

UNIVERSIDADE DE LISBOA
INSTITUTO de CIÊNCIAS SOCIAIS



A global food polity: ecological-democratic quality of the twenty-first century political economy of food

Lanka Elvira Horstink

Orientador: Prof. Doutor José Luís de Oliveira Garcia

Tese especialmente elaborada para a obtenção do grau de Doutora em Sociologia

Especialidade de Sociologia da Ciência e Tecnologia

2017

UNIVERSIDADE DE LISBOA
INSTITUTO de CIÊNCIAS SOCIAIS



A global food polity: ecological-democratic quality of the twenty-first century political economy of food

Lanka Elvira Horstink

Orientador: Prof. Doutor José Luís de Oliveira Garcia

Tese especialmente elaborada para a obtenção do grau de Doutora em Sociologia, especialidade de Sociologia da Ciência e Tecnologia

Júri:

Presidente: Doutora Ana Margarida de Seabra Nunes de Almeida, Investigadora Coordenadora e Presidente do Conselho Científico do Instituto de Ciências Sociais da Universidade de Lisboa

Vogais:

— *Doctor* José Esteban Castro, Emeritus Professor, *School of Geography, Politics and Sociology* da *Newcastle University*, Reino Unido;

— Doutora Maria Margarida Monteiro de Carvalho da Silva, Professora Auxiliar, Escola Superior de Biotecnologia da Universidade Católica Portuguesa, Centro Regional do Porto;

— Doutora Natividade Helena Mateus Jerónimo, Professora Auxiliar, Instituto Superior de Economia e Gestão da Universidade de Lisboa;

— Doutor José Luís de Oliveira Garcia, Investigador Principal, Instituto de Ciências Sociais da Universidade de Lisboa, orientador.

Esta tese foi realizada com o apoio da Fundação para a Ciência e Tecnologia, através da atribuição de uma Bolsa de Doutoramento (referência SFRH/BD/80126/2011 - área Ciências Políticas) financiada por fundos nacionais do Ministério da Educação e Ciência.

This page left intentionally blank.

“The Seed Keepers”

Burn our land
burn our dreams
pour acid onto our songs
cover with sawdust
the blood of our massacred people
muffle with your technology
the screams of all that is free,
wild and indigenous.
Destroy
Destroy
our grass and soil
raze to the ground
every farm and every village
our ancestors had built
every tree, every home
every book, every law
and all the equity and harmony.
Flatten with your bombs
every valley; erase with your edicts
our past,
our literature; our metaphor
Denude the forests
and the earth
till no insect,
no bird
no word
can find a place to hide.
Do that and more.
I do not fear your tyranny
I do not despair ever
for I guard one seed
a little live seed
that I shall safeguard
and plant again.

(adaptation by seed freedom activists of the poem by Fawaz Turki - Palestinian poet, b. 1940)

Abstract

Modern food production may be considered an epitome of the paradoxes that humanity is facing as we edge on into the twenty-first century. It is as much the source of problems that plague modern societies as it can be its solution. While more food than ever is produced, more people than ever suffer from some form of malnutrition. Even though agribusiness is overtaking energy as the biggest money maker, small-scale farmers and rural populations are still the poorest people in the world. Although food appears cheap, calories are largely outweighing nutrients, creating food deserts in otherwise wealthy countries. Finally, agriculture is potentially as damaging to ecosystems and human health, as it is part of the solution for major social and ecological challenges: biodiversity loss, systemic pollution, gross social and economic inequities, and climate change. The politics of food are a mirror of geopolitics, touching on all the big questions: Grow or degrow? Heed the precautionary principle as heralded in international agreements or continue to "manage" risk? Industrialise and scale up further or switch to a holistic farming practice that places people and the Earth at centre, such as agroecology? Continue to allow the commodification and privatisation of natural resources or protect them as a commons? Allow countries in the Global South to defend their food self-sufficiency or pressure them to produce for global markets? Give consumers a real choice or deny them the right to know? Underlying all these questions are issues of power and conflicts of interest, with some people part of the "haves" and many others of the "have-nots", some scientists embracing ecology whereas others hold on to classical economics, some calling for reform while others prefer a revolution, in other words: with many shades of "green" occupying the wide spectrum of food politics. In my thesis, I contend that a food system that is simultaneously healthy *and* fair can only be realised in conditions of "substantive" democracy, understood as a polity where social and ecological concerns take precedence over other interests, where common resources are under social control, and all those people affected by decision-making are also the decision-makers. My thesis analyses the democratic and ecological quality of modern food politics to improve understanding of the leveraging factors for achieving such a substantive or food democracy.

