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**GROWTH, TRUTH  
AND RESPONSIBILITY:  
FOOD IS THE BOTTOM LINE**  
BY JOAN DYE GUSSOW

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I do not know how the other Ellen S. Richards lecturers expressed their debt to the woman for whom this series is named. It is certainly customary on such an occasion to make a certain ritual obeisance; and when I began thinking about my own remarks I fully intended to do just that. What I knew of Mrs. Richards then was that she was the originator of "ecology" (though I have since learned that her *oekology* had much more to do with homemaking than the word we use now.) I knew also that she was the "mother" of Home Economics and that she was the first of her sex to undertake a number of things, including study at MIT.

So, intending that my obeisance should at least be accurate, I went to the library and took out some material on and by Mrs. Richards, including the account of her life—based largely on her own diaries and letters—written within a year of her death by her colleague Caroline L. Hunt.<sup>1</sup> But something happened between my acquisition of that Richards' material and the actual composition of this address. A colleague brought to my attention a recently published book entitled *For Her Own Good: 150 Years of Experts' Advice to Women*.<sup>2</sup> There, in a telling chapter entitled "Microbes and the Manufacture of Housework," I came face to face with a very different Ellen Swallow Richards than I had imagined. (She called *herself*, incidentally, Ellen H. Richards, giving up—as was only proper in that time—even the initial of her maiden name.)

This Mrs. Richards—then Miss Swallow—was denied entrance to MIT as a *regular* student (they let her attend without charge so they could insist to any objecting trustee that she was not really a student);<sup>3</sup> she had a laboratory to herself so that she would not contaminate (or distract) the men; she kept always handy "such things as needles, thread, pins, scissors, etc.;" for sewing up manuscript pages or repairing the professors' suspenders so that men could not say that study "spotted her" for anything else.<sup>4</sup>

MIT let her attend, but refused her a graduate degree—giving her a B.S. to go with the B.A. she already had from Vassar.<sup>5</sup> Vassar gave her a Masters degree after a rigorous examination, but her only doctorate was honorary, conferred by Smith (another women's college, of course) in her 68th year.<sup>6</sup>

Yet MIT *did* let her work—she headed up the laboratory of sanitary chemistry there during the Massachusetts State Water Survey, and from 1884 until her death in 1911 she was instructor in Sanitary Chemistry.

Moreover, according to her contemporaries, she was a woman of formidable energy and organization; her biography is full of those sorts of intimidating details that are the despair of any ordinary modern woman—that her house was always immaculate, efficiently run, and full of healthy plants;<sup>7</sup> that she was always thoughtful in remembering the joys and sorrows not only of friends but of friends of friends whom she had never even met; that she forever had houseguests who always felt themselves welcome even if, as was often the case, they unknowingly accepted the hostess's bedroom while she herself took a room in town, arriving home in the morning in time to offer her "happy and unconscious guests" a cheerful (and no doubt scientifically compounded) breakfast.<sup>8</sup> This Richards had no children—one suspects the unpredictability of youngsters might have daunted even her formidable organizational skills—

and surprisingly, she had little patience for the women's movement, belittling her sex's struggle for the vote and expressing the opinion that women had "now more rights and duties than they are fitted to perform."<sup>10</sup>

So this is the mother of home economics! No wonder we are so defensive—those of us who are her descendants, about the scientificness of what we do! No wonder so many departments of home economics have been turned into departments of "human ecology" in order to avoid the stigma associated with "female" studies. No wonder we in the field of applied nutrition have allowed ourselves to be clasped in the nearly throttling embrace of chemistry and biochemistry in an as yet vain attempt to convince "the others" that we are "serious," that we are good for something besides producing well-trained wives for men in ag. schools or cookies for departmental parties.

#### MAKING A SCIENCE OF HOMEMAKING

The authors of *For Her Own Good* share the view that Richards tried to make a science of homemaking because no one would permit her to invest her very considerable talents in a "real" science.<sup>11</sup> But she was determined to improve the world anyway, so she seized the route open to her—to improve the life of the home through the application of science and technology. Women would be trained to be "scientists" in the home. The young housekeeper would be trained, Richards wrote, "to think, to reason, from the known facts to the unknown results."<sup>12</sup> These young women would not have "a profound knowledge of any one or a dozen sciences," but "an attitude of mind which leads them to a suspension of judgement on new subjects, and to that interest in the present progress of science which . . . impels them to ask, 'Can I do better than I am doing?' 'Is there any device which I might use?' 'Is my house right as to its sanitary arrangement?' 'Is my food the best possible?' 'Have I chosen the right colors and the best materials for clothing?' 'Am I making the best use of my time?'"<sup>13</sup>

