for his role as an innovative pioneer. However, because of the complexity of his therapy, its portability to other clinicians and clinical settings was limited, and I suspect that the long-term legacy of his work will be as a source of

piecemeal insights for other research programs and therapeutic protocols rather than an influential system that is diffused intact.

In the dietary field, the most influential clinician was the German physician Max Gerson, who moved to New York after the Nazis came to power. He had developed a complex dietary therapy that was continually modified in light of new research and clinical experience. The therapy included juicing, a potassium-based diet, colonic irrigation (the famous coffee enemas used to open bile ducts to aid in liver detoxification), and other therapeutic interventions that continue to be influential today.[25] Although the New York Medical Society suspended his membership in 1958 and he died in 1959, his ideas remained influential, and his daughter Charlotte Gerson helped revive the therapy. Today, variants of the Gerson therapy are offered both in the United States and in Tijuana.

Gerson's therapy also influenced the dietary program developed in the 1960s by the dentist William Donald Kelley, who claimed to have cured himself of pancreatic cancer through a special diet.[26] Kelley added to the Gerson program two central elements: a greater focus on dietary enzymes, which represents another strand of alternative cancer therapies that dates back to Beard's work and was more prominent in Europe at the time, and a belief in biological typing that lacks credibility in the form that he articulated it but in some ways predates the emergent field of nutragenomics. Kelley's dietary approach influenced several clinicians, including the Midwestern chiropractor Jack Taylor and a group in Washington state known as Healthexcel.[27] While a medical student in the 1980s, Nicholas Gonzalez analyzed a sample of Kelley's cases and subsequently developed his own nutritional program, which today is being tested in a clinical trial for pancreatic cancer patients at Columbia University, for which oncologist Gonzalez is principal investigator.[28] Other dietary traditions came to vie with the ones listed here, but in my experience they have had less influence in the CAM cancer therapy field in North America.

Among the herbal formulas, the most prominent in North America were those of coal miner Harry Hoxsey and nurse Rene Caisse. Both formulas are now recognized to have pharmacologically active plant ingredients, but again clinical efficacy has not been documented in clinical trials. Hoxsey's great-grandfather developed a formula for cancer treatment after watching a horse with cancer eat selected plants in the fields and then attain a long-term remission or cure. [29] By the 1950s Hoxsey's clinic in Dallas, Texas, was the largest private cancer clinic in the United States, with branches in seventeen

states.[30] The extensive network provided a solid base of support for his legal battles against the American Medical Association and Food and Drug Administration that were even more epic than those of Rife and Ivy. In fact, Ivy had investigated Hoxsey's therapy in 1949, with a negative report, but Hoxsey later flew to Ivy's aid when he encountered suppression during the Krebiozen controversy.[31] Mildred Nelson, a nurse who at first was very skeptical but became interested in the therapy after her mother underwent treatment at the clinic in 1947, moved the clinic to Tijuana in 1963, where it continued to operate even after her death in 1999.[32]

A second major herbal therapy for cancer was developed by Canadian nurse Rene Caisse in the 1920s, when a patient told her about an Objibwa herbal tea formula. She treated hundreds of patients and eventually attracted the usual medical censure. Although a petition to allow her to continue to provide the formula for free gained 55,000 signatures in 1938,[33] the network around Caisse and the herbal therapy was smaller than some of the others discussed here in terms of number of clinical facilities, research projects, and patients treated. She did attract the support of a major mainstream physician—Charles Brusch, the former physician for President Kennedy—who eventually helped convert the therapy to an over-the-counter herbal tea called Flor-Essence (see X, this volume for more on Essiac).[34] Many other variants of Essiac are on the market, or patients can make it themselves from the four main ingredients.

There are many more CAM cancer therapies and attendant networks that existed during the early and middle decades of twentieth-century North America, but the ones discussed above represent the most influential in terms of the size of the network of supporters at the time. The lack of institutionalization meant that many of the therapies suffered a major setback after the primary architect and advocate died, unless there was an heir apparent, as in the case of Mildred Nelson for Harry Hoxsey. This "charismatic" pattern of social organization is still commonplace today among the many clinician-researchers with innovative therapies and a supporting network of colleagues and patients.

Two general patterns might also be noted from this early period. First, as has been noted, most of the advocates of alternative cancer therapies met with some form of suppression. The suppression generally came from leaders of the medical profession, such as Morris Fishbein of the American Medical Association, but the medical profession could mobilize government agencies, the media, and other institutions in its support. Elsewhere I have developed a typology of suppression mechanisms.[35] One group

involves legal or formal sanctions (restraining orders, criminal charges, raids on clinics, FDA warnings, FDA denials or stonewalling of permit applications, hostile tax audits, and revocation of hospital privileges, licenses, or insurance); a second group involves more informal channels (media campaigns, dismissals from organizations, loss of funding, publication blockage), and a third group involves bias in research investigations (protocol modifications, exclusion of advocates from research teams, ignoring favorable data supplied by advocates, biased interpretations of equivocal data). In some cases, the suppression occurs in what some students of CAM history has called a "pincer movement," in which a series of mechanisms are mobilized at the same time.

