

# FOOD



# CITIZENSHIP



**FOOD SYSTEM  
ADVOCATES  
IN AN ERA  
OF DISTRUST**



**RAY A.  
GOLDBERG**



# Food Citizenship



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OXFORD  
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Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide. Oxford is a registered trade mark of Oxford University Press in the UK and certain other countries.

Published in the United States of America by Oxford University Press  
198 Madison Avenue, New York, NY 10016, United States of America.

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Library of Congress Cataloging-in-Publication Data

Names: Goldberg, Ray Allan, 1926– author.

Title: Food citizenship : food system advocates in an era of distrust/ Ray A. Goldberg.

Description: New York, NY, United States of America : Oxford University Press, 2018. |

Includes bibliographical references and index.

Identifiers: LCCN 2017056207 (print) | LCCN 2018010243 (ebook) |

ISBN 9780190871826 (Updf) | ISBN 9780190871833 (Epub) |

ISBN 9780190871819 (pbk. : acid-free paper) |

ISBN 9780190871802 (hardcover : acid-free paper)

Subjects: LCSH: Food industry and trade. | Food supply—Economic aspects. |

Agriculture and globalization. | Food safety. | Public-private sector cooperation.

Classification: LCC HD9000.5 (ebook) | LCC HD9000.5 .G644 2018 (print) |

DDC338.1/9—dc23

LC record available at <https://lcn.loc.gov/2017056207>

9 8 7 6 5 4 3 2 1

Paperback printed by WebCom, Inc., Canada

Hardback printed by Bridgeport National Bindery, Inc., United States of America

Cover photo credits: George Church: Wyss Institute at Harvard University;  
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George Weston: David Hares

*This book is dedicated to my wife, partner, and friend of 60 years  
Thelma E. Goldberg (1934–2015)*

*to my children*

*Marc and Lorri Goldberg, Jennifer and Bill Jaques,  
and Jeffrey Goldberg*

*and my grandchildren*

*Frederick and Amy, Alyssa, Meredith, Michelle, Nicole and Pablo,  
and Gabrielle*



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# Foreword

## The Global Food System

The global food system is the largest segment of the world's economy. It can be viewed as the largest health system on the planet. And it is changing fast. This book takes a panoramic and in-depth look at the leaders—in government, private industry, academia, and nonprofits—who are driving a revolution, and at how they are doing it.

Perhaps no economic system is viewed with suspicion by so many people around the world as the food system. Many critics, including Marion Nestle in her excellent books *Food Politics* and *Soda Politics*, call out the food industry for its systemic problems. Abuses by firms make the headlines. Governments do not have clean hands: national and regional domestic politics can hinder trade and global cooperation on both the environment and on land and water resource management.

We must improve the food system's operations. If we don't, we will not be able to continue economic development and better manage our land and water resources, attack malnutrition and obesity, or improve the lives of people who rely on subsistence agriculture or on food and income supports to survive.

The public has an intense interest in where their food comes from, how it was grown, and who delivered it from the farm to the plate. They want to know that all the participants in the food system were treated in an ethical and fair-minded way. Few understand who the management and labor change-makers in the food system really are, or what their priority system is. This book provides some answers.

## My Lifetime Study of Agribusiness

By accident of birth I grew up in Fargo, North Dakota—the only son of a father who had a farm, grain, feed, and seed business, who spent hours of time with me talking about the importance of the food system.

A farming neighbor, whose sister happened to be the president of Radcliffe College, encouraged me to apply to Harvard. I wrote my undergraduate thesis on a farmers' revolt in 1915 against the grain elevators, banks, and railroads that they felt treated them unfairly. The farmers pushed legislation to create a state-owned bank, a state-owned grain elevator, and a state-owned flour mill; to this very day North Dakota is the only state in the union with these institutions. Writing this thesis and visiting most of the original organizers gave me an understanding of the plight of those who were taken advantage of.

My PhD thesis at the University of Minnesota, on producers and processors in the nascent soybean industry, also impacted my perspective on the food system and its effect on the society it served. As I studied how a new commodity system gets developed, what impressed me was the creativity of everyone in the system, and their ability to compete and work together at the same time. I was also impressed with the role played by the university extension agents, as well as the railroads, in bringing the farmers and processors together. The farmers did not want to produce soybeans without a market, and the processors did not want to build processing plants without local soybeans to process. The railroads hosted the meetings, as they stood to benefit from the increase in transportation revenues. It turned out to be a win-win situation for all.

My work experience, and my academic experience in examining the birth of a new crop, made me want to think systematically about the food industry. I had the good fortune of meeting Wassily Leontief, who won a Nobel Prize for developing an input-output perspective on the global economy. I also met Professor Jay Forrester, the conceptualizer of the system that John Davis and I later applied to the interrelated, interdependent food system that we called “agribusiness.”

