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The Raw and the Organic: Politics of Therapeutic Cancer Diets in the United States

By DAVID J. HESS

ABSTRACT: There is a voluminous literature on the historical conflicts between advocates and critics of complementary and alternative medicine (CAM) for cancer. Although the older literature documents the suppression of CAM therapies and advocates, since the 1990s, the politics of CAM have become more complex and subtle. For example, suppression has tended to shift to a politics of integration, that is, of selective uptake of CAM therapies when used as adjuvant modalities. In addition, there is an emergent politics of knowledge that involves (1) social networks with the CAM movement that represent various therapies, (2) value claims regarding the relationship between CAM therapies and religious and cultural viewpoints, and (3) political views regarding globalization and antiglobalization policies and movements. Focusing on three types of therapeutic diets that CAM cancer patients in the United States use, this article charts some of the emergent forms of the politics in CAM in the United States.

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THE social science literature on complementary and alternative medicine (CAM) is now extensive, and one significant strand of the literature analyzes the politics of CAM. Within that strand, much attention has focused on the challenge mounted by CAM professions and CAM-oriented physicians to the dominance of medical societies.¹ A substantial survey literature documents one of the main driving forces of change, the level of interest in CAM from patients, as well as the money that patients are willing to spend out of pocket.² Another portion of the literature documents the extensive attempts to suppress CAM; the literature includes not only social scientists but skeptical and advocacy groups.³ Professional power struggles play out not only over control of licensing, regulation, and the loyalties of patients but also over the extent of insurance and malpractice coverage.⁴ In the research arena, power struggles involve access to funding that would assess various complementary and alternative therapies and the influence of industry in the selection of research programs and publications.⁵ This article will contribute to an expansion of the concept of therapeutic politics by examining the operation of power in ways that extend the social science literature and its primary focus on issues of professional control and dominance via suppression, licensing, insurance, research bias, and so forth. The argument will be restricted to CAM cancer therapies in the United States, arguably one of the most politicized of CAM fields, although some of what is discussed here can

be generalized to other chronic diseases and other wealthy Western countries.

SOME BACKGROUND ON CAM CANCER THERAPIES IN THE UNITED STATES

The field of CAM cancer therapies, as it is known today, has a history that dates back millennia, but its development as a distinct field in the United States coincided with the consolidation of conventional cancer therapies (Hess 1997, 67-75) and the professionalization of medical care (e.g., Starr 1982). Beginning with surgery, which became practical with the development of anesthesia and antiseptics, conventional approaches to cancer treatment have diversified over time, adding radiation therapy in the first third of the twentieth century, chemotherapy in the second third, and immunotherapies in the last third. Throughout the twentieth century, researchers and clinicians—and, in some cases, laypeople—developed a range of alternative approaches to cancer etiology and treatment that did not become part of conventional cancer care. One of the key alternative traditions is the once-dominant theory that human cancer is infectious and that it can be treated with microbial vaccines (Hess 1997); other traditions emerged around herbal therapies such as Hoxsey (Ausubel 2000), various mind-body approaches such as visualization (Simonton, Matthews-Simonton, and Creighton 1978), high-dose supplements such as vitamin C (Cameron and Pauling 1993), various immunological or pharma-

colological treatments such as laetrile (Markle and Peterson 1980), and dietary programs. The question of why the alternative traditions of etiology and treatment were not selected to become part of the tool kit of standard cancer care remains a contested historical problem. CAM advocates often point to the ample historical evidence that pharmaceutical and biotechnology companies have profited from patented chemotherapy and immunotherapy products, as do oncologists who employ those products. Skeptical members of the medical profession counterargue that the evidence for the various alternative traditions is weak. In turn, CAM advocates point out that the ability to produce scientific evidence is strongly conditioned by funding, and funding has been much more ample for patented drugs and technologies than for the unpatented microbial vaccines, diets, mind-body techniques, and nutritional supplements.

There is more agreement on a second historical issue: the extent of the transformation of the stature of CAM therapies at the end of the twentieth century. Few would disagree that alternative cancer therapy advocates, as well as chiropractors and other CAM practitioners, met with strong opposition and suppression, particularly during the mid-twentieth century, when Morris Fishbein dominated the American Medical Association. The mechanisms of suppression varied from use of the state to close down clinicians and manufacturers to bias in research designs that were ostensibly intended to provide fair evaluation of CAM

approaches to cancer (Hess in press). Although advocates and critics may debate whether such suppression was in the public interest, there is little disagreement regarding the shift in those politics, as the politics of suppression gave way to an alternative politics of integration, particularly during the 1990s.⁶ The integration process has many different aspects to it. At the research level, members of Congress supported the establishment of an Office of Alternative Medicine that subsequently became the National Center for Complementary and Alternative Medicine. At the time this article was being written, the budget was about \$100 million per year, which, while still small in comparison with the total budget of National Institutes of Health, was no longer token. Likewise, private insurance companies have slowly opened their doors to some complementary and alternative therapies, not only in response to demand from patients but also in response to evidence for cost-effectiveness. The pharmaceutical industry and food industry have both moved into the large and growing supplements and natural foods markets, so that the economic interests of some segments of the industries are no longer as obviously antagonistic to the nutritional side of CAM therapies as before. In cancer care, many of the large cancer hospitals now offer CAM facilities, and increasing numbers of oncologists are shifting their practices to include complementary and integrative cancer care.

