

## FOREWORD

### *Interdisciplinarity and the Making of a Public Intellectual*

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I view my professional identity as that of a public health nutritionist and food studies scholar. From this perspective, the most important global problems are food insecurity and its resulting hunger and malnutrition (affecting about one billion people); obesity and its health consequences (more than two billion), and the environmental effects of food production and consumption patterns (everyone on the planet) (FAO et al. 2019; Intergovernmental Panel on Climate Change 2019). These problems result in large part from inadequately functioning food systems, the current term for everything a food encounters from production, distribution, and sales to preparation, consumption, and waste (FAO et al. 2019; Nesheim, Oria, and Yih 2015). Understanding how food systems influence these problems necessarily requires a review of the history of their development, knowledge of their social, economic, political, and behavioral determinants, and at least some familiarity with nutrition science—how the intake of food, nutrients, and energy affects health.

I am not alone in prioritizing these problems and identifying their roots in dysfunctional food systems. In 2019, two interdisciplinary committees commissioned by the *Lancet*, a medical journal published in Great Britain, issued lengthy reports recommending specific personal dietary changes as well as actions by governments, the food industry, and civil society to do “triple duty” and address all three problems simultaneously. The EAT-Lancet Commission on Healthy Diets from Sustainable Food Systems recommended a “Great Food Transformation” to diets that contain half the amount of meat currently consumed in industrialized societies but twice the servings of fruits and vegetables (Willet et al. 2019). The Lancet Commission on the Global Syndemic of

Obesity, Undernutrition, and Climate Change called for government regulations along with an international policy framework to achieve healthier and more sustainable diets based on food systems thinking (Swinburn et al. 2019).

Because the influence of the food industry on personal dietary choices and public policy has been the focus of my research and teaching since the mid-1990s, I particularly appreciated the force and clarity of *Lancet's* global syndemic report. That commission positioned the linked epidemics of hunger, obesity, and climate change as rooted in “consumptogenic” (i.e., capitalist, neoliberal) economic systems that overly empower food corporations, encourage privatization of public goods, permit for-profit companies to externalize the health and environmental costs of food production, and allow governments to be so effectively captured that they are unwilling or unable to curtail the risks generated by unregulated corporate power. The commission explained current policy inertia as the result of strong food industry opposition in the context of weak governance and weak civil society.

I was particularly impressed by the commission's suggestions for rebalancing power in the food system. It not only called for ending subsidies and tax breaks for food corporations but also for regulations to require corporations to pay the externalized costs of what they produce, to stop them from fighting public health measures, to keep them out of public policy decisions, to ensure that they disclose conflicts of interests and political donations, and to hold them fully accountable for the damage they cause to health, the environment, and democratic institutions. Although I have been suggesting measures like these for years, I had never previously seen them issued by a major international report. I considered this *Lancet* commission's food systems approach to be groundbreaking.

#### TRANSITIONS IN THINKING

I did not always understand or appreciate the importance of considering food systems as a means to analyze problems in nutrition and health. I began my career as a basic scientist, but over the years shifted interests to nutrition, public health, and, eventually, to food systems. In retrospect, I can explain these shifts most easily as having occurred in three distinct but somewhat overlapping stages.

*Transition 1: Microbiology to molecular biology to nutrition.* I was always interested in food, but at the time I began college, I was aware of only two options for studying it: agriculture and dietetics. Agriculture was out; I was a city girl and did not understand its importance for human health until much later. Instead, I went to the University of California Berkeley in the mid-1950s as a dietetics major, but I dropped that major immediately. The program required the same basic chemistry course taken by biology and premedical students; I found science more compelling. I became a science major and eventually completed my degree in bacteriology, but most of my friends were studying social sciences and humanities. I wanted to know what they knew. I took a course in public health and advanced courses in sociology, political science, and history. After graduation, I worked as a laboratory technician in Berkeley's school of public health, left that to start a family, did graduate study in molecular biology at Berkeley, and followed that with postdoctoral work in biochemistry and developmental biology at Brandeis University.