Keywords: ecological democracy; food democracy; democratic quality; food system; food politics

Resumo

Uma politeia alimentar global: a qualidade ecologico-democrática da economia política da alimentação no século XXI

O sistema alimentar moderno pode ser considerado o epítome dos paradoxos que a humanidade enfrenta no século XXI. Tanto contribui significativamente para a rápida erosão dos recursos naturais, ecossistemas, e biodiversidade de que os humanos e as espécies que coevoluíram com a sua acção dependem, e ainda para o aquecimento global, como foi indicado como um factor de alavancagem para ultrapassar estes mesmos desafios. Por outro lado, a agricultura tanto está no epicentro de uma indústria emergente lucrativa—a chamada “indústria das ciências da vida”, como está na génese de desigualdades socioeconómicas. Enquanto uma minoria de explorações controla a maior parte da terra arável, e um grupo pequeno de corporações transnacionais domina os sectores das entradas e saídas na agricultura—estabelecendo os padrões alimentares e de produção—no mundo rural a vida permanece em níveis preocupantes: 75% dos que vivem em extrema pobreza podem ser encontrados no campo, enquanto metade das pessoas que passam fome crónica no mundo são pequenos agricultores. Ao mesmo tempo, a agricultura está a ser reconhecida por ser o sector por excelência para tirar as pessoas da pobreza e da fome, e, de facto, os meios para realizar o potencial da agricultura como curadora e protectora das pessoas e seus habitats já existem. Mas na realidade, apesar do reconhecimento generalizado dos problemas e potencial da agricultura, tal não se tem traduzido em políticas concretas.

A forma como as actividades de produção agrícola e alimentar estão no âmago, não só das necessidades humanas básicas como também dos arranjos sociais no nosso mundo, faz com que constituam um tema sociológico por excelência, tema esse que desde o século XVIII tem sido vivamente debatido (relembre-se os fisiocratas¹). A sua pertinência aumenta quando consideramos que, com o derrube de barreiras biológicas na agricultura nas últimas décadas—nomeadamente a capacidade de reproduzir a própria vida—a penetração da agricultura pela economia capitalista está a atingir o seu apogeu. A minha tese propõe esquadriñar as origens dos paradoxos que afligem o que pode ser considerado uma actividade humana primordial, analisando a organização social, económica, e política do sistema alimentar moderno a fim de revelar os factores geradores de injustiça e insustentabilidade no sistema instalado. O foco

1 A fisiocracia foi desenvolvida em França e gozou alguma popularidade pouco antes da publicação de *A Riqueza das Nações* por Adam Smith. É por vezes considerada a primeira teoria completa de economia.

está, em particular, sobre a visão democrática do mundo que inspira as acções dos principais actores nos sectores agrícola e alimentar, entre eles governos, burocracias internacionais, grupos de interesses económicos transnacionais, organizações da sociedade civil, e movimentos sociais. A fim de estudar a “substância democrática” do sistema alimentar moderno, optei por uma abordagem que convoca o âmbito da sociologia clássica, que se articula com as teorias de economia política, cujo grande objecto de análise foi a economia capitalista. Pretendi criar uma ponte entre a análise crítica dos pensadores pioneiros da revolução industrial e as observações contemporâneas de um mundo interligado pelo comércio globalizado. Confrontei ainda com teorias e conceitos recentes, como a sustentabilidade, participação pública, governança, deliberação, ecologia, e soberania alimentar, que procurei imbuir com as lições da economia política clássica, nomeadamente a forma como olha os fenómenos socioeconómicos através da lupa da história moderna e da filosofia moral.