Although change has been dramatic, terms such as "CAM revolution" may occlude more complex

shifts in the politics of CAM cancer care. The movement toward integration generally preserves the hegemony of conventional cancer therapies such as chemotherapy and radiation therapy. Much of the new politics of CAM revolves around the positioning of therapies as complementary to (alongside) rather than alternative to (instead of) conventional therapies. Indeed, nutritional supplements and mind-body interventions in the cancer treatment context are now being studied mostly as adjuvant interventions. For example, there is now a controversy about the role of antioxidants in chemotherapy: do they reduce side effects but interfere with the efficacy of the drugs, and can mode of delivery (such as pulsed doses after a several-day hiatus) provide the benefits of reduced side effects while retaining cytotoxic benefits from chemotherapy? As attention focuses on questions such as adjuvant nutritional therapies, the deeper issues of the evaluation of complete dietary and nutritional programs as alternatives to chemotherapy and radiation tend to be lost. The underlying politics of CAM cancer therapies has tended to shift from a politics of suppression (of "busting the quacks") to a politics of selection (of incorporating some alternatives in a complementary or adjuvant mode but of marginalizing alternatives that could replace chemotherapy and radiation therapy). It is possible that alternative uses of dietary and nutritional programs may turn out to have greater efficacy than conventional therapies, either alone or in combination with adjuvant nutrition. That question

remains open, but it is potentially of considerable interest to large numbers of people such as the one in three to one in two people in the United States who can expect to face a cancer diagnosis at some point in their lifetimes. As a result, there is a new politics of funding—that is, of creating pockets of undone science and done science and of creating areas of controversy (over antioxidants and supplements) and undiscussed doxas (that is, the exclusion of evaluation of completely alternative dietary programs)—that to some extent defines the new politics of CAM, at least in the arena of cancer care in the United States.

In such a context, it is of particular interest to focus on dietary programs for cancer treatment because they are one of the points where advancing nutritional science is being channeled into either adjuvant/preventative modalities or alternative/replacement modalities. Furthermore, the analysis of dietary programs from a political and cultural perspective reveals new forms of power that go beyond the politics of integration. Power is defined here broadly as the ability of an actor to mobilize resources to achieve a goal, which can include shaping agendas and the goals of other actors. The focus in this article is a more fine-grained analysis of what might be called the micropolitics of the design of CAM therapies. The analysis will proceed through three increasingly larger circles of the politics of alignment of knowledge and society: (1) social networks that represent various therapeutic diets, (2) value claims regarding the relative

goodness of different types of societies, and (3) political positions regarding globalization and antiglobalization policies and movements. The focus here is therefore on the second aspect of the definition of power, that is, the ways in which the actors behind the therapeutic diets are attempting to shape agendas regarding general cultural and political preferences.⁷

The research presented here is mainly bibliographic, but it is also based on about a half decade of fieldwork and interviews. Previous research included archival work on the history of alternative cancer therapies in the United States, formal semistructured interviews with about fifty opinion leaders of the CAM cancer therapy movement, extensive reading and tracking of magazines and the literature, attendance at and occasional participation in about ten CAM cancer therapy conferences, many informal conversations with patients and advocates, and working with patient advocates in New York City to hold occasional public meetings for cancer patients.

THREE DIETARY TRADITIONS

Three of the most influential of the therapeutic diets for cancer in the United States are the Gerson-Kelley group, Asian diets (especially the macrobiotic diet), and low-carbohydrate approaches. Historically, the low-carbohydrate approaches have been less visible in the cancer field, but they are included here because they provide a valuable point of comparison, and in my experience they have been gaining some ground. All

three groupings have significant internal variants, and they have undergone historical transformation. A number of other therapeutic diets for cancer are also occasionally encountered among patients and clinicians in the United States, but the other dietary programs share key features with some of the main groups (e.g., the wheatgrass diet shares a raw foods emphasis with the first group) (Wigmore 1985), they are incomplete (e.g., the grape diet of Brandt 1929), or they are less diets than other kinds of intervention (e.g., the lipid-based chemotherapy of the late physician Emanuel Revici 1961) (Marcus Cohen 1998). In other countries, there are obviously different therapeutic dietary traditions, so the discussion here is very much focused on the United States. The differing cultural roots of the diets also reflect global flows of dietary knowledge.

Max Gerson graduated in medicine from the University of Freiburg in 1907, and he first developed his low-salt diet to treat his own migraines.⁸ He later expanded his dietary therapy to treat tuberculosis, arthritis, and in 1928, cancer. His tuberculosis diet was tested in a well-known clinic (446 out of 450 patients are claimed to have recovered), and it was widely used in Germany. When the Nazis came to power, Gerson, a Jew, moved with his family to Austria and then to New York. He continued his research and practice, but he earned the enmity of the American Medical Association when he testified before the U.S. Senate regarding his patients who had recovered under his therapy after failure with conventional therapies. The Pepper-

Nealy Bill, which would have funded Gerson's research, failed, and after continued attacks from the medical establishment, Gerson lost hospital privileges and malpractice insurance. In 1958, the New York Medical Society suspended his license, and he died a year later. In the 1970s, his daughter Charlotte Gerson and a patient advocate, engineer Norman Fritz (a founder of the Cancer Control Society), resurrected the therapy in Tijuana, Mexico, and today variants of the therapy are available in that city. In the 1990s, a former patient, Gar Hildenbrand, and colleagues (1995, 1996) added credibility to the therapy with the publication of two refereed articles that suggested some safety and efficacy for the therapy for midstage melanoma patients, particularly when used in conjunction with surgery.