When Dean Donald David and Dr. John Davis invited me to come to Harvard Business School in 1955 to help develop an agribusiness program, on the recommendation of Dr. O. B. Jessness, the head of my department at the University of Minnesota, I realized that my academic work not only influenced the way I viewed the world but also resonated with the practitioners who were the change-makers of that world.

The systems approach enables private, public, and not-for-profit leaders of the global food system to develop their own priorities by positioning their farms, firms, institutions, or government agencies within the constantly changing global system and noting their impact on the system and the system's impact on them. This approach also forces them to look at the many coordinators that hold the system together, and it helps the system adjust to change as change-makers impact the food system and the food system affects them.

I started the Senior Management Agribusiness Seminar at Harvard Business School, chaired it for most of its existence, and taught a total of over ten thousand senior managers. Many other universities worldwide now offer such programs. I have advised, taught, or helped create the agribusiness programs at universities in Costa Rica, Nicaragua, Mexico, England, Spain, the Philippines, India, and Israel.

I never planned to be an academic—I fell in love with a major economic segment of the world, one that could improve the health and well-being of plants, animals, and humans, and could also help people realize how they could work together.

## PAPSAC: A Forum for the Change-Makers in Agribusiness

A quarter century ago, with the advice and help of management-labor negotiator Professor John Dunlop and Dr. Kurt Isselbacher of the Harvard Medical School, I created a forum at Harvard where the food system's decision makers could come together on neutral ground and discuss change. We called it the "Private and Public, Scientific, Academic, and Consumer Food Policy Group," abbreviated to PAPSAC. It was a seminar to broaden communication among farmers, business leaders, scientists, public policy leaders, academics, leaders of not-for-profits, and consumer activists on topics of mutual concern to participants of the global food system. I was concerned that there was no neutral territory to discuss the distrust both within and outside the food system, and felt that an academic setting would enable people to speak for themselves rather than for their organizations or constituencies.

The first meeting was a disaster, as people took positions and shouted at one another. But I was encouraged by the most thoughtful critic present, Marion Nestle, not to give up. After that meeting, participants realized that the issues we were talking about were more important

than our differences, and they became eager for a second meeting. The group has met annually ever since. The questions they ask themselves are fundamental:

- How is the global food system held together?
- Who holds it together?
- What are the goals that society wants the food system to have?
- Does new technology address these goals and/or create new problems or dangers?
- Who can best assess the strengths and dangers of new technology?
- Who are the constructive gatekeepers who can provide society a better focus on the relationship of nutrition to the health of animals, plants, and humans?
- How do people and institutions help the subsistent producer and the impoverished consumer become viable participants and have a ladder to become part of the global food system and have opportunities to improve their livelihood and be successful participants in the food system?
- The cyclical nature of the food system and its many commodity and livestock systems hits hardest those least able to cope with violent swings—namely, the impoverished consumer and the subsistent farmer. What safety nets are needed for them, and who is responsible for food security in an insecure world?
- Who are the neutral evaluators who can provide safeguards against the dangers of food contamination, food fraud, nutrition misinformation, and even food terrorism?

PAPSAC attendance is by invitation only; discussions are held off the record. Some of the topics discussed include global agricultural research, food policy, nutrition, agricultural technology, food safety, and the environmental impacts of agriculture.

PAPSAC is, as far as I know, unique in the variety of sectors, constituencies, and countries represented in its membership. Some attendees fly in from distant continents and troubled home countries every year to meet for twenty-four hours with their peers, colleagues, and occasional antagonists. The discussions start at noon on a Sunday and end at noon on a Monday, but the relationships formed are so intense that attendees continue talking to each other throughout the year.

As the participants of PAPSAC began to bond and to develop a better understanding of the future of the food system and their relationship

to it, I realized that I had an opportunity to demonstrate to the world that these problems require cooperation, and that people have found ways of cooperating while still maintaining their independence. I decided to interview dozens of these change-makers—most of them at the Harvard Business School as I did case studies on their work. Interviewees were also kind enough to attend the discussion of their case studies in my graduate school courses and senior management seminars. These interviews are the heart and soul of this book, and are critical to understanding the government entity, private firm, or not-for-profit institution’s leadership in addressing the food system’s many challenges.

Videos of the interviews are available to readers of this book, and I strongly encourage viewing them, because they capture the passion of the interviewees for their work in a way that the printed page cannot.

## Overview: The Vertical Food System and How It Is Changing

This book contains the voices of change-makers of the food system—their view of the future and their role in changing it. But it is also about how the food system is converting from a commodity-driven, competitive, transactional model to a partnering, relational model that will better serve consumers and society.

Figure 1 is a simplified chart of the vertical structure of the food system, including the institutions that help the interrelated system coordinate itself and also provide shock absorbers when unforeseen climate and other changes to the system occur. It is an attempt to give the reader an overview of the participants in a food system and the types of institutions involved in holding it together.