As we can now recognize, such questions were those of insecure women—of women ready to be made insecure. Such questions could only be raised, as Mrs. Richards and the other founders of Home Economics recognized, because something had happened in the world which had changed the American home from a place where there was never an idle moment, to a place where women had to wonder about the value of what they were doing there. What had happened in Mrs. Richards' own words was that "the flow of industry had passed on and had left idle the loom in the attic, the soap kettle in the shed."<sup>14</sup> Poor women had often left their homes and followed these formerly domestic activities into the factories. Middle class women were increasingly left with nothing real to do. But if these same young women could be trained to make observations in their own homes, Richards reasoned, they would become not only better housekeepers but more contented ones. "The zest of intelligent experiment, she wrote in 1879, "will add a great charm to the otherwise monotonous duties of housekeeping."<sup>15</sup> (emphasis mine)

On one occasion, challenged by an all male audience as to why women

didn't just stay in the home rather than asking for schooling, Richards put it bluntly. Robbing the home of creative work, she said, had taken more and more of the interest from home life. "You cannot make women contented with cooking and cleaning," she insisted, "and you need not try. . . You cannot put them where their great-grandmothers were, while you take to yourselves the spinning, the weaving, and the soapmaking. The time was when there was always something to do in the home. Now there is only something to be done."<sup>16</sup>

The hope was that marrying science to homemaking would restore meaning to the household. But in attempting to help women adjust "to the rapidly changing conditions of modern times," Richards and her contemporaries abetted the very process whose results they deplored. Always citing the benefits to be derived from science, they encouraged women to welcome the new, scolded them for clinging to the old, urged onto them the adoption of the latest products and devices to emerge from the factories and laboratories. Change was progress. "The work of homemaking in this scientific age," Richards wrote, "must be worked out on engineering principles. . . the modified construction and operation of the family home. . . is the final crown . . . of the conquest of the last stronghold of conservatism, the home-keeper. Tomorrow, if not today, the woman who is to be really mistress of her house, must be an engineer, so far as to be able to understand the use of machines."<sup>17</sup> In that area of "progress" no one would have dared to suggest that conservatism might have a value.

And so, by design, women were led into the modern age, taught to believe that they would seize control of their lives, bring meaning to their chores, and add a little charm to the monotony of housework by adopting the newest in modern conveniences, while the factories took over more and more of their real work. And the housewife, once a producer of much of what her family needed, became simply a consumer. It is not without profound significance, I would suggest, that when the science of home economics was classified in the new Dewey Decimal System, Ellen Richards made sure it was *not* placed under "useful arts" as a "Production" activity, but under "the economics of consumption" so that it would seem to involve "vital matters."<sup>18</sup> And Ellen Richards' questions for the young homemaker: "Is there any device which I might use?" "Can I do better than I am doing?" "Is my food the best possible?" are questions which any modern advertiser is prepared to answer. The woman who has been led to ask herself such questions is a ready customer for a pizza-warmer, a new drain cleaner or the latest in "convenience" foods.

#### MAKING A SCIENCE OF FOOD

Which brings me around to my own field, food. It pains Mrs. Richards' biographer to have to point out that of all the great lady's activities, those which aroused "probably the greatest antagonism" among her contemporaries were "her efforts to improve the quality of food served in public institutions. . . and to make the diet contribute to efficiency."<sup>19</sup> As Caroline Hunt wrote about

★ shadow work

Richards, "She saw, as we all do, that the time must come when the problems of nutrition and food will be reduced to scientific principles, when people will use their food supply with intelligence, and will regulate diet and other living conditions in order to maintain the highest efficiency in work."<sup>20</sup>

In 1890, in pursuit of this goal, Richards opened the New England Kitchen, a sort of take-out shop offering for sale cooked foods whose recipes had been so carefully worked out that "the food value of a given weight of the finished product would always be the same."<sup>21</sup> The standard foods included "beef broth, vegetable soup, pea soup, corn meal mush, boiled hominy, oatmeal mush, pressed beef, beef stew, fish chowder, tomato soup, Indian pudding, rice pudding, and oatmeal cakes," the kind of dull but hearty food we of the educated classes are always urging on the presumably grateful and unknowing poor. The food was compounded to be cheap and nourishing—intended to serve as a supplement to the foods cooked in nearby homes.

The kitchen was an almost instantaneous failure, its "death knell" being sounded, in Mrs. Richards' own words "by the woman who said 'I don't want to eat what's good for me; I'd rather eat what I'd rather.'" <sup>22</sup> Undaunted, Mrs. Richards set up a Kitchen at the World's Columbian Exposition in Chicago in 1893, the famous Rumford Kitchen, which offered lunches whose food value in "proteid," "fat," "carbohydrates," and "calories"—the then known nutrients—was stated on the menu and compared to Voit's and Atwater's standards for one-quarter of a day's ration.<sup>23</sup>

## THE SCIENTIFICATION OF FOOD

Thus, with no inkling of what lay at the end of the road, the grand woman who sought professionalism and dignity for the homemaker set women's feet on the path toward the scientification of food. And those of us who should have been watching over the food supply were so concerned lest we be considered unscientific women, that we acquiesced in the process whereby the value of food was reduced to the value of its nutrients. And in an ever accelerating process we allowed ourselves to be moved from foods to food groups to nutrient labeling (since after all there were so many new foods that didn't fit the food groups) to the notion that we must teach not foods, but nutrients. We were given USRDA's which even as professionals we found irritatingly divergent from the more familiar RDA's; we were given bafflingly elaborate nutrition labels which, predictably, ordinary people turned out to be unable (*not* simply unwilling) to use. And we have suppressed our doubts about all these *progressive* steps lest we be denounced as backward and unscientific, just as Richards scolded the women of her day who clung to their antiquated ways.