In the 1960s, dentist William Donald Kelley (1969) was diagnosed with metastatic pancreatic cancer, one of the most deadly forms of cancer, although the diagnosis was apparently not confirmed with a biopsy. His dietary approach to cancer (Rohe 1982) is clearly influenced by Gerson, but it has several key distinguishing features, including the use of proprietary supplements. The dietary program probably would have passed into obscurity had it not been for the work of oncologist Nicholas Gonzalez, who as a medical student at Cornell University in the early 1980s analyzed Kelley's cases and found evidence to support the claim of long-term survival for a sample of pancreatic cancer patients (Maver n.d.). Gonzalez subsequently developed his own nutritional program, and

after many years of efforts to gain recognition from the establishment, he won support in the late 1990s from the National Institutes of Health to run a clinical trial of pancreatic cancer patients at Columbia University (Columbia-Presbyterian Medical Center n.d.).

A second strand of dietary therapies in the United States is the group of Asian diets. Although some are brought to patients via acupuncturists and other Asian medical therapists, the macrobiotic diet is, in my experience, the most influential in the cancer field in the United States today. The original form of the diet as developed in Japan placed an all-grain diet as the highest level, or goal. In 1971, the American Medical Association Council on Foods and Nutrition reported serious nutritional deficiencies for the all-grain level of the diet (American Medical Association 1971). Michio Kushi, the leader of the movement in the United States, helped reform the diet to avoid the criticized nutritional deficiencies. In 1981, Kushi published *The Macrobiotic Approach to Cancer*, and in the next year, a doctor published a popular book in which he claimed to have successfully treated his cancer with the diet (Sattilaro and Monte 1982). Whereas the early work emphasized the potential value of the diet in cancer treatment, a later publication by Kushi (1993) positioned the diet more as a preventative approach to cancer and secondarily as a complementary therapy. The repositioning of the diet was a better fit with the emergent trends toward integrating nutrition as an adjuvant form of comprehensive

cancer care. As in the other cases, the diet probably would have faded into obscurity had it not been for the work of a second generation. For example, in the cancer field, oncologist Keith Block, who in 2001 consolidated his position as one of the leaders of CAM cancer care when he founded the journal *Integrative Cancer Therapeutics*, had earlier developed with professional nutritionists a highly modified form of the diet as part of his complex integrated cancer care program (see www.BlockCancerCare.com).

A third strand in the dietary field is represented by the low-carbohydrate diets. One of the oldest and most well known was developed by Robert Atkins (1990), a cardiologist who founded the Atkins Center for Complementary Medicine in New York City. The low-carbohydrate approach to diet was subsequently developed by researchers such as scientist Barry Sears (1995) and a former nutritionist from the high-carbohydrate Pritikin centers (Gittleman 1996). Although in my experience, the low-carbohydrate approaches have not had the same influence in the cancer field as the other dietary traditions discussed above, concern with glycemic control does seem to be increasing and influencing diet-oriented clinicians. Furthermore, the low-carbohydrate approaches provide an important point of reference for the other dietary programs.

DISTINCTIONS AMONG THE THERAPY GROUPS

All of the dietary programs have changed over time, so it is difficult to

compare them in a consistent way. This article will focus on the more developed forms of the therapies rather than earlier versions, specifically Gerson's therapy as published in his 1958 book (Gerson [1958] 1990) (that is, shortly before his death); Kelley's therapy as published in a 1982 book by Fred Rohe, which Kelley approved and said superseded prior versions; Michio Kushi's 1993 statement of the macrobiotic diet and cancer, which emphasizes prevention rather than treatment; and Atkins's (1992) new diet rather than earlier versions plus some of his more specific statements about diet and cancer in other sources.

The hallmark of Gerson's dietary program for cancer therapy is the restriction of sodium, fat, and animal protein for an initial period, usually six weeks (Gerson [1958] 1990). He believed that excess sodium led to cellular edema (subsequently viewed as cytoplasmic deregulation) (Cope 1978) and that protein restriction aided the absorption of edema because sodium was trapped with the protein in cellular cytoplasm. The therapy included hourly glasses of freshly squeezed juices that he selected for potassium, minerals, and oxidizing enzymes. The juices varied and included orange, apple, carrot, green leaf, grape, and grapefruit. The therapy also included fresh calf liver's juice, but the liver juice was discontinued in the Tijuana hospital after cases of contamination developed and the researchers figured out a way to replace the desired nutrients with supplement tablets. The remainder of the diet emphasized vegetables and starches, which were

to be eaten raw or cooked slowly without water or oil and with no peeling or scraping. The soup, which derived from a Hippocratic recipe, included celery, parsley, leeks, onions, tomatoes, and potatoes. Grains included oatmeal, whole-grain breads, brown rice, and barley. After six weeks, patients were given nonfat dairy.

Other interventions included supplements and medications. Gerson was far ahead of his time in recommending two tablespoons daily of flaxseed oil (high in Omega-3 oils). He also recommended thyroid medication to speed up the metabolism and increase absorption of potassium as well as vitamins A and D, niacin, brewer's yeast (B vitamin complex), dicalcium phosphate, liver extracts, and potassium salts. Digestive enzymes were prescribed, but Gerson ([1958] 1990) pointed out that the injection of pancreatic enzymes had proven disappointing (p. 211). Most prosaic was the practice of enemas, usually every four hours (using coffee, castor oil, etc.). He believed that without the enemas, the therapy could sometimes detoxify too rapidly and put the patient's liver at risk. Among other benefits, the enemas opened up a bile duct between the liver and the colon (Gerson and Walker 2001, 156-66).