As a postdoctoral fellow, I was forced to recognize my inability to manage the time demands of bench science while raising two children. I left the laboratory and took an instructor's position in the Brandeis biology department, where I ran its basic laboratory course but also taught cell and molecular biology. This was in the early 1970s when students were pressing universities for liberalizing changes; Brandeis students wanted more courses in human biology. In 1975, I was given the choice of developing a new course in human physiology or human nutrition. I picked nutrition.

I was intrigued by nutrition science; it seemed refreshingly new. Linus Pauling's *Vitamin C and the Common Cold* (1970) was on best-seller lists. So was Frances Moore Lappé's *Diet for a Small Planet* (1971), which noted the environmental effects of eating meat and the health and planetary benefits of largely plant-based diets. The food advocacy group Center for Science in the Public Interest had been established in 1971; it had just published *Food for People, Not for Profit* (1975), a collection of articles on a broad range of food and nutrition topics, from agriculture to public health. The historian Geoffrey Barraclough, then at Brandeis, had just published articles in the *New York Review of Books* on the world food crisis and on the politics of food (1975a, 1975b). I was curious to

know the extent to which science supported the ideas in these writings. Along with a basic nutrition textbook, I assigned these works as readings in that first course.

I experienced teaching this material as something like falling in love and never looked back. Whereas undergraduate biology majors could not easily read and critique original research in scientific journals, they could dive into nutrition research, and enthusiastically. Using nutrition as an entry point facilitated the teaching of basic biology, digestive physiology, and metabolism. Questions about the role of food in society and the societal factors influencing food production and choice arose naturally from students' personal experience with diets, were integral to the scientific discussions, and complemented them. I enjoyed teaching about the uncertainties of nutrition science, the challenges involved in determining what people eat, the need to put science in its societal context, and, of course, the dependence of nutrients on their food sources.

*Transition 2: Basic nutrition science to clinical nutrition to public health nutrition.* Much of that first course focused on individual nutrients, their roles in physiology and metabolism, and their food sources. Students asked for a more advanced course, and I taught a second semester of nutrient-based science in the spring of 1976. That fall, I moved to the University of California San Francisco (UCSF) to teach nutrition to medical students. For the next several years, I gave lectures, taught courses, and ran programs about the role of diet in health, diets for specific clinical conditions, parenteral and enteral nutrition, and nutrition counseling. My teaching dealt mainly with the physiological consequences of malnutrition, hunger, and obesity but necessarily drew on social, economic, political, and behavioral aspects when dealing with the causes of these conditions. But I was doing this teaching without a license; I had no formal training in nutrition. When the lack of credentials contributed to the loss of my job at UCSE, I was advised to obtain a master's degree in public health nutrition and did so.

At the time, I did not fully understand why I needed that credential. I held a doctorate and had just published my first book, *Nutrition in Clinical Practice* (1985), which summarized the material I had been teaching for the past decade. But I soon learned what I had been missing. Public health is about how forces in society determine the health risks of populations; it is about groups more than individuals, prevention of illness

rather than treatment, and societal rather than personal determinants of health. It is highly sensitive to socioeconomic inequities and therefore is highly democratic. It fit my way of thinking. I especially appreciated the field work. I spent the year working part time with San Francisco's Coalition of Homeless Shelter Providers. I was able to meet the full-time summer fieldwork requirement through teaching a course in Shanghai and doing a research project on urban malnutrition for the US Agency for International Development in Bangkok and Jakarta.

By the end of this year of public health training, I knew that I wanted to work in nutrition policy as a means to improve the dietary practices of individuals and populations. I moved to Washington, DC, to work in the US Office of Disease Prevention and Health Promotion with primary responsibility for managing the writing and production of the first (and, as it turned out, only) *Surgeon General's Report on Nutrition and Health*, published in 1988 (DHHS 1988). After two years on a steep learning curve about how government nutrition programs do and do not work, I left to take a position as chair of what was then the Department of Home Economics and Nutrition at New York University.