The system shown in this figure has become more complicated as food, health, energy, and the environment have become more interrelated, and the whole system has become more consumer oriented. I call this new global food system an “agraceutical system.” It is impacted by scientific discoveries and new international institutions and structures. This agraceutical system also impacts the consumer directly, with the gatekeepers of this new knowledge being the medical community. The international nature of agribusiness and the research and public policymaking in the developed and developing world make decision making even more complex. Policymakers and food leaders must consider everything from nutritional

### The Agribusiness Systems Approach

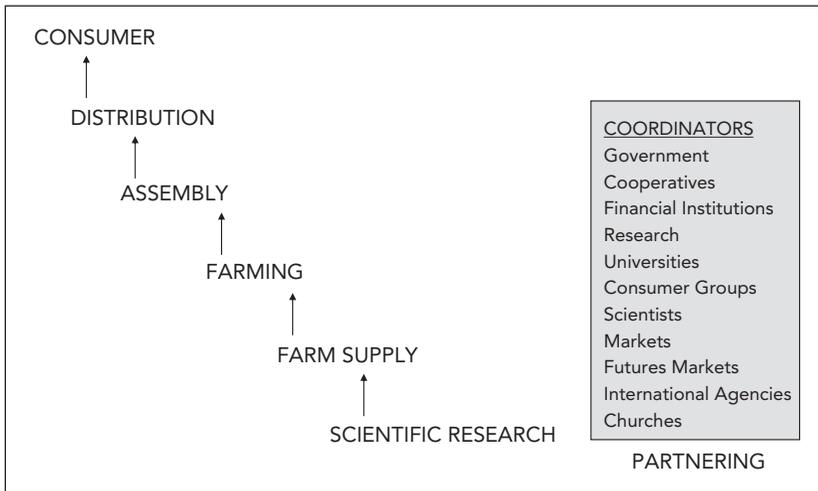


FIGURE 1 The agribusiness systems approach.

priorities, labor, food security, and market access to waste management and alternative energy, as well as the new coordinating arrangements that are being developed.

The food system includes all major branches of government because it involves the use of land and water resources, safety nets under both producers and consumers, creation of alternative sources of energy, development and regulation of new pharmaceuticals from plants, international trade regulation, the relationship of food to public health, and the basic fact that food security is a political issue.

Most people don't realize that the global food system is, in many ways, the biggest quasi-public utility in the world.

Figure 2 shows that the functions of participants at each stage of the vertical food system are being redefined. The farmer has become a manager of land and water resources to produce food, fiber, feed, energy, and pharmaceuticals, and has become a direct responder to the changing needs of the consumer. The input supplier has become a life science company. The commodity handler has become an ingredient supplier and a partner to the processor. The brand food and beverage company has become a wellness company. The food retailer has become a consumer advocate, food safety manager, and health, nutrition, and knowledge network supplier.

<b>Functions Redefined</b>
1. <b>Farmer</b> —Technology, resource, climate manager for food, fiber, feed, energy, pharmaceuticals, and land and water resources.
2. <b>Seed, feed, fertilizer, and machinery supplier</b> has become a life science company.
3. <b>Commodity handler and processor</b> has become an ingredient supplier and solutions company.
4. <b>Brand food and beverage supplier</b> has become a nutrition and taste inventor and wellness company.
5. <b>Distributor = Consumer advocate</b> <b><u>FOOD SAFETY MANAGER, HEALTH, AND NUTRITION</u></b> and knowledge network supplier

**FIGURE 2** Functions redefined.

<i>Considerations in Analyzing an Agribusiness Investment</i>
1. Identify spreads (existing and potential) between input costs and product costs
2. Identify protections to spreads (futures markets, institutions, arrangements)
3. Identify government programs that affect spreads (price supports, Public Law 480 international commodity agreements, export subsidies and controls)
4. Identify means of convincing financial institutions to supply financing
5. Identify the importance of timing in the cycle or in the change of the market structure
6. Determine vulnerability of investment to sociopolitical pressure in agribusiness image (politics)
7. Identify extent to which cooperation is required with system participants
8. Identify special financial tools responsive to analyzing investments in agribusiness: <ul style="list-style-type: none"> <li>• Commodity system model</li> <li>• Sensitivity analysis of factors affecting model</li> <li>• Special financial institutions catering to agribusiness investment needs</li> <li>• Leaseback arrangements</li> <li>• Special arrangements with cooperatives and financial institutions</li> <li>• Balance of product flows with vertical integration</li> <li>• Identification of special inducements to agribusiness</li> <li>• Government and joint ventures</li> </ul>
9. Provide market access for production and coordinate production and marketing through contracts and formula pricing
10. Identify unique individuals who can provide leadership and also train others
11. Determine responsiveness of the investor to the nutritional, social, political, and economic priorities of the government or governments involved
12. Determine the long-term environmental impacts of the investment
13. Determine the creative quality and value system of the men and women needed to provide leadership for the ventures involved

**FIGURE 3** Considerations in analyzing an agribusiness investment.

Figure 3 shows the multiplicity of constituencies—private, public, and not-for-profit—influencing any agribusiness investment made from any sector. The bottom line is only one consideration; in agribusiness it is normal to have to consider the “triple bottom line.”