So where can we go from here? The "scientific" approach to solving problems caused by what B.F. Schumacher called our "forward stampede"<sup>24</sup> is to go, as always, one step further. That step is, of course, even more fortification so that no matter how unfamiliar the food and no matter how uninformed the consumer, s/he can willy nilly be well fed. It is perhaps worth noting that even now work is going forward—without much attention from the food and nutri-

tion community—on the technical feasibility of a proposal made six years ago to fortify all bread and cereal products with a range of nutrients from A to Zinc.<sup>25</sup>

A number of years ago I suggested that the difficulty with fortification—especially "across the board" fortification—was 1) that it could not guarantee good nutrition except in a tightly controlled food supply and 2) that it made nutrition education impossible since there was no longer any way to design a simple, rational rule of thumb for food selection.<sup>26</sup> When cornflakes contain a higher percentage of the RDA for Vitamin B-12 than of that for thiamine, we have been reduced to a kind of absurdist nutrition education. Vegetarians must now learn that corn flakes have become, in one sense at least, a substitute for cows. If "progress" continues in its present direction those of us who educate people on food-related matters may be left with little to do—except teach people how to avoid being zapped by their microwave ovens as they remove therefrom the latest in perfectly formulated frozen meals. And we shall not even have Richards' problem—that people would still rather eat what they'd rather. The flavorists and the advertisers, working together, will have built in not only nutrition but irresistibility.

One would like to sink back into the soft assurances of the culture and accept the notion that this *is* progress. That is, after all, what we have been led to believe. But the end result seems troubling. We have nearly completed the transformation of food from something which most pre-industrial societies made the center of their lives, which most pre-literate people knew how to find or grow, into something which only the most sophisticated and literate can really understand—and that, only if it comes in a package with instructions on the label. I cannot imagine that Ellen Richards had such an outcome in mind. Indeed, though she revered science, she believed that understanding it, embracing it, would *help* women: she believed that the "practice of sophisticating foods... owed its baneful success largely to women's ignorance," and she imagined that housewives might set up to test certain products in order to avoid being cheated.<sup>27</sup>

She wanted to make the home stronger with science. Instead, step by step, we have made it weaker. As I have observed elsewhere: "We have trivialized food. In retaliation our food supply has made us helpless. Millions of American men, women and children are largely dependent for their sustenance on food products which have recipes for use written neatly on their labels... We have a generation of college graduates who do not know what to do with fresh spinach or a head of broccoli; and we are well into a second generation of Minute Rice users, 'cooks' for whom Minute Rice is just like mother used to make. We are dependent upon experts to tell us what is nutritious, experts to tell us what is safe, experts to give us instructions on food acquisition and use."<sup>28</sup>

What I have been trying to say to this point is that if one looks at the future food supply as it is laid out in the supermarket, on the television screens and to a very large extent in our classrooms, it seems to be moving in a direction which ultimately implies—among other hazards—a very trivial role for those of us professionally concerned with how and whether people are well fed.

## FOOD AND THE FUTURE

I wish now to make an abrupt change of subject, to turn to a very different view of the future arising out of quite another set of data. This alternate view of the future seems to me to be both more plausible and more realistic, as well as to imply a much more significant role for Ellen Richards' descendants.

I have for some years now spent a considerable amount of investigative and conceptual energy attempting to sort out some of the relationships between the various feeding webs on which we are dependent for our food—the biological ones which control the flow of energy and materials through living matter—and the technological ones—peopled by farmers, truckers, processors, retailers, advertisers and others who control the ways in which the raw materials produced by the biological systems come to be available to, and perceived by, consumers as suitable food. These efforts have led me to the conclusion that the food future we face—whatever we do—is going to be considerably different from the food past, and considerably different from the effortless technological nirvana implied by the present direction of the food supply. My efforts have also led me to the conclusion that most of the people who seemingly ought to be concerned about this fact—the food and nutrition professionals—are paying it little attention.