O meu primeiro passo foi de pensar o sistema alimentar em termos políticos, identificando as relações de poder e os principais conflitos de interesse, apoiando-me na tradição da análise sociológica crítica, mas também perscrutando novas abordagens às tomadas de decisão. Esta reflexão teórica profunda serviu para apoiar a construção de um modelo de democracia “substantiva” ou “democracia alimentar”, que entendo ser uma democracia fundamentada na actividade humana de produção alimentar e de outras necessidades básicas, que é, ao mesmo tempo, social- e ecologicamente responsiva ao seu *demos*. Montei este modelo exploratório após ter analisado uma diversidade de teorias democráticas e de “qualidade democrática”—a medida em que uma política ou decisão respeita a vontade e a necessidade populares—de forma a sintetizar os atributos democráticos mais próximos de realizar uma democracia alimentar. Assim percorri desde teorias de extensão da democracia liberal, passando por teorias que incorporam uma noção de economia democrática, até teorias de democracia “profunda” e “radical”. No passo final, apliquei este modelo ao sistema alimentar moderno e às políticas alimentares de nove actores² representativos deste sistema. Baseei-me em dados documentais para fazer, por um lado, uma análise biográfica do sistema alimentar moderno e, por outro, uma análise crítica dos discursos de cada um dos actores escolhidos. Esta abordagem de construção progressiva da teoria enquadra-se na metodologia da teoria

2 De notar que reservo a palavra “actores” para grupos de interesse bem delineados, que são activos no sistema alimentar, enquanto o termo “agentes” refere-se a todos os grupos de interesse no sistema.

fundamentada (Strauss and Corbin 1994), que se mostrou apropriada para apreciar as complexidades sociológicas e ecológicas do sistema alimentar moderno. O uso da análise crítica de discurso justifica-se, por seu lado, tendo em conta que a organização do sistema alimentar pode ser cada vez mais entendida como uma disputa discursiva sobre o enquadramento das questões políticas e sobre a construção das regras, normas, e identidades dos actores (Fuchs 2005). Seguindo com Fairclough (2001) que o discurso é uma forma particular de representar aspectos da vida social, incluindo aspectos desejados, a sua análise crítica permite revelar tanto as intenções dos actores como as suas relações com outros actores e agentes. Usando a metodologia tripartida experimentada por Johnston (2008), fiz o ensaio de identificação das tensões ideológicas e contradições inerentes às narrativas que aparentam promover o bem-estar e a equidade, observando com que argumentos a hegemonia cultural dos grupos de interesse dominantes é reproduzida, e por fim procurando entender como os discursos dominantes interagem com as narrativas contra-hegemónicas dos movimentos sociais.

A pista que a tese prossegue é a de que somente através de propostas democráticas substantivas para a organização de uma sociedade em torno de um sistema alimentar poderemos alcançar um modelo organizacional que seja responsivo (i.e. que dê resposta) tanto às questões de equidade social como àquelas de equilíbrio ecológico. Avaliei a substantividade das propostas que encontrei por meio do conceito da qualidade ecologico-democrática, que defino como a medida em que as tomadas de decisão são responsivas tanto ao seu *demos* como aos desafios ambientais e sociais do nosso tempo. Desta forma, as perguntas de investigação principais que organizam a tese são:

- Qual é a qualidade ecologico-democrática da forma de organização que caracteriza o sistema alimentar moderno?
- Qual é a qualidade ecologico-democrática das políticas alimentares que são defendidas por diferentes actores no sistema alimentar global?

A dissertação está estruturada em cinco capítulos, uma introdução e uma conclusão. Os primeiros três capítulos visam a construção de um modelo democrático exploratório, ancorado no conceito da qualidade ecologico-democrática, derivando de uma abordagem de economia política. No Capítulo 1, procuro descobrir as lógicas da economia política do sistema alimentar moderno, apoiada em análises críticas tanto de pensadores pioneiros nesta

abordagem, como de teóricos mais recentes. O Capítulo 2 percorre as teorias democráticas, focando em particular as que incluem de alguma forma um reconhecimento dos impactos da “sociedade comercial” e/ou a organização do sistema alimentar moderno, com o intuito de encontrar a abordagem democrática mais apropriada para uma democracia alimentar. O Capítulo 3, após analisar as propostas para uma teoria e uma prática de qualidade democráticas, faz a síntese das ideias até então discutidas apresentando um modelo tentativo de avaliação da qualidade ecologico-democrática das tomadas de decisão. Na segunda parte da dissertação, são apresentadas respectivamente a análise biográfica do sistema alimentar moderno, sob forma de dados estatísticos e testemunhos (Capítulo 4), e a análise crítica dos discursos de nove actores alimentares, entre eles várias organizações supranacionais, um representante das grandes empresas transnacionais, e representantes dos movimentos sociais e camponeses globais (Capítulo 5). Tanto a organização actual do sistema alimentar moderno como as políticas alimentares implicadas pelos discursos dos principais actores são escrutinadas à luz do meu modelo ecologico-democrático, para aferir o seu potencial para alcançar os pressupostos objectivos de maior equidade e sustentabilidade do sistema alimentar.