Given the career and prestige risks associated with CAM cancer therapies, one might wonder why so many well-credentialed people have, over the years, become involved. To answer this question properly, one would need to undertake a detailed comparative biographical study, so at this point I can venture a hypothesis. In my years of interviewing and observing the CAM cancer therapy movement, it appears that two motivating forces are paramount: the lure of historical glory to anyone who develops a significant breakthough in cancer treatment, and the personal satisfaction of being able to save lives and help terminal patients. Because most of the advocates claim to have some impressive cases of long-term remissions, they feel that any well-intended and open-minded researcher should explore the possibility of less toxic and potentially more efficacious alternatives. Most of the advocates have a relatively naïve sociological model of science and medicine, and when they discover that science and medicine are highly political, their dismay can turn either to withdraw or to confrontation. The flip side of this question is the many physicians who suspect that CAM therapies do work for cancer but remain quiet for fear of personal reprisal.

The Emergence of a CAM Social Movement

If there is a formative event that marked the transition from relatively precarious networks of clinicians, patients, and researchers to a more lasting mass social movement, it is arguably the controversy that erupted around a single laetrile doctor in California. Originally following the model described in the previous section—that is, a network of patients, clinicians, and researchers around a single therapeutic agent or program—by the end of the 1970s advocacy for laetrile had become a social movement. One crucial event was the arrest and subsequent court trials in 1972, and then again in 1976, of physician John Richardson for his use of laetrile.[36] Because Richardson

happened to be an articulate member of the John Birch Society, the medical profession arguably made a strategic mistake in selecting him as a target for suppression. According to Michael Culbert, a journalist who covered the Richardson trial and later became a leader in the alternative wing of the CAM cancer therapy movement, about half of the original members of the Committee for Freedom of Choice in Cancer Therapy (today the Committee for Freedom of Choice in Medicine) were Birchers.[37] The linkage was the basis for the popular image of the laetrilists as extreme right wingers; however, the history is much more complicated, in ways similar to what Gregory Field has shown for the perception of antiflouridationists during the 1950s and 1960s as merely right wingers.[38] By 1977 the Committee for Freedom of Choice in Cancer Therapy claimed 500 chapters and over 30,000 members.[39]

Another wing of the laetrile movement developed in 1975 in a research setting around an organization that became known as Second Opinion.[40] Consisting mainly of employees and former employees of the Memorial Sloan-Kettering Cancer Center, this group began discussing a cover-up of animal experiments that had provided evidence in support of laetrile. In November 1977 the group released a forty-eight page report that led to the famous dismissal of Ralph Moss, who had worked in the public affairs office. In 1980 Moss published the first edition of his exposé of the suppression of CAM cancer therapies that was later republished as the influential book *The Cancer Industry*. Moss became one of the leaders of the CAM cancer therapy movement, particularly those who wanted to have more funding and fairness for research, and today he writes both a column on CAM cancer therapies in the *Townsend Letter for Doctors and Patients* and the Moss Reports, which are individually tailored guides for cancer patients who wish to explore alternatives.

As the laetrile movement grew, its politics and membership became more diversified. Culbert noted that the Richardson trial in Berkeley drew out not only right-wing sympathizers but also “McGovern-for-president left-wing hippies.”[41] The left-right polarities were noted in sociological work by James Petersen and Gerald Markle, although a member of the CAM cancer therapy movement who read the essay told me that he felt that the emphasis on right-left political differences, particularly the association of Second Opinion with left-wing politics, was an exaggeration.[42] Indeed, the friendships that spanned the political spectrum even led to jokes among colleagues in the movement about favoring “right-handed” or “left-handed” laetrile, a reference both to the political leanings of the advocates and the optimal chemical structure of the molecule.

The laetrile movement had other organizational bases that came together in the formation of a social movement. The National Health Federation had a longer history of involvement in the politics of healing in the U.S. Founded in 1955 by Fred Hart, the president of a company that had been prosecuted for selling unconventional medical devices, and by Royal Lee, a dentist whose company sold vitamin supplements and whose foundation published nutrition information,[43] the organization's first representative in Washington, D.C., was one of Harry Hoxsey's lawyers.[44] In the late 1970s the National Health Federation became active in some prominent court cases in defense of laetrile.[45] The organization was also a strong opponent of fluoridation, therefore providing one point of contact between the CAM cancer therapy movement and the antiflouridation movement that I have seen repeatedly flagged in conferences during the 1990s (see Field's essay, this volume).