What is the future going to be like? This year I have used in my class a book called *The Sane Alternative*, written by a British management expert named James Robertson.<sup>29</sup> Robertson pulls together in a sort of outline form all the projections on possible futures for humankind put forward by various observers over the last decade or so and finds that they fall into five overall scenarios: 1) Business-as-Usual—in which we simply go on as we are going (as long as events allow us to do so); 2) Disaster—in which our continuing assaults on the biological systems that sustain us bring about ecological catastrophe; 3) Totalitarian Conservationist—in which conservation of essential systems and resources is imposed by desperate rulers (and accepted by desperate people) in order to prevent mass ecological suicide; 4) the Hyperexpansionist (or HE) future—the Herman Kahn, Gerard O'Neill world in which we colonize the solar system, mine the asteroids and live at least in part in orbiting modules complete with artificial skies above synthetic rolling fields; and the last scenario 5) the Sane, Humane, Ecological (or SHE) future in which our territorial and technological imperatives are allowed to die away as people gradually come to recognize the satisfactions of a voluntarily-assumed, culturally-rich material austerity.

As an exercise for my class, I had them work in groups to lay out for each of the scenarios what the food supply would look like, what processing and distribution would be like, and what kinds of food consumption patterns would be prevalent. The following are some of the items that turned up under Business-as-Usual: the diet would be high in sugar, fat and salt and low in fiber. It would be a high protein, high meat diet, using many artificial ingredients and heavily fortified with "essential" nutrients. We would eat many exotic fruits and vegetables out of season and make use of many "cash crop" items such as coffee, cocoa and tea. Our agriculture would emphasize monocropping and

heavy use of synthetic fertilizers, pesticides and other fossil-fuel-derived products so that agriculture would continue to be energy intensive. Soil erosion would continue and get worse, there would be fewer and fewer family farms and more and more of our food, especially produce, would be imported from developing countries. Food would be sold in large supermarkets with many brand names. We would buy instant meals there, but we would also eat out a lot—in fast food restaurants. We would diet off and on and eat alone a lot.

When my course assistant pulled the responses together she commented on how interesting it was that where food and agriculture were concerned "Business-as-Usual" seemed to lead right into "Disaster." We posted all the conclusions and then I asked the students to vote on which *two* of the futures they would prefer to work toward. I knew—or suspected I knew—that they would vote for the SHE future as their first choice, even though they were appropriately skeptical as to the ease with which such a future could be achieved. But I wasn't sure what their second choice would be. They chose the Totalitarian Conservationist. And they chose it, so they told me, because every other route seemed—like Business-as-Usual—to lead to a disaster greater than the loss of freedom. I think it would be well if those of us concerned with students keep in mind the true alternatives we are offering them as we simply keep moving on.

## PROGRESSING TOWARD DISASTER

The simple fact is that those persons who are seriously attending to the interface between the environment and the food supply are convinced, as are my students, that Business-as-Usual *will* lead on to Disaster. But I see no evidence that those of us who are educators are making serious attempts to help either our students or the eating public understand that fact. Of course we pay some attention to the *world* food situation—on occasion—although I know many nutrition professionals who seem as unaware as the public that we are on the verge of heading into a world wide food shortage which may be more severe than the one that led to the 1974 World Food Conference. But even when we talk of a world food shortage, we are hardly able to imagine that we may actually suffer; and I see no evidence that food and nutrition professionals are preparing for the possibility that the diet about which we may need to instruct people may be drastically changed before the end of the century.

There is a critical and widely ignored fact about food which we forget at our peril. It is simply this: if there is not enough food, it ultimately doesn't matter if there is enough of everything else—including oil, and money. A recent letter to the *New York Times* deplored the fact that we had so many Nobel prize economists in the United States and so little apparent wisdom about attacking our present economic dilemmas.<sup>30</sup> It is true that our economists have begun to attend to the fact that we are no longer the ones with money—since we are busy buying ourselves into debt for oil—yet most conventional economists still do not seem able to get straight the fact that all of us, everywhere in the world, are ultimately dependent for our survival on food which someone has grown, somewhere. And more and more countries are becoming dependent on food

grown outside their borders.

Who grows the food to send them? We have become accustomed to thinking that the ones with food to sell in the future will be—as in the past—us. But a great deal of evidence to the contrary is beginning to turn up in surprisingly official places. To grow food you need, among other things, farmers and topsoil, and we are running low on both. We are, to begin with, suffering a continuing loss of topsoil to erosion. Erosion made the front pages of the *New York Times* and the *Wall Street Journal* this year though its popularity with the press does not appear to have influenced the all-out production policies which are encouraging it.<sup>11</sup> (The presently proposed solution to erosion, it should be noted, is called no-till or minimum tillage agriculture. Rather than plowing the land the farmer readies it with a dose of herbicide and then plants right through the surface litter. The method involves, for obvious reasons, heavier use of herbicides; and, for less obvious reasons, heavier use of pesticides.)