## Constructive Criticism of the Global Food System

Critics have argued that it is impossible for food firm managers to integrate good global citizenship into earnings-oriented business practices. This book begins with an interview with Marion Nestle, the Paulette Goddard Professor of Nutrition at New York University, who is rightfully considered the toughest but fairest-minded critic of food firms' anti-consumer activities. Her most recent book is *Soda Politics: Taking on Big Soda (and Winning)*. In our interview she says that many of the corporate and cooperative managers of the food system say "the right things" but delegate many outside activities to trade associations that act more like tobacco firms once acted than food firms.

Food writers such as Mark Bittman of the *New York Times* write even more negatively of the current food system. He calls for a change in culture "to one in which eaters—that's everyone—realize that buying into the current food 'system' means exploiting animals, people, and the environment, and making ourselves sick. To change that, we have to change not only the way we behave as individuals, but the way we behave as a society."<sup>1</sup>

As one reads or listens to the voices of the change-makers of the future, we have to keep in mind the constructive criticism from those such as Nestle and Bittman who expect and deserve more from the food system. Some of this criticism arises from the nature of the food system and past and current mistakes and abuses within the system:

- The food system is the biggest employer in the world, and has a history of bad labor treatment in many of our major commodity systems.
- It is the biggest economic sector in the world: its sometimes sluggish and sometimes corrupt development makes people look for scapegoats.
- It is the biggest user of land and water. In many places of the world these resources are mismanaged in a manner that lessens the productivity of the soil and wastes a dwindling supply of usable water and food, making our total environment less sustainable.
- It has the biggest impact on the health of humans, animals, and plants, yet addresses health in a nonsystemic and insensitive manner.
- In many countries, overseas buyers are purchasing land as a safeguard for potential food shortages in their own countries.

Some of the criticism arises not only from the size of the food system or its history but also from the human relationship with food and reactions to changes in that relationship:

- Food is an integral part of cultures, religions, and ways of life. Any technology that changes our customs, rituals, and historical way of life is a threat to who we are and who we want to be.
- The changes from the times when nearly all people were farmers, through the Industrial Revolution and the separation of functions in the food chain, to the mechanical, chemical, genetic, bacterial, and microbial world of today, make us long for the day when we produced our own food and knew each neighbor's product and productivity. We resent consolidation and dependence on global production, even as it gives us year-round access to fruits and vegetables and a variety of unique foods from every nation in the world.

Other problems arise from the food system's complexity and its interconnectedness to other systems:

- It was much simpler to study agricultural economics, animal husbandry, and home economics as separate systems. We recognize the multidisciplinary nature of our problems, but resent their complexity and the need to understand so many different fields such as business, medicine, public health, the environment, government, molecular biology, landscaping, engineering, transportation, and life sciences to truly comprehend and affect the food system.
- In times of budget crises, governments often reduce support for those that need it most, such as food support recipients, increasing food inequity.

In spite of these and other problems and criticisms, I believe that the food industry's decision makers have the ability to create both economic value and social value—in fact, they are already doing it. More important, they are now aware that they can't have one without the other. Despite the tremendous complexity of the problems these change-makers face, this is very good news. As former Cargill chairman Warren Staley stated in one of the studies footnoted in this book, "The great challenge and joy of business is to achieve that balance." He stated further, "I believe that all aspects of

good citizenship come down to a shared mindset in an organization. It is not good enough to understand what is meant by citizenship. It's not enough to believe that good citizenship is important. It only comes about by changing behavior."<sup>2</sup> Increasingly, Cargill's customers, and consumers everywhere, are taking a more active interest in the origins of food products and want assurances that they are produced in a responsible manner.

## How This Book Is Organized

The interviews in this book are organized around the vertical food chain, starting with the consumer, showing how decision makers and critics in public, private, and not-for-profit entities at different parts of the food chain impact that consumer. The decision makers' activities and priorities demonstrate that they realize that business, public policymaking, and constructive consumer critic activities all have one thing in common: collaborating to improve the health and well-being of plants, humans, and animals and the present and future environment of the world. The interviewees' responses illuminate their value system and passion, and the variables they are juggling to fairly meet both public and private needs.

The theme of Chapters 1 and 2 is that the food system exists to promote the health and well-being of the consumers and their communities.

Chapter 3 focuses on how the food system decision maker satisfies consumers' needs by creating shared value up and down the vertical structure of the food system. Each interviewee describes how his or her firm is able to both partner and compete in the vertical food system to create a win-win relationship for all involved in the process.