One of the more significant developments toward institutionalization during this period was the founding of what is today called the Cancer Control Society. The society began around the work of Cecille Hoffman, a laetrile patient who convinced Mexican physician Ernesto Contreras to offer her the drug on a compassionate basis.[46] Suffering from late-stage, metastatic disease, she underwent a remission in 1964 after treatment with laetrile. As often happens, she began offering information to other late-stage patients, and in 1965 she founded the organization Cancer Victims and Friends (today Cancer Victors and Friends), which by the late 1970s had fifty chapters and 8,000 members.[47] Under the leadership of Norman Fritz, an engineer and friend of Cecille Hoffman, the organization became financially healthy, and a polarization on the board developed.[48] As a result he, Lorraine Rosenthal, and Betty Morales left to found the Cancer Control Society. Among the organization's activities today is an annual convention in Los Angeles, which I would characterize as the more alternative, populist wing of the social movement. Prominent among the speakers are representatives of some of the larger Tijuana clinics.

The hospitals and clinics in Tijuana provided another important institutional basis for the laetrile movement. In the mid 1970s a wealthy Canadian, Andrew McNaughton, who had long been a leading laetrile advocate, established manufacturing and clinical facilities in Tijuana.[49] Laetrile is still offered at some of the major hospitals in Tijuana, such as the Contreras family's Oasis of Hope Hospital and the American Biologics Integrative Medical Center, for which Michael Culbert became director of information. Today those two hospitals offer a wide spectrum of therapies that are usually combined

in complex packages and tailored to each individual. More generally, Tijuana provided a clinical home not only for laetrile, but for the continuation and re-establishment of other therapies that were suppressed in the U.S., such as the Gerson therapy (which Norman Fritz played a role in re-establishing along with Gerson's daughter), the Hoxsey therapy (which Hoxsey's nurse Mildred Nelson led until her death), and the therapy of biologist Harold Manner (which included laetrile, enzymes, and vitamins). Over time the leaders of several of the larger clinics and hospitals tested many alternative, nontoxic therapies, although not in the form of clinical trials, and they drew on their clinical experience to sort through which ones were most efficacious under which circumstances. Thus, the clinical setting in Tijuana, and to some extent in other non-U.S. sites (especially Germany), provided another impetus to the diversification of the social movement. The international dimension of the social movement is crucial to understanding the survival of the alternative wing of the movement and several of the therapies that were effectively closed down in the United States.

In the 1970s and early 1980s a number of other organizations were founded or became publicly much more visible in ways that contributed to the growing diversification of the social movement and to its dense network of cross-therapeutic relationships. In the early 1970s followers of Michio Kushi founded the *East-West Journal* and the East-West Foundation,[50] and in 1975 the foundation cosponsored the first New England symposium on macrobiotics and natural foods.[51] By 1981 the movement's leader published *The Macrobiotic Approach to Cancer*; that publication and a book by a doctor who claimed to have recovered from cancer through a macrobiotic diet signaled the movement's growing influence in the CAM cancer therapy field.[52] Although in my experience the macrobiotic diet has been less influential than Gerson-derived diets, particularly in the large cluster of Tijuana clinics, a very modified version of the diet has had some influence at the more complementary end of the spectrum, as in the work of oncologist Keith Block, a leader in the integrative therapy movement of the 1990s (whose worked is discussed below); John Boik, a specialist in oriental medicine who has written a significant textbook on the mechanisms of nutritional interventions in cancer;[53] or Jeffrey Bland, a biochemist who has educated thousands of doctors in his "functional medicine" seminars, in which he has described the macrobiotic diet as a good place to start.[54]

Other organizations and networks during the 1970s and early 1980s contributed to the diversification of the movement. In the Pacific Northwest the major naturopathic

schools and the growing holistic health movement contributed some leaders to the CAM cancer therapy movement, and the *Townsend Letter for Doctors and Patients* carries many articles on CAM cancer therapies. In 1983 Patrick McGrady, Jr., established his CanHelp service after his father, himself a major cancer journalist, succumbed to cancer. In Washington, D.C., cancer patient Robert DeBragga founded Project Cure in 1979; the organization laid some of the groundwork for the changing currents in Washington, D.C., and published an influential critique of bias in cancer therapy evaluation by journalist/researcher Robert Houston.[55] In Philadelphia in 1977 linguist Susan Silverstein founded the Center for Advancement in Cancer Education after her husband succumbed to cancer. In Virginia U.S. government physicist Arlin Brown held six conferences in the 1970s and 1980s on alternative cancer therapies. Brown had founded his organization, the Arlin J. Brown Information Center, Inc., in 1963. He had become interested in herbal approaches to cancer when stationed in Panama, but he found that the National Cancer Institute was uninterested in his calls for research.[56]