Perhaps even more serious than the loss of soil to erosion—since topsoil can be rebuilt (albeit with great difficulty)—is the loss of topsoil to asphalt. An interagency task force of the Federal Government has been carrying out a National Agricultural Lands study, looking at the loss of prime agricultural land to development. Prime agricultural land is particularly attractive to developers because it is situated around the perimeter of the cities which the farms once supplied, and it is usually flat and hence less expensive to build on. The conclusions of the study are that while farmland loss—looked at on a national-average basis—doesn't look too serious, analysis of what is happening on a state by state basis creates a devastating picture—involving in some cases the total loss of acreage previously devoted to a particular crop.<sup>12</sup> The study concluded, for example, that if present rates of development continue, three states, Florida, New Hampshire and Rhode Island, will have lost *all* of their prime agricultural land by the year 2000, and that the nation will have lost all the land on which such crops as artichokes and tart cherries are grown.

Already the outward march of development from the sprawling cities of California has chased many growers southward, across the border. How many nutritionists are aware—or are making others aware—of the degree to which we are already dependent upon other nations for food, just as we are dependent for oil—and that in the case of one of our major suppliers, Mexico, we may end up being dependent for both food and fuel on a nation which bears us a number of well-earned grudges?

Who takes care of such things? Congress, perhaps, unless the forces on Congress make any rational action impossible. Seeing it as a first step in federal land-use planning, conservatives in Congress (and out of it) only this year killed a very weak farmland preservation bill.<sup>13</sup> What about the owners of the land? Is it in their interest to preserve farmland? Several recent reports raise some unsettling questions about that. To begin with land ownership is very concentrated. When all land is counted, three-quarters of the landowners hold only 3 percent of the land, less than .5 percent of the owners hold 40 percent of all privately held land. That's nationwide. In the Pacific States on which we all depend so heavily, 71 percent of the private land is owned by 1 percent of the owners, 88 percent by the top 5 percent of the owners. Counting farmland on-

ly, 5 percent of the owners own 70 percent of the land in the Pacific States. Overall, 34 percent of the farmland of the nation is owned by the 1.6 percent of farm units which have over 1000 acres, while the 57 percent of all farm units less than 50 acres own only about 6 percent of the farmland.<sup>14</sup> Actually, USDA admits to knowing far too little about farmland ownership especially since no effort is necessarily made on the part of the "farm unit" to make the lines of ownership clear especially where a single "unit" may hold many thousands of acres in scattered parcels. A recent report from the California Institute for Rural Studies gathered data from a variety of sources in order to piece together a true picture of land-ownership and farmland control in our major agricultural state.<sup>15</sup> They found that the largest single farm in the state owned 206 thousand acres, had yearly sales in 1976 of \$115.5 million (and an after-tax profit of \$21.8 million), and was interlocked through its board of directors with many of the other 200 largest farms identified in the survey. It is difficult to be sure that such a large corporation will—in the interest of the common good—preserve prime farmland so as to be able to send vegetables and fruits to you and me. As David Freeman, now of the TVA once put it, "On a discounted cash-flow basis, the earth simply is not worth saving."<sup>16</sup>

Who else might protect our food producing ability? The processors, perhaps, who depend on the products of the land for raw materials? A 1980 report from the Economics, Statistics, and Cooperatives Service of USDA found that where food manufacturing and marketing were concerned, the share of total assets controlled by the 50 largest food manufacturing firms had risen from 42 percent in 1963 to almost 64 percent in 1978 and could well rise to 100 percent by the year 2000.<sup>17</sup>

In sum, then, the Business-as-Usual scenario will lead in the year 2000 to increased soil erosion and a total loss of our ability to raise certain crops; to an increasing concentration in the ownership of land and in the growing of certain crops (California already grows 85 percent of all processing tomatoes); to an increasing dependence on food imported from countries which are not necessarily our firm friends and which are, in many cases, perilously neglecting their own underfed poor to produce export crops for our rich markets; and, finally, to the possibility that food processing will be entirely controlled by 50 giant companies, most of whom will no doubt be sufficiently diversified to pull out of the food business altogether if raw materials get scarce and/or profits start to drop. Such a scenario helps make it clear why "business-as-usual" leads on to "disaster."

Now let me try to pull together the two halves of this only *apparently* schizophrenic essay in an attempt to show you why I have found Mrs. Richards to be not merely a creature—albeit a brilliant creature—of her time, but a strikingly appropriate symbol of where we as her descendants have come from and of where we might think of going.

I said earlier that our professional concern with food had seemed to me to be involving us in the trend toward a greater and greater scientification of the food supply—a trend that promises to leave us by the year 2000 with nothing to teach but microwave oven safety. What I have been trying to say in the last few minutes is that our failure to mind the food supply seems much more likely

to be leading us toward a future in which the price, quality and availability of our food will at best be controlled by a few giant landowners and a few giant processors and at worst ("at worst" presently seems to me to be the more likely scenario) toward authentic food shortages and a serious erosion of our *capacity* to produce food. It seems clear to me that if we just go on as we are, we shall by the year 2000 be wondering as a nation whether to bankrupt ourselves importing food or oil (assuming that somewhere in the world someone will have both for sale at price we can afford) and that as individuals we shall be scabbling to try to find enough affordable food to eat.