The forbidden list was long: tobacco, salt, sharp spices, tea, coffee, cocoa, chocolate, alcohol, refined sugar, refined flour, candies, ice cream, cream, cake, mushrooms, cucumbers, water to drink, canned foods, sulfured foods, frozen foods, smoked or salted vegetables, dehydrated or powdered foods, bottled

juices, all fats, all oils, and salt substitutes (even sodium bicarbonate in toothpaste). Some foods otherwise assumed to be safe were excluded because they were too fatty (nuts, soy, and avocados) or were suspected allergens (berries and pineapples). For obvious reasons, compliance has been a problem, especially after patients leave the clinic. For healthy people, the diet is considerably more relaxed, with dairy, meat, fish, eggs, nuts, and natural sweeteners allowed but still restricted.

Kelley believed that an excess of dietary protein caused a deficiency of pancreatic enzymes. He therefore tapped into perhaps the oldest and richest of the alternative cancer therapy traditions, one that dates back to the turn of the century and the work of the Scottish scientist John Beard (1911), who believed that pancreatic enzymes were the key to cancer control. However, in many ways, Kelley's diet was similar to that of Gerson. No meat was allowed except raw liver, and even people who were biologically typed as meat eaters (more on biological typing below) were directed to restrict meat intake.⁹ After six months, white fish was allowed two times per week. Only four to eight ounces of unpasteurized, cultured milk was allowed in the morning. Protein was supposed to be eaten before 1 P.M. to free up the anticancer therapeutic value of pancreatic enzymes at night. The diet was supposed to consist of 70 percent raw foods because cooking damaged enzymes. Restrictions were similar to those of Gerson, although sometimes for different reasons. For example, soy was restricted not

because it was fatty (Gerson) but because of the affinity for copper (Kelley). Contrary to Gerson's restriction, pineapple juice was allowed because of its enzymes. Kelley also had a complex regimen of supplements (mostly vitamins, minerals, and enzymes) that could involve up to 150 pills per day. Again, it is obvious why accessibility and compliance were problems.

In the late 1990s, the therapeutic protocol of oncologist Nicholas Gonzalez received National Institutes of Health funding for a clinical trial, one of the key events of the 1990s that has marked the acceptance of CAM cancer therapies as a legitimate research topic. According to the protocol published for his prospective trial, the patients receive pancreatic enzymes and about thirty nutritional supplements per day (Columbia-Presbyterian Medical Center n.d.). Although Gonzalez, like Kelley, argued that diets need to vary individually based on human genetic differences, the clinical trial provides one basic diet called the moderate vegetarian metabolizer diet. The diet requires 70 percent raw foods that are 90 percent organic, with a daily recommendation of at least a quart of vegetable juice (carrot), one to two soft-boiled or poached eggs, eight ounces of whole milk yogurt, and ten almonds. Fish is indicated twice a week, but red meat and poultry are forbidden. There are no limits to the intake of whole grain products, fruits, vegetables, nuts, and seeds. Coffee enemas are mandated twice per day. One can see a family resemblance to the Gerson diet, but also significant differences, especially

with Gerson's approach to the first period of dietary therapy.

In the macrobiotic diet, 50 to 60 percent of the food intake is cooked whole grains such as brown rice, whole wheat, millet, oats, barley, corn, rye, and buckwheat. Soup (especially soy-based Miso) is about 10 percent of the diet. Vegetable dishes are about 25 to 30 percent of the diet, and beans and sea vegetables are 5 to 10 percent. Allowed, but in low doses, is white meat fish such as cod or haddock (a few times per week), fresh fruit (preferably cooked or dried), seeds, nuts, and natural sweets. Foods to avoid are sweets (sugar, honey, syrup, chocolate, carob, and artificial sweeteners), most animal foods, dairy, eggs, and some other vegetables seen as acid producing (e.g., eggplants, asparagus, spinach, sweet potatoes, potatoes, tomatoes, avocados, and green and red peppers). Unlike the Gerson, Kelley, and Atkins diets, the macrobiotic diet does not recommend dietary supplements.

The hallmark of the classical Atkins diet is its high protein and fat content and its low intake of carbohydrates. The diet is significant because it raises the issue of insulin resistance and glycemic control that reached public attention particularly during the 1990s. Atkins argued that large-scale clinical studies support his contention that high fat intake is not a risk factor for cancer, unless fat intake is correlated with unrefined carbohydrate intake, as in desserts (Atkins 1992, 161, citing Willett et al. 1987).¹⁰ Because the Atkins diet substitutes carbohydrates with fat and protein, it allows patients to lose

weight even when they eat as much as they want.¹¹ The thinking is similar to that of several other health diets that became popular during the 1990s, but it has raised concerns with researchers and clinicians concerned with cardiovascular disease.¹²

At first glance, Atkins's concern with glycemic control and his ban on all grains and juices put his diet at odds with the high levels of juicing in the Gerson and Kelley diets and the high levels of grains in the macrobiotic diet. However, the most well-known version of the Atkins diet turns out to be directed especially at weight loss for patients with insulin resistance, and fewer than half of Atkins's patients are on the weight-loss diet (Dean 2000, 41). For patients who are not overweight and do not show signs of insulin resistance, Atkins prescribes the other of his two basic regimes: the "meat and millet" diet (Atkins 1990, 360). The second diet is individually tailored, but it allows whole grains and fruits along with high-protein foods (meat, fish, fowl, eggs, nuts, beans, and some dairy) and vegetables.¹³ In one book, Atkins (1990) described his diet for a patient who had an inoperable pancreatic tumor and lived at least two years, that is, a relatively long time for the deadly form of cancer. After toying with putting the patient on a Kelley or macrobiotic diet, he instead prescribed a version of the meat and millet diet with the usual restrictions on sugar and chemical additives, but he added sixteen ounces of freshly squeezed carrot juice per day and mandated that 80 percent of the vegetables should be uncooked (Atkins 1990, 325-26). He also added high-

dose antioxidant supplements (including intravenous vitamin C in the tradition of Ewan Cameron and Linus Pauling 1993), pancreatic enzymes, herbs, essential fatty acids, thymus extract, and other supplements, and when the patient had recovered sufficient strength, he referred her to a clinic in Germany. In short, Atkins emphasizes individual variation and, in the case above, prescribed a diet that had substantial commonalities to the Kelley regimen.