*Transition 3: Nutrition to foods to food politics and food systems.* When I arrived at NYU in the late 1980s, the department housed programs in home economics, of course, but its stronger programs were in dietetics and food service management. These offered a variety of beginning and advanced courses about food and food preparation. The department also offered a small continuing education program of cuisine classes taught by local chefs. When, as I will explain, the opportunity arose to develop programs in food studies, the department could base the new programs on courses already in place.

I trace my interest in food politics to a meeting I attended at the National Cancer Institute in the early 1990s. My talk was about diet and cancer risk, but most of the other speakers spoke about cigarette smoking. Several showed slides of cigarette marketing, especially focused on people in developing countries and on children. I left that meeting thinking that nutritionists should be paying far more attention to the marketing of soft drinks and junk foods (what we now call ultra-processed foods). I began writing articles about the ways food companies influence food choices and health, and in the late 1990s I used that material as the basis for *Food Politics* (2002) and *Safe Food* (2003).

In 2006, the food studies faculty added a concentration in food systems to the existing concentration in food culture (more about the history of the department's food studies program below). Early the next year, for a talk at a conference on small farms at Oregon State University, I showed a slide labeled "Food System" to illustrate links between agriculture, food, nutrition, and public health as a basis for understanding personal dietary choices and food policy. I have used a version of that slide in nearly every subsequent talk to explain the interconnectedness of food issues. Since my retirement from NYU in 2017, I have continued to teach short courses titled *Food Systems Policy and Politics*, specifically aimed at integrating concepts derived from science, social and behavioral sciences, economics, and public health to help students understand and critically evaluate current issues related to food production and consumption.

#### METHODOLOGICAL APPROACHES

As a scientist, I was trained to use and value empiricism. Bench science involves formulating hypotheses, testing the hypotheses using appropriate laboratory techniques, controlling for potentially confounding alternative explanations of results, endlessly repeating experiments to confirm the results, and diligently keeping records of how the testing was done. As a graduate student, I isolated an enzyme that split DNA. To find out where the splits occurred, I had to develop a new method for separating the cleaved products, which I described in my first published paper (Nestle and Roberts 1968). But in my graduate training, what mattered was the research question—its importance, not how it was answered. Methods had to be appropriate but were decidedly secondary to whether the research question was "interesting." Except for those who were developing new methods, scientists who focused on "how" rather than "what for" were viewed as engaged in less interesting work. The kind of science that I was doing gave unambiguous results; the experiments either worked or did not and required no statistical tests for interpretation—a situation markedly different from that of research on food choices, dietary intake, and the effects of specific foods and diets on health.

For such questions, the scientific method has only limited applicability. Because humans are not experimental animals, vary in genetics,

eat diets of great complexity, and vary in lifestyles, nutrition research is fraught with uncontrollable confounders and susceptibility to error. The principal quantitative methods for determining what people eat depend on individual self-reports of consumption over twenty-four hours or, for epidemiological studies of populations, through food-frequency questionnaires probing intake of specific foods for the last week, month, or year. Self-reported intake is well established to be subject to selective memory lapses, exaggeration of intake of supposedly good foods, and minimization of intake of supposedly bad foods, along with a 30 percent or greater underestimation of caloric intake. The results of nutrition studies often show only small differences that require careful interpretation, usually through the use of statistical tests to decide whether the differences could have occurred by chance. These flaws, long understood by nutrition scientists who interpret their results as best they can, have recently been rediscovered by statisticians who argue that because such methods sometimes lead to implausible results, nutrition research requires a total overhaul (Ioannidis 2013, 2018). Such critics, however, do not suggest meaningful methodologic alternatives.