I would feel a good deal more depressed about either alternative—that we shall be teaching microwaving or survival—if it were not for the fact that I believe we have, as professionals, a truly unique opportunity to research, to teach, and to work toward potential solutions which are both more interesting than microwaving and less likely to lead to disaster than business as usual.

#### FOOD THROUGH A MACROSCOPE

Just before she died a year ago last summer, a wonderful psychologist I knew wrote the following: "The plasticity of the human species has been its outstanding characteristic, giving humankind its capacity both to adapt to an existing environment and to create environments to suit developing needs."<sup>14</sup> Since the time of Ellen Richards, we as professionals have simply adapted—or attempted to adapt—to food production and consumption environments in which we have taken little serious professional interest and over which, therefore, we have exerted little professional influence. Fearing, as did Richards, that we would not be taken seriously as scientists (which appears, regrettably, to be the only thing one is permitted to be taken seriously *as* these days—"thinkers" having gone out of style) we have attended to the ever smaller and smaller; breaking down food, food handling, food processing, food functions, into manageable, microscopic pieces; looking at the isolated effects of the isolated behaviors on isolated food substances in isolated biological systems. I believe it is time now for some of us in the field of food and nutrition to take up our microscopes rather than our telescopes, to begin the task of looking at connections not merely between nutrients and cells; or between food handling, food textures and food toxins; but of looking at the connections between farmers and producers; between food policies and environmental policies; between toxic wastes and the opportunity to produce safe, affordable food; between tax policies, development policies, and land-use policies and our ability to retain farmland; between the cost of energy and the cost of food.

It is time that some of us who are professionals in the field of food and nutrition began to look at possible alternative food systems, asking what a relocalization of the food supply might mean to the economics and the food availability of our regions. There is a broadening interest in this country—growing largely out of the environmental movement—toward what is called *bioregionalism*.<sup>15</sup> It has to do with understanding the unique soil, water, climatic and other natural characteristics of various regions which have in their turn helped

determine the traditional (though now all but swamped) cultural patterns of that region. What *bioregionalism* suggests is that the "answer" for one region may not be the answer for another region—that the diet which is most rational and affordable in Maine may be wholly inappropriate for North Carolina or Florida. Around the country there are various experiments going on looking at the potential of various regions for producing a "local diet." What is striking about these experiments is that, so far as I know, none of them involves a nutrition professional. The consequence of this is that the diets that are constructed may have as little to do with what people would actually eat as did the food served in Richards' New England Kitchen.

What the necessity for regional adaptation—indeed for microclimatic adaptation—means is that there is enough important work for everyone to do if the food supply is to be saved. What I am urging is that the profession to which I have chosen to dedicate my remaining years should play some little part in helping the world move peacefully—rather than chaotically—into the 21st century. It is always possible that the hazards of the atom—peaceful or otherwise—will become unmanageable. But short of atomic warfare, I believe the world *can* be saved, and that we are uniquely capable of helping save it—if only we will properly define our task.

I had the experience, recently, of sitting around a table with a group of nutrition people who were discussing educational programs. None of the people around that table—with the possible exception of one fellow backyard gardener—could understand how growing vegetables might have anything to do with nutrition education. I would suggest to you that in the coming decades, knowing how to grow vegetables may have everything to do with having fresh produce to eat and that, alas, more ordinary people than nutrition professionals understand (and are acting on) that fact. If we do not abandon our notion that such concerns are insufficiently scientific to engage our attention, we shall simply be left behind. And when the crunch comes, I doubt that it will be reassuring to the inhabitants of North Carolina to learn that tobacco leaves contain an extractable protein—news which was carried in the November, 1976 issue of the UNC Institute of Nutrition News.<sup>16</sup> Perhaps it would be preferable—before the crunch comes—for North Carolina to move toward greater food self-sufficiency. (I don't know the extent to which you are now self-sufficient—or could be. I don't know about the extent of the threat to *your* agricultural land base. But I hope some of you are now asking those questions, asking where your food comes from, how much it costs to get here, whether it would cost less if it were grown here—and if not, why not.)

#### TRUTH AND SURVIVAL

What I am suggesting, of course, is that we need a new model for appropriate research—that we need to ask new kinds of questions—indeed, we may need to learn which questions to ask. It will not be easy to do this because the conceptual frameworks which have guided our thinking to date imply very different sorts of questions than those I believe we must begin to ask in the last

fifth of the 20th century. It will be difficult to restructure our task not only because such a restructuring will require us to think differently, but because it will raise many troubling questions. Let me in closing, suggest three of these.

First, asking questions about the present direction of our food supply is, of course, to ask about "progress." We have "bought into" progress now for generations, assuming it could only take us in one direction—toward less and less personal effort in the maintenance of our own food supply, in the maintenance of our own homes and families. The most eloquent statement I know about this sort of progress has been made by a poet and farmer, Wendell Berry, who has pointed out that while our slide into dependency has been easy, it has had a cost. "We can simplify our minds and culture only at the cost of an oppressive social and mechanical complexity," Berry has written. "We can simplify our society—that is, make ourselves free—only by undertaking tasks of great mental and cultural complexity."<sup>41</sup> To move toward such mental and cultural complexity is progress. To grow 85 percent of our tomatoes in California is not progress—it is folly. But we shall have to prove that fact against fierce economic odds.