Even when one takes into account the cancer-oriented diet that Atkins described, there remain significant differences among the three dietary groups. The Gerson diet emphasizes severe short-term protein restriction, whereas Kelley wanted to restrict protein consumption to the morning and lunch hours so that the pancreatic enzymes would be more available at night to combat cancer. Atkins, in contrast, was not concerned with excessive protein. Notwithstanding these differences, the maintenance diet of Gerson approximates the meat, millet, and carrot juice diet of Atkins, so at certain points, the diets may be closer than they first appear.¹⁴ There are also significant differences between the macrobiotic diet and the Gerson and Kelley diets. For example, the macrobiotic diet is more tolerant of cooked food and sodium than the Gerson, Kelley, and even Atkins diets. Preferences toward rice versus potatoes, or tolerance of dairy versus soy, probably reflect food cultures (e.g., Asian lactose intolerance) more than any scientific rationale. Indeed, the relative value of dairy versus soy remained an intense controversy in

the many health conferences that I attended during the 1990s. All of the diets recognize the importance of increased good fats, especially the Omega-3 fatty acids or, even more specifically, the Omega-3 fish oils.

Although there is some common ground, the differences are significant enough for each dietary group to have distinctive features that occasionally flare up at conferences. For example, at a conference of the Cancer Control Society in Los Angeles, where many of the leaders of the Mexican clinics presented their protocols to prospective patients, I observed one clinician expressing concern about the glycemic implications of juicing. "Eat your vegetables, don't juice them," he said. In other cases, I heard concerns about nightshades (e.g., potatoes and tomatoes) or soy, which are distinguishing features between macrobiotics and Gerson, or about the value of multiple supplements versus a food-based program (distinguishing, for example, Kelley from the Gerson program, with minimal supplements in its classic form, and macrobiotics). The scientific controversies over a particular food; how much of a diet should be raw, cooked, or juiced; or what types of cooking are best (dry steaming versus frying) create the space for new players to emerge who reconfigure the elements in new ways (juicing plus soy and rice, for example). The almost endless variations in the configurations of dietary elements therefore are reminiscent of what has been known in anthropology as "bricolage" (Lévi-Strauss 1966), yet it is a bricolage accomplished through debates about scientific evidence.

Furthermore, pace Bourdieu (1984), the scientific controversies are simultaneously conflicts among clinicians and clinical networks about resources (patients, clinicians, researchers, and research dollars) and about hegemony in the field of therapeutic and preventative cancer diets. In other words, the dietary controversies have political implications to the extent that the outcomes of the controversies tend to legitimate one dietary grouping over another. Yet to the extent that the therapeutic diets affect general food tastes or develop into significant markets (such as for juicing or for macrobiotic restaurants), the diets can, in theory, also affect markets for different types of food (e.g., soy versus dairy). Thus, while at one level the type of politics revealed by this more fine-grained analysis is a micropolitics of networks of research, researchers, clinicians, and patients, at another level the outcomes of the controversies about optimal anticancer diets are connected to macro-level political economy issues regarding consumer preferences and food industries.

NONMODERN OTHERS

A second type of politics of food and health emerges when one inspects the cultural addresses and cultural baggage that are woven into the narratives about the dietary therapies for cancer. Although all three groups can be examined, defended, and criticized in the terms of modern biomedicine and nutritional science, it is also the case that each grouping has points of reference or inspiration that draw on food and

cultural traditions that are not part of modern biomedicine. The references to extrascientific practices and traditions constitute a second type of alignment, here less between elements (juicing, soy, sodium, etc.) that distinguish therapies and clinicians and more between the therapy as a unit and a differentiated field of cultural values or traditions.¹⁵

Even Gerson, whose work reveals a brilliant scholarly mind that roamed over a wide range of scientific literatures that were available to him at the time, drew occasionally on nonscientific literatures. For example, he discovered the Hippocratic soup when his first cancer patient brought him a book on European folk medicine, and he cited the theories of Hippocrates and Paracelsus. However, unlike in macrobiotic thinking, Gerson's borrowing from humoral medicine was at a very general level: he was mostly concerned with showing that the ancients had foreseen the therapeutic use of diet that modern science could now begin to sort out.

Kelley drew on another extrascientific tradition: the idea that human beings can be categorized into basic biological types (Kelley 1977). Although anthropologists today reject such typologies and prefer to think instead of clines or distributions of alleles across populations, Kelley drew on prescientific ideas of human difference. However, his theory of human typing was also extrapolated from general knowledge about the autonomic nervous system, so it was an odd hybrid of scientific and folk racial theory. He believed that sympathetic dominants are strict

vegetarians and prone to diabetes, arteriosclerosis, rheumatoid arthritis, and cancer. In contrast, parasympathetic dominants need to eat up to fourteen ounces of meat per day, and they were prone to low blood sugar, osteoarthritis, and massive heart attacks (Kelley 1977). In evolutionary terms, sympathetics were adapted to tropical, plant-based diets, whereas parasympathetics were adapted to colder climates and meat-based diets (Office of Technology Assessment 1990). A variety of types existed between the two.¹⁶

Kelley also emphasized the religious component of his program. The penultimate chapter of his 1969 book is about "spiritual attitude," and while the message can be read as nonsectarian, he does quote Jesus twice in the chapter. Likewise, the first sentence of the book is, "Jesus the Christ said, 'Physician Heal Thyself'" (Kelley 1969, 1). Ironically, Rohe's (1982) book adopts a military metaphor as an organizing device, but the ninth chapter, "The Commander in Chief," is about spirituality. On this ground, the Kelley diet shares a deep similarity with the emphasis on spirituality found in the macrobiotic movement, albeit across an East-West cultural divide.