Qualitative methods are often better for understanding why people choose particular foods or diets and how to promote dietary change. When I write about contemporary food politics, I find it useful to draw on the qualitative methods of history, psychology, economics, political science, and sociology to evaluate current government documents, newspaper accounts, and other components of non-peer reviewed “gray” literature. I know many scientists who view qualitative methods as non-research and multidisciplinary fields to be non-disciplines; they consider the work produced by such methods and fields as merely descriptive. But I have found qualitative methods to be essential for explaining the influence of food marketing on food choice (*Food Politics*, 2002, 2007, 2013) and, more recently, the influence of food industry funding on the outcome of nutrition research (Nestle 2015, 2018).

#### WRITING FOR A PUBLIC AUDIENCE

Nutrition research is necessarily aimed at identifying diets that maximize health and longevity; it is necessarily applied. But because the results of nutrition research usually require interpretation, their implications for personal food choice are not always straightforward. In

teaching about diet and disease risk, I have always tried to be as clear as possible about the applications of nutrition research—its implications for personal dietary choices and public policy. As a lecturer in nutrition at UCSF, I received requests from its public relations office to answer questions from reporters. In the early 1980s, I did a series of thirteen segments on nutrition and health for a public television program, *Over Easy*, aimed at older viewers (one segment, for example, was with the *New York Times* food writer Craig Claiborne and Bay Area chef Narsai David). I wrote reviews of books about nutrition and health for the magazine *Medical Self-Care*. In Washington, DC, I wrote or rewrote most of the 1988 *Surgeon General's Report on Nutrition and Health*, which was meant to be understood well enough to inform nutrition policy. By the early 1990s, I had become a frequent source for reporters writing stories about nutrition issues. I considered dealing with their questions to be part of my university community service and well worth whatever time it took for them to get the facts right and interpret them reasonably.

To reach a wide audience, I have written an almost daily blog since 2007. From 2008 to 2013, I wrote a monthly food column for the *San Francisco Chronicle*. Although I try to make all of my books accessible to educated readers, I have written four specifically for a more general audience. *What to Eat* appeared in 2006; in it, I used supermarket aisles as an organizing device to address a wide range of food issues. In collaboration with Sara Thaves of the Cartoon Bank, I wrote the text of *Eat, Drink, Vote*, a book displaying more than two hundred cartoons drawn by artists that she represented (2013). In 2020, I published a book of short essays about the food politics of individual diets, communities, and the world, constructed as answers to questions posed by Kerry Trueman (*Let's Ask Marion*). And in 2022, the University of California Press published my memoir of all this, *Slow Cooked: An Unexpected Life in Food Politics*.

I want to reach general audiences. I believe that it is good for society, for the planet, and for democracy to ensure that everyone, regardless of income, race, class, gender, or age, is able to choose and consume diets that are healthier and more sustainable. People are confused about nutrition. I believe that helping to clear up that confusion is a worthwhile enterprise.



## FOOD STUDIES AT NYU

I chaired what is now called the Department of Nutrition and Food Studies at NYU from 1988 to 2003. During that time, we developed programs in food studies to provide the kind of academic environment we would have chosen for ourselves from the beginning, had it existed. We were able to create this new field of study through a series of fortuitous circumstances.

From 1990 to 1995, I was often invited to attend and speak at international conferences organized by a Boston-based “culinary think tank,” Oldways Preservation and Exchange Trust (Gifford and Baer-Sinnott 2006). Oldways’ conferences brought together chefs, food writers, and academics to discuss the health and environmental value of traditional diets, particularly those of olive-growing Mediterranean countries (the group’s chief sponsor was the International Olive Oil Council). At these conferences, I met talented chefs and food writers who told me of their deep interest in learning more about the history of food and its role in culture.

Boston University, urged by the chefs Julia Child and Jacques Pépin, had introduced a master’s program in gastronomy in 1991, locating it within Metropolitan College, the university’s continuing education division (Boston University). I wished that we could do something like that at NYU.

Before I arrived at NYU, the department’s programs in food service management had evolved into—and were promoted as—programs in hotel management. I was concerned about the academic quality of that enterprise but was unable to do much about it. In 1995, a New York food consultant, Clark Wolf, offered help. He was well connected to the greater New York food community and put together an advisory committee composed of leading food producers, restaurateurs, chefs, food service managers, hotel managers, food journalists, writers, and editors along with some interested NYU professors in other departments. This committee reviewed the existing curricula and made one overriding suggestion: teach more about food. In response, we began working on curriculum revisions.