O sistema alimentar que emerge da análise que realizei está muito longe do ideal campestre que continua a ser passado aos alunos do ensino primário em países do Norte Global. A agricultura e a alimentação estão a ser integradas velozmente numa nova indústria das ciências da vida, que reúne grandes corporações nas áreas dos agro-químicos, farmacêutica, energia, biotecnologia, e defesa, sustentadas em segundo plano por grandes empresas financeiras. É uma indústria “trilionária” que está a ultrapassar em valor a das energias convencionais, e que visa levar a comodificação (i.e. mercantilização) e privatização dos recursos naturais à sua última consequência. Na sua génese, esta indústria foi muito apoiada por fundos públicos e pelo lóbi activo dos governos dos seus países de origem (Garcia 2006). Os seus actores estão interessados em capturar o que chamam “biomassa”, um termo comercial genérico para organismos vivos, para gerar novas formas de energia, e desenvolver novos produtos e organismos sintéticos. Nesta visão, que pode ser apelidada—segundo Garcia (2006) e Pierce (2012)—de biocapitalismo, as barreiras biológicas que a agricultura apresenta à sua comodificação completa tendem a ser definitivamente derrubadas, e a agricultura passa a ser compradora líquida dos insumos em que dantes estava auto-suficiente, como as sementes e os adubos. Este novo campo industrial assegura ainda o seu lucro

continuado com a implantação de sistemas draconianos de protecção dos direitos de propriedade intelectual sobre os organismos vivos e as técnicas de criação de plantas; com a celebração de acordos com cláusulas leoninas de comércio “livre” entre os países líderes na biotecnologia e os países fornecedores de bens naturais; e por fim, a passagem de leis nacionais derivadas destes acordos, que restringem a liberdade do agricultor em escolher os seus insumos.

O sistema que resulta desta hiper-industrialização da agricultura e a sua paralela comodificação, favorece principalmente as indústrias dos insumos e do processamento de alimentos. O sistema de patentes e a necessidade de atingir uma elevada economia de escala, facilita a manutenção de oligopólios ou quasi-oligopólios em todos os passos da “cadeia de valor agrícola”, com excepção dos próprios agricultores. O desenvolvimento inigualitário entre actores do sistema alimentar, e entre países pioneiros da biotecnologia e os restantes, resulta no seu principal paradoxo: enquanto a agricultura e alimentação geram fortunas para um punhado de grandes corporações, em particular no Norte Global, metade das pessoas que passam fome são pequenos agricultores e a maioria do mundo rural no Sul Global vive em situações de relativa pobreza.

Observando os enormes desequilíbrios e desigualdades resultantes do sistema alimentar moderno, e ao mesmo tempo reconhecendo mudanças de atitude subtis em alguns actores alimentares poderosos, considera-se que a ideia do “movimento duplo” avançada por Polanyi continua a ser aplicável. O sector formado por governos, burocracias internacionais, corporações multinacionais, e outros actores da nova elite global continua a promover o projecto “laissez-faire” junto dos países exportadores de recursos naturais, apesar do reconhecimento dos problemas da agricultura industrializada e globalizada. Já algumas agências supranacionais como a FAO, crescentemente os governos do Sul Global, e os movimentos sociais globais de defesa dos direitos dos camponeses e da natureza, constituem um contra-movimento que vai atrasando e por vezes alterando o projecto de acumulação capitalista. Em alturas de crise, os próprios proponentes do neoliberalismo como o Banco Mundial, tal como Polanyi previu, ajudam a travar os excessos das suas próprias políticas. Na verdade, a minha análise de discurso revelou um movimento triplo, com uma divisão no contra-movimento entre os que chamei “capitalistas sociais”—com uma definição próxima do liberalismo social, encerrando ainda a ideia de abertura a sacrifícios em prol da equidade e sustentabilidade—e um grupo mais apologista da mudança sistémica, ainda assim bastante

heterogéneo, que chamei “democratas ecológicos radicais”. Este último grupo tem enriquecido a teoria democrática com conceitos comunitaristas, como ideias de altruísmo, solidariedade, direitos da natureza, e a noção do “bem viver” (Buen Vivir). Em reacção à pressão dos dois grupos do contra-movimento, o que chamei o “bloco hegemónico de comércio” teve que adaptar o seu discurso para incluir o reconhecimento inevitável da insustentabilidade do sistema actual. Ainda assim, procura tentar refugiar-se em conceitos novos que apenas escondem práticas antigas, como a agricultura “climaticamente inteligente”, a “economia verde” ou “bioeconomia”, e a “intensificação sustentável”.