Chapter 4 provides the reader an understanding of how the genetic and digital revolutions are changing the ability of the food system's leaders to respond to the health, economic development, and productivity needs of society in an environmentally sound manner.

Chapter 5 sets forth the creation of a successful resolution commission between farm workers and the firms they work with, allowing them to improve operations to their mutual benefit and that of their consumers.

Chapter 6 provides examples of large-scale farming and farm cooperative leaders taking a systems approach in relating their farming operations to a fast-changing global market.

Chapter 7 sets forth a number of leaders in private, public, and not-for-profit firms and institutions who are enabling the world's five hundred

million small-scale food producers to become part of the commercial global food system.

Chapter 8 discusses the critical new role that China plays in improving the global food system, through the efforts of one of its key change-makers.

Chapter 9 provides interviews with unique change-makers who are working to create a fair and responsive global food system by creating fair trading rules, adjudicating differences, and providing equitable public policy rules and financial priorities.

Chapter 10 sets forth future trends: it describes the impact of creating shared value in a nation during a food crisis and offers an example of a systems approach to improving the taste of fruit in a way that encourages the new generation to consume more of its product: in essence, to make important foods in one's diet more enjoyable to eat.

## Hope for the Future

To the best of my knowledge, no one has had the opportunity that I have had to tell the story of the global food system in the words and voices of those who are creating it. What is amazing to me is the ability these people have to recognize the changes in the food system and the extent to which they have reinvented their companies, institutions, and advocacy organizations—changes that it took guts to make. They know how to criticize one another, but also know how to develop programs, products, concepts, tools, structures, resources, and, most of all, people to tackle the developmental and the environmental challenges that face the global food system.

New types of managers know that the global food system will grow primarily in the developing world, and they must take the special needs of small-scale producers and malnourished consumers into account. They see how to adapt the developed world's technology to the developing world. They see a new kind of cooperation emerging in the developing world, leading to collaborations nobody ever thought would take place. The interviews in this book provide the reader with specific examples of what successful collaborations look like.

This book is more than just a collection of interviews; it's a testament to people who not only responded to a revolution but also have helped to create it.



# Acknowledgments

SO MANY PEOPLE have been involved over the years with this book project, and with the seminar that gave birth to it, that my acknowledgments are wide-ranging.

First, this book would not have been possible without the creation of the Public and Private, Academic, Scientific, and Consumer Food Policy Group (PAPSAC) and its members, who are responsible for its success and longevity. In many ways, this is really their book. I am most grateful to each of the food system leaders in this book for being willing to be interviewed by me and giving permission for their words and video images to be used.

The late John Dunlop, Kurt Isselbacher, and I founded PAPSAC, with institutional support from Dean John McArthur of the Harvard Business School (HBS), Dean Albert Carnesale of the Harvard Kennedy School of Government (HKS), Dean Daniel C. Tosteson of the Harvard Medical School (HMS), Dean Harvey Fineberg of the Harvard Chan School of Public Health, and Harvard President Neil Rudenstine. HKS Deans Graham Allison, David Ellwood, and Joe Nye also gave support to this effort across the years, and I am immensely grateful to the current dean Douglas Elmendorf for giving PAPSAC a permanent home at the Kennedy School, and to HKS faculty member Bill Clark for agreeing to be my successor. Everyone at PAPSAC is grateful to Ayres Heller at HMS, who has managed the details of this complex international gathering with aplomb.

Agribusiness scholarship at Harvard has many friends. I am grateful to President Drew Faust for agreeing with me on the need for more multidisciplinary education at Harvard on the food system; HBS Dean Nitin Nohria for his support of agribusiness education; my HBS agribusiness faculty colleagues José Alvarez, David Bell, and Forrest Reinhardt; my colleague Jim Austin, who pioneered the HBS Social Enterprise Initiative;

and its current faculty heads Kash Rangan and Dutch Leonard. I owe great thanks to John Davis, who was the first head of the HBS Agribusiness Program and cowrote *A Concept of Agribusiness* with me, and to Hank Arthur, my predecessor in the Moffett Professorship of Agriculture & Business at HBS.

Forestry professor Michelle Holbrook and Roger Porter of HKS have both supported my activities. I am indebted to Secretary Dan Glickman, who co-taught Food Policy and Agribusiness Management with me; Robert Lawrence of HKS, who coauthored cases with me; and my former doctoral student, Dick McGinty, with whom I coauthored *Agribusiness Management for Developing Countries*.

I have known every dean of Harvard Business School except the first, but am particularly grateful to Dean Donald K. David, who was dean while I was an MBA student, and who hired me back five years later to help create an agribusiness program; Dean Stanley Teele, who rehired me later; and Dean George Baker, who granted me tenure. The fifty-seven Agribusiness Senior Management Programs I have been involved with over the years could not have happened without Agribusiness Program Manager Natalie Kindred and Senior Program Relations Director Jackie Baugher in Executive Education. And much of my work would have been impossible without the help of Theresa Sparks, who was my secretary for a quarter century.