In addition to the development of organizational diversity, during the 1970s a wider range of CAM cancer therapies were pioneered or developed. The pattern of a core researcher/clinician with a network of supporters discussed for earlier in the century continued, but the new therapies and advocates were being developed in an environment with greater organizational diversity and a potential to draw mass support from the diversifying laetrile movement. Only a few examples of the more prominent of the recent networks will be mentioned here. Physician Joseph Gold was developing work that started in the 1960s on hydrazine sulfate; the drug appeared to block gluconeogenesis, a metabolic process in the liver that was associated with the extreme weight loss of late-stage cancer known as cachexia. [57] In the early 1970s scientist Linus Pauling and physician Ewan Cameron started testing their vitamin C therapy,[58] oncologist O. Carl Simonton and psychologist Stephanie Simonton were developing their visualization therapy for cancer,[59] and physician Judah Folkman published a paper on the antiangiogenesis implications of cartilage.[60] Later in the decade physician Stanislaw Burzynski began testing his antineoplaston therapy in humans, and scientist Lawrence Burton became involved in controversies over the testing of his immuno-augmentative therapy.[61]

By the beginning of the 1980s the terrain had shifted tremendously. The laetrile movement had merged or spilled over into a more general alternative cancer therapy movement, in turn part of the broader holistic health movement. The wide range of

alternative health organizations were having an increasing effect on national policy in both the regulatory and research arenas. For example, in 1976 the National Health Federation's lobbying efforts led to the passage of the Proxmire Amendment to the Food, Drug, and Cosmetics Act.[62] The amendment limited the Food and Drug Administration's ability to regulate supplements and predated the Dietary Health Supplements and Education Act of 1994.[63] The National Health Federation had also supported work that led to a court decision in 1977 to allow the importation of laetrile for terminally ill patients; the appeals process lasted nearly a decade.[64] In the research arena, the National Cancer Institute developed a protocol to evaluate Burton's immuno-augementative therapy in 1975, but he rejected it because it violated the ethics of equipoise, that is, it did not offer treatment to the control group.[65] After this event and continued stonewalling from the Food and Drug Administration for his Investigational New Drug approval, Burton decided to move his work on immunoaugmentative therapy to the Bahamas. Given the epic controversies that Linus Pauling was to have after the results of the first clinical trial for vitamin C trial were published in 1979,[66] and the controversies over the clinical trial for laetrile that were published in 1982,[67] Burton's decision not to proceed with an NCI-run clinical trial may have been prescient. Although the clinical trials of the late 1970s and early 1990s represented the first moves of the research establishment toward an evidence-based approach to CAM therapy evaluation and away from the quack-busting mode, unfortunately the trials excluded the advocates from participation in the study design and implementation. As a result the negative results or failures to agree on protocols only fanned the gap between the research establishment and the CAM cancer therapy advocates, and they led to charges that suppression was ongoing, only now through the mechanism of biased protocol modifications.

The gap intensified after the raids on the Burton clinic in the Bahamas and the Burzynski clinic in Houston, which occurred in July, 1985, a second galvanizing date in the CAM cancer therapy movement.[68] Due largely to grassroots lobbying by patients and advocates, in 1986 U.S. Representative Guy Molinari and eventually about forty other members of Congress requested that the Office of Technology Assessment (OTA) study Burton's treatment. The office was unable to come to an agreement with Burton over a protocol,[69] and criticism of the OTA from the CAM movement eventually became heated. The final study, which was published in 1990, is still considered to be deeply

flawed. Scholar-journalist Robert Houston found two-hundred errors in the study; half were corrected.[70]

According to Ralph Moss, the public affairs officer of the Memorial Sloan-Kettering Cancer Center who went on to become one of the leading figures in the CAM cancer therapy movement, in the year following the OTA report, several members of Congress became convinced that the National Cancer Institute was unwilling to carry out the report's recommendations to investigate CAM cancer therapies.[71] The frustration led to a bill introduced by Senator Tom Harkin, based on conversations with U.S. Representative Berkley Bedell, to establish an Office of Alternative Medicine within the National Institutes of Health.[72] The first year's appropriation was $2.2 million, a homeopathic dose (to use the phrase of journalist Peter Barry Chowka),[73] but by a decade later the budget had grown to about $100 million, no longer an infinitesimal financial dose but still less than one percent of the full budget of the National Institutes of Health. Furthermore, the office had been transformed into the National Center for Complementary and Alternative Medicine, a more than nominal change that signaled authority over funding decisions. Perhaps more than the funding, the symbolic importance of the growth of a precarious toehold within the NIH to a center represented to many the "coming of age of CAM" or the "CAM revolution." This leads to the third phase or type of politics of healing in the CAM cancer therapy field.