The macrobiotic diet bears the strong imprint of Asian concepts of humoral medicine, but for Kushi, the humoral tradition was much less filtered through the prism of modern science than it was for Gerson. Yin is associated with the expansive, cold, wet, and female, whereas yang is associated with the contractive, heat, dry, and male (Kushi 1993, chap. 6). Fruits, dairy, and spices are classified

as more yin, and animal food as more yang. In between, on a spectrum running from relatively yin to relatively yang, are cereals, beans, seeds, vegetables, nuts, and fruits. Cancer is classified as a yin disease due to its expansive nature (rapid growth), and the yin-yang categorization applies recursively to types of cancer. Yin cancers are peripheral, upper body, and in hollow, expanded organs (e.g., the stomach), whereas yang cancers are deeper (e.g., the pancreas). At another level, yin stomach cancers come from high-yin foods and affect the upper stomach, whereas yang stomach cancers come from high-yang foods and affect the lower stomach. This system attempts to explain anomalies such as the Eskimos, who do not follow the macrobiotic diet but historically are said to have had low levels of cancer. Kushi (1993) argued that they had a high-yang diet (meat and fish) but had no cancer until they consumed high-yin items (e.g., sugar from the Western diet), which were needed to stimulate cancer growth (p. 65). Treatment from this yin-yang framework attempts to move the diet to the center of more balanced foods with some compensation. For example, yin cancers are treated with a slight emphasis on yang foods, and vice versa.

Unlike the other two dietary traditions, there is less reference to non-Western, folk, or religious ideas in the low-carbohydrate group. However, Atkins (1992, 29) and Sears (1995, 101) do note similarities between their diets and paleolithic diets, suggesting that all humans are better suited to preagricultural diets, that is, diets that predated the

extensive use of grains. Although on the surface their view may sound more scientific, the average life expectancy tens of thousands of years ago was so low that there is little evidence that the diet of the time protected against cancer, especially in older persons. In many paleolithic societies, humans died from other causes before they reached the age brackets where cancer risk is highest. Furthermore, as Kushi (1993) pointed out, paleolithic diets varied tremendously, and at least in some places, there was substantial gathering of undomesticated cereals, plants, berries, and roots (p. 28).

In summary, each of the dietary traditions tends to draw on some form of ancient wisdom as a point of reference and legitimation. Although this aspect of the diets produces the most discomfort among medical researchers and tends to be filtered out as excess cultural baggage, it is to some degree the most interesting from the viewpoint of a social science analysis of the politics of diets. As shown in the first level of comparison, the diets legitimate specific foods, macronutrients, micronutrients, supplements, and ways of cooking; those legitimations can be important if one is part of the soy versus dairy industry, or a potato versus rice farmer. However, over and above this level of politics is another layer of cultural politics. From this perspective, the therapies can be regrouped along new dimensions. For example, Kelley and Kushi are more similar on the spirituality dimension than the more secular and scientific discourse of, for example, Gerson and Atkins. On another dimension,

Gerson looks deeply into the traditions of Western humoral medicine but does not embrace them as knowledge, whereas Kushi takes a similar look at Asian humoral medicine but does embrace it as knowledge. Kelley appears much the American, with his concern with races and individualization, but Atkins also turns out to individualize significantly. Finally, Gerson and Kushi draw on the agricultural peasant diets of their homelands, whereas Atkins and Sears look more toward the preagricultural diets of hunter-gatherers.

SOME COMMON GROUND:
A THIRD LAYER OF
DIETARY POLITICS

One reaction to the differences among the therapeutic cancer diets is to reject them all and claim that their differences and extrascientific baggage only confirm the general wisdom of oncologists, that is, that dietary modifications will be of no help in cancer treatment. However, as I attended conferences and completed interviews, I continued to meet patients who had been on one of the dietary programs or clinicians who knew patients on the programs, and they claimed that the programs had helped them. One example is a woman whose husband died of pancreatic cancer. They had spent some time tracking down long-term pancreatic cancer survivors, and all of them had been on extensive CAM programs. Of course, such information is anecdotal, but anecdotes also provide the basis of common sense that informs an interpretation of clinical and subclinical research.

A good clinical trials literature is lacking for the diets as cancer therapies, but the data on micronutrients and cancer prevention, in some cases even remission, continues to accumulate, and there are a few clinical studies (such as the Hildenbrand et al. 1995, 1996 studies previously mentioned). One point of comparison is pancreatic cancer; given the poor prognosis for pancreatic cancer patients and the absence of successful conventional therapies, any pocket of long-term survivors is of interest, even if it does not come in the form of a prospective, double-armed trial. Gonzalez has done the most in this regard. In his study (Maver n.d.; Gonzalez 1987) of Kelley's records from 1974 to 1982, he found twenty-two pancreatic cancer patients, nine of whom followed the protocol completely and lived a median of nine years. This kind of statistic is so good that one immediately suspects improper diagnosis, but Gonzalez also found a dose-response relationship (as compliance increased, so did survival). Furthermore, in a subsequent prospective pilot study of ten patients (single-arm, unmasked), Gonzalez and Isaacs (1999) reported that half the patients survived two years and that two were alive at the time of publication (at three years and four years of postdiagnosis survival). For the macrobiotic diet, there are two retrospective cohort studies that suggest an increase in survival for pancreatic cancer patients, and Atkins claimed that three out of six pancreatic cancer patients on his program as of the late 1980s had lived two years.¹⁷ The data can be taken only as suggestive,

but for pancreatic cancer patients, they offer one of the few beacons of hope available today.