The second difficulty is, I think, one that comes up repeatedly whenever anyone suggests that we return to the home some of the tasks formerly done in the home. It is what I would call the "lifestyle" problem. That is, to ask for more involvement of the populace in its own food supply seems to imply that one is against women's lib. Since there is no evidence that, as someone once put it, men lack the gene for housework, it is inconceivable to me why only women's liberty should be so endangered. Nevertheless, the objection will arise. Of course, it is well to remember that for every woman who has a fully satisfying job outside the home there are 10 who have jobs which are a good deal more demeaning and monotonous than "home work" (notice I did not say "housework") and which they work at only because they *must* work to earn a living. But if Richards recognized in the last century that women could not be made content merely with cooking and cleaning, we would be naive to assume that they could be made so now.

Though I do not keep abreast of the home economics literature, it is my impression that home economics has—much more than nutrition—begun at last to push back against the notion that the home should be merely a consuming unit. It has begun to recognize that the production capacity of the home, its ability to produce in what economists call the gift and barter sector of the economy, cannot be discounted: to the extent that the home produces for itself, to that extent its consumption needs are reduced.<sup>42</sup> It is home production—unmeasured by such economic data as GNP—which produces much of our health (as opposed to our sickness) care, a good deal of our child raising, most of our sex life, at least half of our cooking, and perhaps most of our happiness.

We simply have no evidence yet that cultures like ours can survive without something roughly defined as a family or something roughly defined as a home. Yet both are in great disrepair in America. One of our more perceptive investigators of childhood has commented that child-raising is so often difficult and exasperating that it can be done successfully only by someone who is

"crazy about that kid."<sup>43</sup> It is not at all clear that the necessary someone who is crazy need be a mother or a father—or certainly that it needs to be that kid's mother or father—but it is also not yet clear what activities we ought to try to retain in—or bring back to—the home if it is to perform its important emotional and social functions.

To what extent is the fact that the home no longer produces anything the culture considers worth paying for (and hence, *valuing*) but counts merely as a consuming unit, a contributor to the home's decay? I think it fascinating that those were the very kinds of questions Richards thought it worth asking more than 70 years ago: "What are the essentials which must be retained in a house if it is to be the home?", she asked. "What work may be done outside? What standards must be maintained within? How can the school be made to help? . . ."<sup>44</sup>

The final reason why it will be difficult to reconceptualize our task—and to act on that reconceptualization, has to do with power—and the difficulty of finding truth. I was recently sent an excerpt from a new book with a request that I comment on it in relation to my own field. I have not yet made such a comment, but I thought the quote worth sharing with you since it illustrates very well the dilemma which we all, on occasion, face. The title of the book is *The Regulation Game*. It is written by two economists and it is published by a serious publishing house. This is the quote. "Regulatory policy is increasingly made with participation of experts, especially academics. A regulated firm or industry should be prepared whenever possible to co-opt these experts. This is most effectively done by identifying the leading experts in each relevant field and hiring them as consultants or advisors, or giving them research grants and the like. This activity requires a modicum of finesse; it must not be too blatant, for the experts themselves must not recognize that they have lost their objectivity and freedom of action."<sup>45</sup>

Most of us, I believe, want to be honest. And most of us, I believe, want to be useful. That we sometimes fail to be either, often has more to do with what our times tell us is required for survival than with any inherent defect in our characters. What I have been trying to say this evening is that those of us concerned with food, those of us who are food professionals, have a unique opportunity in *our* time to be *usefully honest*; and then, having faced the truth about the manner in which "business-as-usual" may lead to "disaster"—to be *honestly useful*. We have the privilege of beginning to help our communities recreate viable food systems—systems which will, even in a time when soil and water and energy have become scarce commodities, provide those communities with affordable and nutritious food. It is, I would suggest, a much more challenging, and interesting task than any other we are being offered.