The Politics of Integration

As mentioned at the outset of this essay, on a number of grounds—patient utilization patterns, insurance, regulatory changes, research funding shifts, and so on—significant changes did occur with respect to the politics of complementary and alternative medicine during the 1990s. Advocacy for CAM cancer therapies not only influenced the shifts but also benefited from the more general advocacy coming from other quarters of the CAM or holistic health movement. By the end of the twentieth century NCCAM was funding studies of CAM cancer therapies, including a clinical trial of the Gonzalez dietary and enzyme protocol. The trial itself was a significant event, because 1) unlike the previous trials of laetrile, vitamin C, and hydrazine sulfate, the key advocate had control over the protocol, so that controversy over experimental design could be limited, 2) the trial took place at a prestigious university rather than a cancer or medical center that had lost credibility as a site for fair testing due to previous clinical trial controversies, and 3) if successful, the Gonzalez protocol could replace

chemotherapy as the standard of care of pancreatic cancer patients. However, even though the politics of cancer had driven the OTA study and to some degree the founding of the OAM, by the late 1990s CAM cancer research had to compete with the funding needs of many other CAM therapeutic traditions and diseases. Furthermore, there were signs that the funding portfolios themselves were being oriented toward the more complementary uses of CAM cancer therapies and to the idea of "integrative oncology practice."

The older politics of suppression, which characterized most of the history of alternative cancer therapies in the U.S., had given way partially to a new politics of integration based on the model of evidence-based research (with the catch of low funding to support the needed research).[74] Suppression continued as a strategy of social control, as was evident in the continued attempts to close down Burzynski's therapy[75] in the 1990s and the closure of several Tijuana clinics in 2001.[76] However, as has occurred with other successful social movements, increasingly the politics of CAM cancer therapies involved integration with the mainstream.

In addition to the name change of the Office of Alternative Medicine to the National Center for Complementary and Alternative Medicine, another bellwether of the shift was a revised operational statement of the American Cancer Society in 1999.[77] The organization had long been reviled in the alternative cancer therapy movement for its list of "unproven" therapies; having a therapy added to the list has in several cases coincided with the pincer movement of suppression that involved media campaigns, closures of clinics, loss of license, and so on. In the new statement "alternative" is defined as unproven, and "complementary" is defined as supportive or adjunctive. The role of CAM therapies for cancer is repositioned as primarily palliative care, which is targeted to receive funding for evaluation. Although the change represents a tremendous shift from the older quackbusting policy and the unproven methods list, there should be little doubt that if this statement accurately represents the cancer "establishment's" new stance, it is intended to divide the CAM cancer therapy field into acceptable adjunctive therapies and unacceptable alternative therapies. In this context the closure of several Mexican clinics in 2001 may be less a return to an older policy than a new articulation of an unchanged policy that continues to limit head-on alternatives to chemotherapy and radiation therapy. The Gonzalez trial, which could lead to a replacement of chemotherapy as a standard of care for pancreatic cancer patients, therefore takes on a special political significance.

Organizationally, the new politics of CAM cancer therapies are evident in the annual conferences that began in 1998 under the leadership of psychiatrist James Gordon of the Center for Mind-Body Medicine in Washington, D.C. The registration fee structure, availability of continuing education credits, and generally high scientific quality of the research reflect the orientation toward the health-care professions, in contrast with the populist, patient-to-patient advocacy orientation of the Cancer Control Society's annual meeting. The Washington, D.C.-based conference also has higher participation from federal research agencies (including the armed forces, NCI, and NCCAM), from nutritional and mind-body researchers, from oncologists who were increasingly adding nutritional and mind-body protocols to their practices, and from major cancer hospitals that were adding off-site CAM facilities. Although the alternative strand was represented at these conferences, the more complementary perspective was foregrounded. Gordon has been a crucial reformer inside the system; he chaired the White House Commission on Complementary and Alternative Medicine Policy; and he is more open to bona-fide alternative therapies than the American Cancer Society. I would therefore classify him as a mediating voice that retains an open-door to alternative side of the complementary/alternative spectrum within an emergent policy field that is oriented toward complementary rather than alternative therapies.

Increasingly, oncology practices and some oncology hospitals within the United States are moving toward integrative care. One leading institution is Cancer Treatment Centers of America, which was founded in 1988 and now includes multiple centers and affiliated oncologists across the country.[78] Another leading force is Keith Block, a Chicago-based oncologist who in 2002 founded the journal *Integrative Cancer Therapies*.[79] Block has brought conventional therapies such as chemotherapy and surgery together with complementary approaches that include dietary modification, nutritional and herbal supplements, massage therapy, mind-body therapy, acupuncture, and other alternative modalities.[80] The new models of integrative care emphasize treating the patient humanistically as a whole person, strengthening the body through nutritional and other programs, and reducing toxicities and side effects of conventional therapies while attempting to retain some of their benefits. The models are probably a harbinger of what will become the standard of care of twenty-first century cancer therapy, although there is still a huge gap between the sophistication of, for example, Block's practice and the very limited adjunctive offerings at the major conventional cancer hospitals.