For their excellent work in many of the cases referred to in this book, I would like to thank my doctoral students Alicia Harley and Jessica Newman, and my case writers and case researchers Kevin Allison, Ian McKowan Cornell, Noeime Delfassy, Juan Enriquez-Cabot, Lorin A. Fries, Jessica Grisanti, Kerry Herman, Allen Hirsch, Harold F. Hogan Jr., Michael Kennedy, Carin-Isabel Knoop, Kevin Liang, Katie Milligan, Meredith Niles, Andrew Otazo, Jose Miguel Porraz, Matthew Preble, Cate Reavis, Mary Shelman, Eliot Sherman, Christine Snively, Srinivas Ramdas Sunder, James Weber, Vincent N. Willis, and Jessica Droste Yagan.

I can't thank everyone in the food industry who has helped me or there would be a thousand names, but I would like to give special thanks to current Nestlé chair Paul Bulcke, former Nestlé chairs Peter Brabeck and Helmut Maucher, and former ConAgra chair Bruce Rhode for sharing their insights with me. Lisa Goldberg, assistant to Juan Enriquez, located scientific information for me a number of times. Richard Anderson of Anderson Co. has been of great support, and I am also grateful to Larry Pope of Smithfield, Paul Fribourg of Continental Grain, Wan Long of WH Group, and John Kaneb from Hood Milk for their support of PAPSAC.

Edmund O'Keefe of Pineridge Group and James Haymaker of Cargill both discussed this book with me before I started it, sharing many good ideas. My HBS colleague Mike Wheeler provided valuable advice and publishing contacts.

This book would never have been published without the sound advice, encouragement, and industrious editing from Jock Herron, my former student and now an instructor of architecture at the Harvard Graduate School of Design, and Jean Monroe or without Jacqueline Archer, document specialist in HBS Case Services, who has kept track of an ever-shifting manuscript with good humor and great professionalism. I owe a lifetime's thanks to Paula Alexander in the HBS Senior Faculty Center, who has been helping me and reading my handwriting for at least thirty years. I am also thankful for her colleagues Luz Velasquez and Jan Simmons of the Senior Faculty Center, and to Jessica Baroni, assistant director of faculty support services, for their help and patience.

I am grateful to Susan Kahn, assistant director of HBS Case Services, for approval to use my case studies, and to her department collectively for much invaluable help. Media Production Manager Tim Hogan of HBS Media Services videoed and edited the interviews, and Document Specialist Chris Jones transcribed them—large and vital tasks for which I cannot thank them enough. Thea Danato, former head of HBS Media Services, helped keep track of my interview videos over a period of years. My fellow midwesterner Alan Hutchings in HBS Operational Support Services has done reams of printing and duplicating for me, and his colleague Ramone Sharpe has done similar volumes of shipping.

IT experts Dave Dollins and Jonathan Ritter-Roderick have navigated me through the realm of system upgrades and cloud storage with calm and expertise. My friend Joan Gordon provided much support during the latter stages of this project. My agent Jim Levine of Levine Green Rostan Literary Agency sent me a very helpful submission template and shepherded this book unerringly to Oxford University Press. My kind and astute editor at Oxford University Press, Angela Chnapko, has been a joy to work with through this process, as have Alexcee Bechthold and production editor Richa Jobin.

Finally, I must acknowledge the lifelong love and support of my children and their spouses Marc and Lorri Goldberg, Jennifer and Bill Jaques, and Jeffrey Goldberg, and the love and encouragement of my grandchildren Frederick and Amy, Alyssa, Meredith, Michelle, Nicole and Pablo, and Gabrielle. I could not ask for a better family.



# Food Citizenship



# Health and Nutrition

## MARION NESTLE

*Paulette Goddard Professor of Nutrition, Food Studies, and Public Health, New York University (2014)*

Marion Nestle is one of the leading authorities and respected critics of the food system. She has a doctorate in molecular biology from the University of California, Berkeley, and is the author of numerous academic articles and of popular books for lay audiences like *Food Politics*. Her books, teaching, and lecturing have led to an increasing awareness of the shortcomings of our current food system. Thanks to her efforts, the public has responded by being more aware of the relationship between food and health and more willing to take political and economic action to change the system to make it more nutritious and health oriented. Nestle points out that the most important predisposing factor for poor health and nutrition is poverty.

RG: Dr. Marion Nestle is the Paulette Goddard Professor of Nutrition, Food Studies, and Public Health at New York University. How did you end up becoming such an unusual leader in the nutrition field? What was the motivation of your doing what you're doing today?

MN: It happened one step at a time. I got a doctorate in molecular biology, took a teaching job, and was given a nutrition class to teach as part of that job. It was like falling in love. I've never looked back. I've always loved food, and I realized right away that you could use food to teach undergraduate biology or just about any other subject for that matter. Also, the fact that my teaching could start from the science of nutrition but go immediately to its politics was very appealing. I taught nutrition

to undergraduates and then to medical students for years, and then went to Washington as a nutrition policy adviser.