## REFERENCES

- <sup>1</sup> Hunt, Caroline L. *The Life of Ellen H. Richards*. Boston: Whitcomb & Barrows, 1912.
- <sup>2</sup> Ehrenreich, Barbara & Dierdre English. *For Her Own Good. 150 Years of the Experts' Advice to Women*. Garden City, New York: Anchor Press/Doubleday, 1979.
- <sup>3</sup> Hunt, *The Life of E.H.R.*, p. 88.
- <sup>4</sup> *Ibid.* p. 91.
- <sup>5</sup> *Ibid.* p. 104.
- <sup>6</sup> *Ibid.* p. 310.
- <sup>7</sup> *Ibid.* p. 121.
- <sup>8</sup> *Ibid.* p. 128.
- <sup>9</sup> *Ibid.* p. 91.
- <sup>10</sup> *Ibid.* p. 288.
- <sup>11</sup> Ehrenreich, *For Her Own Good*, p. 105.
- <sup>12</sup> *Ibid.* p. 182.
- <sup>13</sup> *Ibid.* p. 291.
- <sup>14</sup> *Ibid.* p. 259.
- <sup>15</sup> *Ibid.* p. 182.
- <sup>16</sup> *Ibid.* pp. 288-289.
- <sup>17</sup> *Ibid.* pp. 289-290.
- <sup>18</sup> *Ibid.* p. 266.
- <sup>19</sup> *Ibid.* p. 231.
- <sup>20</sup> *Ibid.* p. 232.
- <sup>21</sup> *Ibid.* p. 218.
- <sup>22</sup> *Ibid.* p. 220.
- <sup>23</sup> *Plain Words About Food*. The Rumford Kitchen Leaflets. Boston: Rockwell & Churchill Press, 1899. Also see Hunt, *op. cit.* p. 221.
- <sup>24</sup> Schumacher, E.F. "An Economist's Look at Farming." *Soil Association*. November/December, 1974.
- <sup>25</sup> Food and Nutrition Board, NRC. National Academy of Sciences. *Proposed Fortification Policy for Cereal-Grain Products*. Washington, D.C.: National Academy of Sciences, 1974.
- <sup>26</sup> Gussow, Joan. "Improving the American Diet: Fortification or Education." *J. Home Econ.*, November, 1973, pp. 6-10.
- <sup>27</sup> Hunt, *The Life of E.H.R.*, p. 146.
- <sup>28</sup> Gussow, Joan Dye. *The Feeding Web: Issues in Nutritional Ecology*. Palo Alto: Bull Publishing Co., 1978. pp. 443-444.
- <sup>29</sup> Robertson, James. *The Sane Alternative: A Choice of Futures*. St. Paul: Riverbasin Publishing Co., 1978.
- <sup>30</sup> Sidney W. Dean, Jr. "Our Distraught Land of Economic Genius" Letter. *New York Times*, November 6, 1980. p. 34.
- <sup>31</sup> Crittenden, Ann. "Soil Erosion Threatens U.S. Farms' Output" and "Lack of U.S. Funds Cited in Fight Against Erosion." *New York Times*, October 26 and 27, 1980.
- <sup>32</sup> Cutler, M. Rupert. "The Peril of Vanishing Farmlands" *New York Times*, July 1, 1980, and Anthan, George. "'Alarming' Loss as U.S. Eats Away its Prime Farmland." *Des Moines Register* March 9, 1980.
- <sup>33</sup> "House Kills Weakened Bill to Help Preserve Farmland" *Des Moines Register*, February 8, 1980.
- <sup>34</sup> Soil and Water Resources Conservation Act, 1980 Appraisal Review Draft. Part II, Chapter 4 (undated); *Structure Issues in American Agriculture*. ESCS Agricultural Economic Report 438. Washington, D.C.: Department of Agriculture, November, 1979.
- <sup>35</sup> Villarejo, Don. *Getting Bigger: Large Scale Farming in California*. Davis, California: California Institute for Rural Studies, Inc., March, 1980.
- <sup>36</sup> Freeman, David in *Energy: The New Era*, quoted in "Oil Industry Adapts to World of Today." *New York Times*, November 10, 1980.
- <sup>37</sup> Connor, John M. *The U.S. Food and Tobacco Manufacturing Industries: Market Structure, Structural Change, and Economic Performance*. Agricultural Economic Report No. 451 (ESCS) Washington, D.C.: USDA, March, 1980.
- <sup>38</sup> Dorothy Cohen, personal communication.
- <sup>39</sup> See eg. *Planet Drum*, P.O. Box 31251, San Francisco, Ca. 94131; *Blackberry*, P.O. Box 186, Brunswick, Me. 04011; *Texas Observer*, 660 W. 7th St., Austin, TX 78701.
- <sup>40</sup> "Tobacco & Swiss on Rye, Please." *Institute of Nutrition News*, November, 1976. (Chapel Hill: University of North Carolina).
- <sup>41</sup> Berry, Wendell. *The Unsettling of America: Culture and Agriculture*. San Francisco: Sierra Club Books, 1977. p. 45.
- <sup>42</sup> See for example Jorgenson, Dale. "The Whole System is Out of Whack." *The CoEvolution Quarterly*. Winter Solstice, 1974. Also Robertson, *op. cit.* #29 *supra*.
- <sup>43</sup> Bronfenbrenner, Urie, "Beyond the Deficit Model in Child and Family Policy," Vol. 81, Fall 1979, pp. 95-104.
- <sup>44</sup> Hunt, *The Life of E.H.R.*, p. 260.
- <sup>45</sup> Owen, Bruce; Ronald Braeutigam. *The Regulation Game*. Ballinger Press, 1978.