Conclusions

Cancer patients who have the financial and physical resources to travel now have more options available to them than at the beginning of the century. They may receive the best of conventional care at a major oncology center with some nutritional and mind-body support at an adjunctive facility; they may be lucky enough to find one of the pioneering integrative clinicians who understand the details of nutritional therapeutics in the context of compassionate care; or they may travel to Mexico, the Bahamas, or Germany for access to bona-fide alternative therapies that can replace chemotherapy, radiation therapy, and even, in some cases, surgery, although at a risk of uncertainty regarding efficacy and in some cases safety. The last option represents optimal "medical freedom," as the phrase in the movement goes, because the out-of-country clinics have (at least until very recently) been able to offer therapies that are not available in the United States. Yet those therapies are often (though not always) the least investigated, and it takes a great deal of knowledge to be able to separate out the more credible out-of-country clinics and therapies from the less credible ones.

In general social movements that grow and diversify tend to develop reformist and radical wings as well as shades of difference in between. The development of the CAM cancer therapy movement in the twentieth century is no exception to the general pattern. The different wings have their own strengths and weaknesses, and together they contribute to a diversification in the politics of healing from the medical freedom issue to the more complex politics of medical integration and research funding priorities.

The historical developments also lead to a normative question that lies behind this essay and, I hope, this volume, the issue not only of what the politics of healing have been and are in North America during the twentieth-century, but also of what they should be during the twenty-first century. Certainly the issue of "medical freedom," of access to alternative treatments, is a crucial public good that holds out the potential to help many patients. However, choice is almost meaningless in the absence of meaningful research to guide the choices, and in the absence of regulatory changes that would allow patients and clinicians a full spectrum of choices that historically has only been available outside the United States and Canada. It seems clear, to me at least, that a broader public interest will be served by providing more research funding for the bona-fide alternative traditions discussed here and by legalizing the rights of patients to choose them—and clinicians and other health-care providers to offer them—if they see fit. Thus, the twenty-

first century promises to be a time of ongoing negotiations and confrontations over the rights of access to complementary and especially more alternative therapies, and over the release of funding for their proper evaluation. The lessons of history suggest that the so-called "CAM revolution" of the 1990s is only a beginning.

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[1] David Eisenberg et al., "Unconventional Medicine in the United States," *New England Journal of Medicine* 328(1993): 246-252; David Eisenberg et al., "Trends in Alternative Medicine Use in the United States, 1990-1997," *Journal of the American Medical Association* 280 (18, 1998): 1569-1575.

[2] John Weeks, "Charting the Mainstream," *Townsend Letter for Doctors and Patients* 211/212 (2001): 20-21. The monthly column is one of the best and most concise sources of information on the topic; see also <OneMedicine.com> and his newsletter *The Integrator for the Business of Alternative Medicine*.

[3] Morris Beale, *Medical Mussolini* (Washington, D.C.: Columbia Publishing Co. , 1939).

[4] Brian Berman and David Larson (co-chairs, editorial review board), *Alternative Medicine: Expanding Medical Horizons. A Report to the National Institutes of Health on Alternative Medical Systems and Practices in the United States* (Chantilly, Virginia: Workshop on Alternative Medicine, U.S. Government Printing Office, 1992).

[5] David Hess, *Evaluating Alternative Cancer Therapies* (New Brunswick, N.J.: Rutgers University Press, 1999).

[6] John Beard, *The Enzyme Treatment of Cancer and Its Scientific Basis* (London: Chatto and Windus, 1911).

[7] David Hess, *Can Bacteria Cause Cancer?* (New York, N.Y.: NYU Press, 1997), pp. 10-16.

[8] Herbert Oettgen and Lloyd Old, "The History of Cancer Immunotherapy," in *The Biologic Theory of Cancer*, ed. V. DeVita, Jr., et al. (New York: J. B. Lippincott, 1991), p. 97.

[9] Lyda Mattman, *Cell-Wall Deficient Forms* (Boca Raton, Fl.: CRC Press, 1993).

[10] David Hess, *Can Bacteria Cause Cancer?* op. cit., ch. 3.

[11] Ibid., pp. 17-24.