A análise ecológico-democrática do sistema alimentar moderno e seus principais actores que apresento conduz à conclusão que ainda se está longe de uma *politeia* global alimentar, no sentido de uma comunidade democrática ou um corpo cívico em torno da organização da agricultura e da alimentação. A realidade social fica bastante aquém dos discursos promovidos pelos principais actores alimentares: o sistema alimentar moderno não cumpre sequer os índices democráticos mais básicos do meu modelo de qualidade ecológico-democrática. Das entidades analisadas, apenas os actores que não estão no poder nem têm interesses comerciais, abraçam o espectro completo dos atributos ecológico-democráticos apresentados na Tabela 1. Os capitalistas sociais, contrariamente aos “hegemónicos do comércio”, aventuram-se para além dos atributos mais básicos, incluindo grande parte dos que estão na categoria “controlo popular”, e até, tentativamente, reconhecendo mérito aos atributos incluídos na categoria da “autonomia”. No entanto, a sua incursão nas filosofias de democracia radical encontra a sua fronteira no reconhecimento pleno da autonomia de povos e comunidades na definição das políticas alimentares. Tal reconhecimento poria em causa o continuado lucro nas áreas agrícola e alimentar dos países líderes nestes sectores, dos quais a maioria tem também uma voz maior nos órgãos supranacionais decisores.

Não obstante a ausência de uma *politeia* alimentar global, ou de resultados concretos das políticas para diminuir as desigualdades e desequilíbrios ecológicos, o duplo ou triplo movimento que observo está a modificar aos poucos a forma de conceptualizar as práticas de tomada de decisão em matéria de recursos comuns. São exemplos disso o reforço do direito à alimentação, a vontade política de países do Sul para restringir os direitos das corporações, e o crescente reconhecimento de alternativas à agricultura industrial, como a soberania alimentar e a agroecologia. Uma vez que a aceitação destes conceitos não é compatível com a anuência do que chamei os “embargos de comércio”, resta a esperança de que, parafraseando Dewey,

os projectos mais inclusivos levem a melhor. Para que isso aconteça, a minha recomendação é que as tomadas de decisão sejam sempre verificadas a nível da sua qualidade ecologico-democrática, cuja operacionalização por sua vez deve estar sempre em debate.

Palavras chave: democracia ecológica; democracia alimentar; qualidade democrática; sistema alimentar; política da alimentação

Preface

I am fully aware that my thesis broaches many different themes within the vast and fertile field of food and agriculture, calling upon different disciplines for their observation, among them sociology, human ecology, economics, and political science. Running the risk of overcrowding my analysis was a conscious choice, although I could have taken many different routes. But I feel strongly that the socio-ecological dynamics of the food system are representative of the way our societies are being organised, as well as of the dominant power relations in our societies, alas, in our world, which seems to have become smaller and less diverse. I also felt that, in order to make critical observations about the sociopolitical and economic organisation of our food system, I needed to connect with several versions of the history of the food system, as recounted by anthropologists, sociologists, economists, geographers, philosophers, and more recently, ecologists. Additionally, since my main concern is with the democratic and ecological deficits of the globalised food system, I wished to understand how different currents that are critical of the capitalist and industrialised model of human production, explain the economic, social, cultural, political, and ecological dynamics at play in this system, which has been dominant for the last few centuries. This led me to explore different theories of political economy and of democracy, which greatly improved my knowledge of thinkers that hitherto were not much more than names and general ideas, while it also changed my mind about some things that I had taken for granted. It did not make my task of arriving at a tentative model of the "ecological-democratic quality" of decision-making in food politics any easier. Swamped with ideas from intelligent scholars and practitioners, and with the experience of being active in several national and international movements for food and seed freedom, arriving at a valid selection of criteria was a long process, during which I matured my ideas a year at a time, one or two papers at a time, one conference or project meeting at a time. Given another five years, I am sure my model would be different or at least more refined, and that time may then have caught up with some of my notions, but as a researcher rather than a philosopher, I have to accept that there is a cut-off point for my theoretical improvements. Therefore, in this thesis I offer you my best analysis at the time of this particular cut-off point, in the hope it contributes to furthering our critical understanding of the dynamics of food politics in a globalised, industrialised, and currently

highly neoliberal world, and of the criteria that could help measure whether our decision-making is furthering the goals of economic, ecological, and social justice.