While those revisions were underway, the NYU administration decided to develop the equivalent of a hotel school within the School of

Continuing Education and called for transferring our food (and hotel) management programs to that school, an action that would reduce our tuition income by more than \$1 million a year. When the dean asked what I wanted in return, I had a ready answer: “Food studies.” The dean’s response: “What’s that?”

I knew that Boston University’s gastronomy model would not work for NYU. We needed a title that would better reflect our purpose. NYU already offered many programs labeled “studies”—Africana studies, American studies, and Asian studies, for example, just in the “A’s” alone. Feeling sorry for our plight, the dean took the risk that we would somehow be able to attract students to this new field, gave the department a new tenure line, and got the School of Continuing Education to pay for renovation of the department’s 1950s home economics kitchen. Over the next nine months, we recruited Amy Bentley, an American studies historian, to develop the program, turned the kitchen into a modern food laboratory space, wrote proposals for new undergraduate, master’s, and doctoral programs in food studies, and obtained the necessary approvals from the university and the New York State Board of Education.

One week after obtaining state approval, Marian Burros, a food writer for the *New York Times*, wrote about our program (1996). That very afternoon, prospective students came to our office holding clippings of the article, telling us that they had waited all their lives for this program. We had a class when our programs started in the fall of 1996.

Burros, who had been writing about the politics of food for many years, interviewed many sources for her story: me, Amy Bentley, and Clark Wolf but also a range of figures in the worlds of food and nutrition. Some expressed doubts. Burros quoted biochemistry professor John Suttie reflecting the attitude of many basic scientists that people trained in interdisciplinary subjects “are trained to do nothing.” She also quoted Alice Waters, of the restaurant *Chez Panisse* in Berkeley, who objected that “the program needs real emphasis on the agriculture side. . . . The students should have to go out and grow tomatoes and harvest potatoes.”

At the time, I was incredulous. NYU is decidedly urban. Were we supposed to be growing vegetables in Washington Square Park? But of course she was right in insisting that food studies be applied as well as theoretical. Ten years later, we introduced the concentration in food systems; we also filed the first of many petitions to the university for space

to build a farm. In 2013, after years of dealing with one bureaucratic hurdle after another, we were able to break ground behind a landmarked I. M. Pei faculty-housing building to establish the department's now flourishing Urban Farm Laboratory (chapter 13 provides more detail on the Urban Farm Lab).

I must mention one additional fortuitous event: development of the NYU Library's food studies collection (which, I could not be more pleased to note, has been named in my honor). This began in the early 2000s when a professorial friend in California forwarded a notice she had been sent about the availability of a large collection of cookbooks belonging to Cecily Brownstone, then in her nineties and long retired from a forty-year career as food reporter for the Associated Press. Until then, the library had resisted collecting books about food on the grounds that they were "not scholarly" and "not of general academic interest." But a new curator of special collections, Marvin Taylor, thought it was the library's responsibility to support food studies programs and arranged for purchase of Brownstone's ten thousand or so books and five thousand pamphlets and food ephemera (Severson 2005). Taylor's active collecting program has resulted in a world-class library of about sixty-five thousand books on food and cooking, in constant use by NYU and other scholars from every imaginable field of study (NYU Libraries Special Collections and Archives).

What all this means is that the environment of NYU's food studies programs enables us to deal with critical problems in society, in my case, capitalism (which scares students), through the lens of food (which does not). Food studies unites and supports my interests in how food company marketing imperatives affect hunger, obesity, food production, and climate change and how to advocate for food systems that are healthier for people and the planet.

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Practicing Food Studies

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Looking forward  
to more collaborations

Fre

Foreword by Marion Nestle

Marion  
we did it!!

xox Amy 2/27/24

Marion  
It has been  
quite a ride!

Krishnendu



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