[12] Brian Martin, ed., *Confronting the Experts* (Albany, N.Y.: SUNY Press, 1996); Brian Martin, *Suppression Stories*, (Wollongong, Australia: Fund for Intellectual Dissent, 1997) <http://www.uow.edu.au/arts/sts/bmartin/dissent/documents/ss/>.

[13] David Hess, "Suppression, Bias, and Selection in Science: The Case of Cancer Research," *Accountability in Research*, 6: 245-257, 1999.

[14] David Hess, *Can Bacteria Cause Cancer?*, op. cit., pp. 10-24.

[15] Barry Lynes, *The Cancer Cure That Worked* (Queensville, Ont.: Marcus Books, 1987).

[16] David Hess, *Can Bacteria Cause Cancer?*, op. cit., pp. 24-29.

[17] Ibid., pp. 29-39.

[18] David Hess, *Can Bacteria Cause Cancer?* op. cit., pp. 42-47.

[19] I am selecting here two of the most prominent of the mid-century period. Another therapy in this category that attracted widespread attention was an oxidation product known as gloxilide, developed by William Koch. After suppression in the 1950s he moved to Brazil, and in 1996 I interviewed his colleague, Dr. Jayme Treiger, while I was a visiting Fulbright scholar at the Universidade Federal Fluminense.
[20] Patricia Ward, "Who Will Bell the Cat?" *Bulletin of the History of Medicine* 58(1984): 28-52.
[21] Ibid., p. 42.
[22] Marcus Cohen, "Emanual Recivi, M.D.: Innovator in Nontoxic Cancer Chemotherapy, 1896-1997," *Journal of Alternative and Complementary Medicine* 4 (2, 1998): 140-45.
[23] Emanuel Revici, *Research in Physiopathology as Basis for Guided Chemotherapy: With Special Application to Cancer* (Princeton, N.J.: D. Van Nostrand, 1961).
[24] Michael Lerner, *Choices in Healing* (Cambridge, Ma.: MIT Press, 1994), p. 161; Lawrence LeShan, *Cancer as a Turning Point* (New York: Dutton, 1989).
[25] Max Gerson, *A Cancer Therapy* (Bonita, Ca.: Gerson Institute, 1990; orig. New York: Whittier, 1958); Patricia Spain Ward, "History of the Gerson Therapy" (San Diego, Ca.: Gerson Research Organization; orig. *Healing Journal* 8 (1-2, 1993): 30-38).
[26] William Kelley, *One Answer to Cancer* (n.p.: The Kelley Research Foundation, 1969).
[27] <www.healthexcel.com>.
[28] <www.dr.-gonzalez.com>.
[29] Kenny Ausubel, *When Healing Becomes a Crime* (Rochester, Vt.: Healing Arts Press, 2000), p. 12.
[30] Ibid.
[31] Kenny Ausubel, *When Healing Becomes a Crime*, op. cit., pp. 124-125.
[32] Peter Chowka, "The Hoxsey Story," *Whole Life Times* Jan.-Feb. (1984), pp. n.a., and Peter Chowka, "Tijuana's Alt Med Clinics: Finally the End of an Era?" <http://naturalhealthline.com> August 15, 2001.
[33] Richard Thomas, *The Essiac Report* (Los Angeles, Alternative Treatment Information Network, 1993), p. 23.
[34] Richard Thomas, *The Essiac Report*, op. cit., p. 60.
[35] David Hess, "From Suppression to Integration: Changing Patterns of the Politics of Complementary and Alternative Medicine for Cancer," ms.
[36] Michael Culbert, *Freedom From Cancer* (New York: Pocket Books, Simon and Schuster, 1974), pp. 29ff.
[37] David Hess, *Evaluating Alternative Cancer Therapies*, (New Brunswick, N.J.: Rutgers University Press, 1999), p. 103.
[38] Greg Field, "Flushing Poisons from the Body Politic: The Flouride Controversy and American Political Culture, 1955-1965," *Proceedings of the German Association for American Studies*, 2001, forthcoming.
[39] Michael Culbert, *Freedom From Cancer*, op. cit., p. 30.
[40] Ralph Moss, *The Cancer Industry* (Brooklyn, N.Y.: Equinox, 1996), p. 177.
[41] Interview, in David Hess, *Evaluating Alternative Cancer Therapies*, op. cit., p. 103.
[42] James Petersen and Gerald Markle, "The Laetrile Controversy," in *Controversy: Politics of Technical Decisions*, ed. D. Nelkin (Beverly Hills, Ca.: Sage, 1979), p. 165.
[43] Stephen Barrett, *The Unhealthy Alliance* (www.hcrc.org, 1988).