Soon after I moved to NYU, I was invited to a meeting at the National Cancer Institute that was run by former surgeon general C. Everett Koop. The meeting was about two behavioral causes of cancer—cigarette smoking and diet. I knew cigarettes caused cancer but had never heard anti-cigarette physicians talk about cigarette advertising in any systematic way before. They showed slide after slide of cigarette marketing in developing countries, in remote areas of the Himalayas, and in the jungles of Africa. Next, they did the same for cigarette marketing to children. I knew perfectly well that cigarette companies marketed to children. I just had never really noticed it. This felt like a revelation. I thought we nutritionists who care about childhood obesity should be doing the same thing for Coca-Cola.

So I started paying attention to food marketing, its astonishing ubiquity, and its subtle and not-so-subtle methods. I started writing articles about the effects of food marketing on food choices. Those articles turned into *Food Politics*, published in 2002, and now in a third edition. That's really when it all started, although plenty led up to it.

RG: You are considered the expert in looking at the impact of food on the health and well-being of people. You work with the private sector, the public sector, and the not-for-profit consumer activist sector. How do you see people responding to the fact that food plays such an important role in their health and well-being, and in their economic development? How do you see people understanding the importance of it, and actually wanting to do something about it in all three sectors?

MN: Food is very personal. It's something that you put inside your body, so it has deep emotional and cultural significance. I'm interested in political aspects that go beyond the personal. I want to make the personal political for people who think that what they eat is simply a matter of free will and personal choice. The way I see it, we have the choices we have because of the food system we're in. Food makes it possible to talk about political issues in a way that people can hear and respond to. Everybody can understand how the marketing environment influences what people think and do. Everyone relates to food. It's easy to talk about the politics of food; it's much harder to talk about other kinds of politics.

I'm interested in trying to get people interested in changing the food system to make it better, and in working for a healthier food

environment—one that's healthier for people and healthier for the planet. It's easier to do that around food issues than trying to work on climate change or, heaven help us, changing the political system in Washington, DC.

RG: If it's much easier to do that, why do we have such an enormous problem with obesity everywhere in the world?

MN: We have an enormous problem with obesity because of enormous changes in the food system starting around 1980. That's when everything got deregulated. In the early 1980s, we had deregulated farming; farmers were paid to grow as much food as they possibly could. Farmers did a really good job of it, produced more food, increased the number of calories available in the food supply to twice as much as we all needed, and made the food system very competitive. Right after President Reagan was elected, Wall Street changed the way in which it judged corporations. The Shareholder Value Movement forced companies to provide higher immediate returns to investors and to report growth, as well as profits, to Wall Street every ninety days. For food companies, this was really difficult, because they were already selling products in a food environment with far more calories than anyone needed, so it was competition on top of competition. Food companies had to find new ways to sell food. They got a break when deregulation made it possible for all corporations, but food companies in particular, to advertise and market their foods in ways that had not been possible before.

The result: food companies made food ubiquitous and socially acceptable to eat food 24/7, and in very large portions. Large portions are a sufficient explanation for obesity. If I had one thing that I could teach the American public, it would be that larger portions have more calories! This may sound absurd, but the relationship between portion size and calories is not intuitively obvious. Large portions are a sufficient explanation for why people are gaining weight. It's not because of lack of exercise; it's because we're eating more.

RG: It sounds so simple, and yet, the problem is tremendous. Why do companies like Walmart start working with insurance companies to tackle the obesity problem from a marketing point of view, from a supermarket point of view? Do you think they can help, or do you think it's just another marketing ploy?

MN: Obesity poses a tough problem for food companies, because if people want to do something to prevent gaining weight, they have to eat less, eat better, and move more, and avoid eating too much junk food. The

“don’t eat too much junk food” goes under the “eat less” category. But eating less is very bad for business. The job of food companies is to sell more products and grow their returns to investors. That’s their job. Healthier food is more expensive to produce and maintain, and that cuts into profits. Obesity puts food companies in a terrible position, and they know it, so they do as much window dressing as possible to get regulators off their backs. They’re terrified of regulation, so they do a lot of nice things publicly. But behind the scenes, they’re lobbying government not to make any rules, and doing everything that they can to fight public health measures. Even if people in these companies would like to do something about obesity—and many do—their hands are tied. They really can’t take actions that might decrease returns to investors.

RG: It sounds like a terrible problem. At the same time, many of these companies—using Walmart as another example, again—they sit down with the Walmart moms, who care about their children, who care about health, who care about obesity, and they talk to them about health, and they talk to them about obesity. Do you think it’s just talk, or do you think they actually have a way of working with them to help them understand to eat less and to eat better?