If future research demonstrates that each of the dietary traditions can result in survival benefits in comparison with standard treatments that include little or no nutritional intervention, then one is left with a different sort of politics of food and health: the peace in the feud. What are the commonalities among the differing therapeutic diets?

1. All advocate increased intake of fresh fruits and vegetables and lower intake of junk food, processed food, and sweets.

2. All are concerned with the quality of food (e.g., freshness) and with increasing the intake of organic food, both because organic food may have a higher nutrient content and because it is less likely to contain pesticide residues or other pollutants.

3. All are concerned with the type of fat, and they advocate increased intake of Omega-3 fatty acids.

4. All recognize that food may be prepared in ways that are unhealthy, such as charbroiling (although there are significant differences on the raw vs. cooked issue).

The common ground is not very far away from standard recommendations for a cancer prevention diet. For example, even a conservative organization such as the American Cancer Society, which for decades attacked alternative cancer therapies and today remains critical of unproven cancer therapies, currently recommends

five servings per day of fruits and vegetables, reduction of dietary fat, and consumption of whole grains rather than refined sugars (American Cancer Society 2001). It may turn out that differences from the standard prevention diet do not provide additional preventive or therapeutic protection, but it may also turn out that extreme differences from the conventional prevention diet (such as hourly juicing, short-term fat and protein restriction, and substantial supplements) do increase survival benefit for cancer patients. The science here is all “undone,” and given current funding patterns, it is likely to remain undone for a while.

Still, if consumer preferences were to shift toward accepting even the common ground of organic food, high levels of fresh vegetables, whole grains over refined carbohydrates, restricted modes of cooking (e.g., no frying, no microwaving, no charcoal grilling), and restrictions on food processing (favoring fresh whole foods), there would be considerable political implications. The therapeutic diets could strengthen the movement toward a world of community-supported agriculture, farmers’ markets, and organic salad bars and away from a world of industrial agriculture, long processing and distribution chains, and fast food franchises. Gerson was ahead of his time in his support of organic agriculture and his linkage of the health of the soil to the health of the human body. Likewise, Kushi (1993) linked the macrobiotic diet to “healing the earth” (p. 98). This is one topic on which there is little disagreement across the board.

Likewise, the diets potentially offer alternatives to conventional cancer therapies such as chemotherapy and radiation, which can be life saving but for many patients have only offered little survival benefit in exchange for high levels of discomfort and toxicity. In short, the diets could support the confluence of global social movements around issues of sustainability, community control, decreased exposure to toxins, and environmental health.

CONCLUSION

This article expands the concept of the politics of CAM from discussions that focus mainly on professional power struggles about legal recognition, insurance support, and research funding. Those power struggles have undergone tremendous changes in the United States, especially during the 1990s, as the politics of integration displaced an older politics of suppression. However, this article suggests that the concept of politics with respect to CAM cancer therapies does not have to be restricted to the relations between advocates and critics, or even between advocates of alternative modalities versus complementary/integrative modalities. Three additional levels of politics are considered. First, within the therapeutic field, a series of technical distinctions (food choices, macronutrient mixes, scientific rationales) simultaneously constitute a social field of networks of patients, advocates, clinicians, and researchers who, while often friendly to each other, are at another level competitors for scientific legitimacy and

support from patients on a therapeutic field. This is a kind of Bourdieuan politics of distinction, but it potentially has broader implications for various industries that can be aligned with the therapeutic distinctions (e.g., dairy versus soy).

Second is a level that is best described as cultural politics. The leaders of the therapeutic diets tend to talk about a lot more than scientific medicine, rapidly changing nutritional science, and clinical evaluation. For example, they sometimes discuss the relationship between modern scientific knowledge and ancient wisdom, or they link their therapies to religious and humoral traditions in Eastern versus Western cultures. Like Kelley, they may make statements about how similar or different human populations are. Furthermore, the therapies raise the question of the limits of scientific knowledge and the importance of religion as the perennial competitors meet in the zone of the clinical encounter.

At a third level, the peace in the feud, the therapeutic diets carry with them a political message that connects with community-oriented environmentalism and green localism. Narratives of detoxifying the body coincide with a concern for organic agriculture, just as concerns with fresh, raw food suggest a political economy of gardens and locally based agriculture. At this level, the politics of CAM reveal not an isolated reform movement but a field of connections with other social movements. The deeper politics of therapeutic diets, especially the third level, is beginning to find articulate visions of the

confluence of the environmental movement and the CAM movement.¹⁸ To the extent that consumer preferences are changed toward organic and local food production and less toxic modes of food preparation, the politics of CAM cancer therapies takes on a significance that extends beyond the health care arena. An emerging social science of CAM would do well to pay more attention to the deeper politics of the place of CAM as a social movement in the emerging politics of globalization, the environment, and health.

Notes

1. This literature dates back to the studies of Freidson (1975) and Haug (1973) on professional dominance and deprofessionalization and forward to subsequent theoretical developments regarding countervailing powers (e.g., Light 1995, 2000), of which complementary and alternative medicine (CAM) is clearly one instance. For an extension of the sociology of professional dominance and power into issues of CAM, see Saks (1995) and Cant and Sharma (1999).