[44] James Harvey Young, "Laetrile in Historical Perspective," in *Politics, Science, and Cancer: The Laetrile Phenonmenon*, ed. G. Markle and J. Petersen (Boulder, Co.: Westview, 1980), p. 23.
[45] Ibid.
[46] David Hess, *Evaluating Alternative Cancer Therapies*, op. cit., pp. 15-17.
[47] Donald Markle and James Petersen, "Resolution of the Laetrile Controversy," in *Scientific Controversies*, ed. H. T. Engelhardt Jr., and A. Caplan (New York: Cambridge University Press, 1987), p. 325.
[48] David Hess, *Evaluating Alternative Cancer Therapies*, op. cit., p. 17.
[49] James Young, op. cit., p.24.
[50] Herman Aihara, *Basic Macrobiotics* (New York: Japan Publications, 1985).
[51] Michael Lerner, *Choices in Healing*, op. cit., p. 287.
[52] Michio Kushi, *The Macrobiotic Approach to Cancer* (Wayne, N.J.: Avery, 1981); Anthony Sattilaro and Thomas Monte, *Recalled by Life* (Boston: Houghton-Mifflin, 1982).
[53] John Boik, *Cancer and Natural Medicine* (Princeton, Mn.: Oregon Medical Press, 1996).
[54] Seminar given for "Comprehensive Cancer Care 2001," Washington, D.C., October 2001.
[55] Robert Houston, *Repression and Reform in the Evaluation of Alternative Cancer Therapies* (Washington, D.C.: Project Cure, 1987).
[56] Arlin Brown, "What is the Arlin J. Brown Information Center?" (Fort Belvoir, Va.: The Arlin J. Brown Information Center, P. O. Box 251, n.d.).
[57] Ralph Moss, *The Cancer Industry*, op. cit., p. 187.
[58] Ewan Cameron and Linus Pauling, *Cancer and Vitamin C* (Philadelphia: Camino Books, 1993; orig. 1979).
[59] O. Carl Simonton et al., *Getting Well Again* (New York: J. P. Tarcher/St. Martin's, 1978).
[60] Judah Folkman, "Tumor Angiogenesis: Therapeutic Implications," New England Journal of Medicine 285 (21/1971): 1182-1186. John Prudden's work on bovine cartilage and cancer, which posits an immune-system mechanism rather than angiogenesis mechanism, has vied with Folkman's work for priority and recognition in the cartilage field. See the review by Vivekan Flint and Michael Lerner, *Does Cartilage Cure Cancer? The Shark and Bovine Controversy: An Independent Assessment* (Bolinas, Ca.: Commonweal <www.commonweal.org>, 1996).
[61] Ralph Moss, *The Cancer Industry*, op. cit., pp. 296 and 242.
[62] Stephen Barrett, op. cit., n.p. Senator Proxmire had also been a supporter of Krebiozen, as reported by Patricia Spain Ward, "Who Will Bell the Cat?" op. cit., p. 44.
[63] Michael Cohen, *Complementary and Alternative Medicine: Legal Boundaries and Regulatory Perspectives* (Baltimore: Johns Hopkins University Press, 1998), p. 80.
[64] Stephen Barrett, op. cit., n.p.
[65] Ralph Moss, *The Cancer Industry*, op. cit., p. 242.
[66] Edward T. Creagan et al., "Failure of High-Dose Vitamin C (Ascorbic Acid) Therapy to Benefit Patients with Advanced Cancer," *New England Journal of Medicine* 301 (13,

1979): 687-690; Evellen Richards, *Vitamin C and Cancer: Medicine or Politics?* (New York: St. Martin's, 1991).

[67] Charles G. Moertel et al., "A Clinical Trial of Amygdalin (Laetrile) in the Treatment of Human Cancer," *New England Journal of Medicine* 306 (4, 1982): 201-206.

[68] Ralph Moss, *The Cancer Industry*, op. cit., p. ix.

[69] Ibid., p. xvi.

[70] David Hess, Evaluating Alternative Cancer Therapies, op. cit., p. 132.

[71] Ibid., p. xxv.

[72] David Hess, *Evaluating Alternative Cancer Therapies*, op. cit., p. 3.

[73] David Hess, *Evaluating Alternative Cancer Therapies*, op. cit., p. 165.

[74] David Hess, "Stronger Versus Weaker Integration Policies," *American Journal of Public Health*, 2002 (in press).

[75] Anonymous, "Jury Indicts Texas Doctor on 75 Counts," *New York Times*, Nov. 26, 1995, p. 29.

[76] Peter Chowka, "Tijuana's Alt Med Clinics: Finally the End of an Era?" <http://naturalhealthline.com> August 15, 2001.

[77] American Cancer Society operational statement on complementary and alternative methods of cancer management 1999; <www.cancer.org>.

[78] <www.cancercenter.com>.

[79] <www.blockmd.com>.

[80] David Hess, *Evaluating Alternative Cancer Therapies*, op. cit., pp. 67-78.