MN: Walmart’s job is to sell more food, not less. I live in New York City; we don’t have a Walmart. But I spend time upstate in Ithaca, which has a Walmart. I go to it regularly to see if what Walmart says in public is consistent with what I see in the store. I’m astounded by the discrepancy. Walmart may say it’s trying to promote healthier food, but I don’t see it in the store. Walmart’s job is to sell food as cheaply as possible, pay its employees as cheaply as possible, and force its suppliers to provide products as cheaply as possible. That’s its business model. Walmart has been astoundingly successful doing that, so expecting them to interfere with that model seems quite unrealistic. They’re not going to do it because they can’t.

RG: Do you think that it’s just window dressing when they say they want to do it?

MN: No, I’m sure they want to do it, and I’m sure they’re sincere. I’ve met Walmart officials. They care about promoting health, but they can only make changes that will keep sales increasing. Even though Walmart is privately held and has more flexibility with Wall Street, its hands are tied by its business model. The most effective thing Walmart could do to make America healthier is to pay its employees decent wages so they could buy better food.

RG: You really are tough on the people in the food system, and yet, when we have meetings they seem to be quite sincere about trying to improve the health of their customers, trying to find ways of getting more fruits and vegetables available to them at a more reasonable price.

MN: The Walmart in Ithaca is half a mile from a Wegmans. Wegmans is also family owned, but does all this much better, and at prices remarkably similar to those at Walmart. So I'm not impressed with what Walmart looks like on the ground. What does impress me is that a lot of Walmart's employees—I don't know the exact percentage—get food stamps. Taxpayers are subsidizing Walmart, by closing the gap between what Walmart pays its employees and what people need to live. If we want to improve the health of Walmart's employees and other low-wage workers, we have to pay them better.

RG: Forty-eight million people are on food stamps.

MN: They are indeed, and a substantial number of them work at Walmart apparently.

RG: If they were here, they would say they're trying to have low prices and be more efficient, because people are having a difficult time buying food, and what they're trying to do is actually helping them, so—

MN: Yes, but at Walmart, there's aisle after aisle of junk food at very low prices. A few little areas have fruits and vegetables, but the produce section is not well maintained, at least from what I've seen.

RG: Let's look at other parts of the system. The chairman of Nestlé, Peter Brabeck, wants to create shared value by making sure that both small-scale producers and end consumers are better off. They have health and nutrition experiments going on. The chairman was in the hospital, and the food was so miserable, he decided the whole system is at fault. Do you think they are doing anything about nutrition or not?

MN: They're changing their products in various ways, but they are still food products. If you want people to eat healthfully, you want them eating fruits and vegetables, and to increase the plant foods in their diets. That's not what Nestlé does. Nestlé makes ice cream and products you buy in packages. That's fine; they have a place in diets, just not the main place. Nestlé has the same constraints as every other food company. Profits are the number one criterion. Unless they can find a way to make healthy foods profitable, they're not going to do it. They are working hard on personalized nutrition and fortified products.

RG: At the same time, a Nestlé will go into the developing world and put a milk plant where not enough milk production is actually occurring,

and wait for as much as ten years before they break even, because they want to find a way for the small-scale producer to have market access in a place for their milk. They think they're helping economic development in that process. Do you think, again, that's not really what they're trying to do, or what?

MN: They're trying to increase milk sales. I don't know whether milk is the best example. Let's talk about sodas, which I know much more about. Soda companies, like Coca-Cola and Pepsi, are going into developing areas very aggressively and setting up small businesses with carts for selling Pepsi or Coke. These people are making money off it, and it's helping raise their income level, but they're selling something the population shouldn't be drinking, or at least not drinking much [of]. So there are contradictions built into this enterprise that are complicated and not easy to sort out. That's an easier example than what Nestlé is doing.

RG: Is there any hope that in the food system itself, there are people who can actually make a difference and change?

MN: I think so, but not when the profit motive is involved. If it's a nonprofit enterprise, it has to be sustainable or it won't last. So the question is, how can you build the kinds of institutions that are sustainable in the long run?

RG: That's a good question; how can you?

MN: Well, it's not something that I'm particularly involved in, so I'm not the person who's going to do this. It's not my job to develop business models. That's your job. My job is to analyze what's going on and advocate for curbing the unbridled marketing of foods that aren't healthy for people.

RG: The people we've been discussing have looked to you for constructive criticism, but at the end of the day, you think they are unable to do what you want them to do because the system forces them to act in a way that adds to the problem rather than addresses the problem.

MN: I've been impressed that the people I've met who wanted to work from within companies to change them didn't last long. Unless their ideas were profitable, they couldn't continue, and either left in despair or found something else to do. It's asking a lot to expect companies to do this on their own. I believe in regulation. If there were regulations that restricted certain kinds of marketing activities, that would create a level playing field for food companies. It would be much easier for the companies that want to do good to actually do good if the playing field were level. Nobody wants to go first, because it puts profits at risk.