2. My review of the survey literature in 2000 brought up more than seventy recent surveys of CAM patients and clinicians. In the United States, the most influential surveys have been those of David Eisenberg and colleagues (1993, 1998) of Harvard Medical School. For more social-science-oriented review work in this area, see Kelner et al. (2000).

3. For a way into skeptical positions in the United States, see www.quackwatch.com and the National Council against Health Fraud at www.ncahf.org. For a sample of pro-CAM organizations, see the National Health Federation at www.thenhf.com or the Cancer Control Society at www.cancercontrolsociety.com. The most well-known book for the cancer field is probably Moss's (1996), but the topic has also been examined by social scientists (e.g., Hess 1997; Richards 1991).

4. On regulatory issues and CAM, see Stone and Matthews (1996) for the United Kingdom and Michael Cohen (1998) for the

United States. For discussions of licensing and professional conflict, see Baer (2001). The insurance field in the United States is rapidly changing, and the best affordable source of ongoing updates is the monthly review column by Jonathan Weeks in the *Townsend Letter for Doctors and Patients*.

5. Abraham (1995) examined the issue of industrial interests and publication bias, whereas Hess (1999), Houston (1989), and Moss (1996) examined how industrial interests have shaped research priorities and research methods in the CAM cancer therapy field in the United States.

6. The history of suppression and its transformations during the 1990s that are reviewed in this paragraph are discussed in more detail in Hess (2002, in press).

7. In terms of frameworks of analysis in science and technology studies, this article moves beyond the micro level of actor-network and constructivist studies to broader institutional and cultural perspectives, as has been the general trend in the field (e.g., Kleinman 2002; Hess 2001).

8. The history follows the essay by medical historian Patricia Spain Ward (n.d.), checked against Gerson and Walker (2001).

9. Again, this description follows Rohe (1982).

10. In 2001, Atkins's Web site featured a summary of research from the University of Toronto that linked high-serum insulin levels with breast cancer progression (apparently the research has not yet been published).

11. The diet is 60 percent natural fats, 30 to 35 percent animal protein, and 5 to 10 percent carbohydrates, with decreases in fats and increases in carbohydrates as the diet progresses (Atkins 2001). Although vegetables are allowed, most grains are not allowed. He prefers fruits and vegetables with a "high antioxidant to carbohydrate ratio," specifically fruits such as berries and vegetables such as kale, garlic, spinach, Brussels sprouts, broccoli, onion, and leaf lettuce (Atkins 2001).

12. For example, the diets of Dean Ornish (1990) and Nathan Pritikin (1979) both advocated lower fat and higher carbohydrates. The Pritikin diet is the older of the two, and one of the Pritikin nutritionists subsequently became a convert to the low-carbohydrate school (Gittleman 1996). In an epic encounter aptly titled "Fat Fight," Ornish and Atkins debated

the risks of Atkins's tolerance of high fats (Dean 2000). Ornish recognized glycemic control issues, but said that the use of complex carbohydrates minimizes the risk without incurring the risks of a high-fat diet such as the one advocated by Atkins. The American Heart Association also condemned high-fat weight loss diets (St. Jeor et al. 2001).

13. The Zone anticancer diet of Barry Sears also is different from the regular Zone diet. The anticancer diet eliminates red meat, egg yolks, and organ meats, and it calls for most of the carbohydrates to come from fruits or fiber-rich vegetables (Sears 1995, 171). Sears argued that the Zone cancer diet and the macrobiotic diet are similar but that the Zone diet is better principally because it better limits the production of arachidonic acid.

14. It may be possible that what is probably the central contradiction among these therapy groups—the glycemic spikes induced by juicing and the Atkins/Sears concern with glycemic control—may be resolved when one understands better the effects of juicing at regular intervals on insulin, and in turn the effects of juicing-induced insulin and pancreatic activity on cancer. It may be that the short-term effects of juicing are both beneficial in the way that Gerson described and negative in ways that Atkins and Sears described, but for cancer patients, the short-term benefits outweigh the long-term harm, which is reversed when the therapeutic diet is relaxed into the maintenance diet. Other mechanisms that Gerson did not recognize may also be at work. For example, juicing may activate the pancreas to produce more proteolytic enzymes, or high levels of insulin may prevent cancer cells from excreting lactic acid.

15. If part 1 of the analysis might be seen as a kind of 1970s totemic argument that “food is good to think” (Lévi-Strauss 1963), recast in a Bourdieuan field of distinctions, part 2 might be seen as a cultural critique of “food as cultural narrative” (e.g., Haraway 1989).

16. Although Kelley's theory drew few adherents, similar ideas continued to surface in the world of therapeutic diets. For example, one dietary therapy developed in the 1990s suggested that people with type O blood were meat-based hunters, type As were sedentary cultivators who do best on vegetarian diets, and type Bs were nomadic types who did well on dairy and a balanced diet (D'Adamo and

Whitney 1996). Again, the scientific rationale is not well justified.

17. The macrobiotic studies are not completely available but have been summarized (Office of Technology Assessment 1990, 64-66, citing Carter et al. 1990, see also Carter et al. 1993), and Atkins's figure is only mentioned in passing (Atkins 1990, 327). For a quick survey of other clinical studies of the dietary group, see Hess (1999, 208-11).

18. One leader in this regard is Michael Lerner of Commonweal, who in 2000 and 2001 argued for the confluence of CAM and environmental issues in keynote speeches at the Comprehensive Cancer Care Conference. Organized by James Gordon (chair of the White House Commission on Complementary and Alternative Therapies) and supported in part by the National Institutes of Health (www.cmbm.org), the conference is now the major CAM cancer therapy conference in the United States.

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