All doctoral candidates have battle stories and the scars to prove them, and now I have my own to add to the trove. The challenges seemed endless, but end they did, while new ones begin as soon as I lay down the proverbial pen. For being my battle buddies, I have many people to thank, but in particular the following: José Luís Garcia, my thesis supervisor, who was the first to believe in me and in my research, who gave me endless support and showed me the meaning of true academic freedom; Ana Nunes de Almeida, who was the second to believe in me and made my dream of coming to the Institute of Social Sciences a reality; my parents, who are my biggest fans, whether I deserve it or not, and always, bravely, stand by me; my friend for life, Paulo, who is always available to help at the distance of a phone call; my fellow transnational political participation *aficionadas*, Nina Amelung and Britta Baumgarten, who patiently kept giving me advice and the benefit of their experience; my food and seed freedom comrades, in particular Sara, Mara, Paula, Cloé, and Frederica and Pepa, who helped me stay in touch with the real issues; my former flatmates Vanesse and Josie, who witnessed many of my darker moments, and helped me pull through; my daughter Ava, for being a teenager and therefore keeping me grounded; my brother and sislaw, Max and Marta, for thinking of me and giving me cute nephews; Margarida Silva, for her inspiration, availability, and cheer.

A todas e todos, obrigada e até já!

Lanka Horstink

Lisboa, December 2016

Table of Contents

List of figures and tables.....	xx
List of abbreviations	xxi
Introduction.....	1
The birth of the agricultural food system.....	2
Inside the modern food system.....	6
Researching the food polity.....	9
Methodological approach.....	14
Structure of the thesis.....	18
Part 1: Constructing a model for food democracy	
I. The political economy of food.....	23
Political economy versus economics of food.....	24
Sustainable <i>if</i> tradeable.....	29
A path-dependent global political economy.....	33
Sketching a political economy of food.....	39
Conclusion.....	53
II. Food politics and the democratic question.....	57
The concurrent rise of the commercial society and liberal democracy.....	58
A rights-based approach to realising food democracy.....	67
Democracies with adjectives in the twentieth and twenty-first centuries.....	77
Extending the liberal democratic project.....	78
The deliberative democratic proposal.....	83
The "thinness" of public participation.....	87

Beyond liberal democracy: radical theories.....	94
Proposals for food democracy.....	109
Conclusion.....	111
III. The dimensions of food democracy.....	113
Defining democratic quality.....	114
Liberal democratic theories of democratic quality.....	117
Deliberation as democratic quality.....	127
Grounding democratic quality in ecological democracy.....	128
Food democracy as a special case of ecological democracy.....	134
Constructing a framework for the ecological-democratic quality of decision-making.....	138
Part 2: Democratic analysis of the global food polity	
Introduction to the democratic analysis.....	153
Questions to guide the assessment of ecological-democratic quality.....	162
IV. The ecological-democratic quality of the food system.....	165
The modern food system and the new food actors.....	166
Food: a trillion dollar business, but not for everyone.....	170
Life at the edges of the hourglass model.....	182
A new model of science and policy-making.....	188
Support for a new paradigm.....	193
V. The ecological-democratic quality of food politics.....	209
Selecting the discourses in food politics.....	209
Designing a Critical Discourse Analysis of prominent food actors.....	215
Results of the Critical Discourse Analysis.....	216

What makes up the food system?.....	216
Who are the agents of the food system?.....	224
The threats, challenges, and difficulties recognised.....	233
What are the solutions?.....	237
What are the key narrative strategies and versions of truth?.....	245
The democratic implications of different discourses in food politics.....	253
Conclusion	263
References	275
Appendix A	293

List of figures and tables

Fig. 1. Level of aggregation in democratic indices.....	139
Fig. 2. Corporate control of the food supply.....	171
Fig. 3. Concentration in food and agricultural markets.....	172
Fig. 4. Diagram of the “Life Sciences” corporations.....	173
Fig. 5. Top exporting countries in agriculture.....	175
Fig. 6. Home economies of the world’s top agribusiness TNCs.....	175
Fig. 7a. Global distribution of farms.....	176
Fig. 7b. Average farm size per region.....	177
Fig. 8. Distribution of agricultural land per land size class.....	178
Fig. 9. Evolution of the structure of US agriculture.....	179
Fig. 10. Who controls the WTO?.....	180
Fig. 11. Who has the votes at the World Bank?.....	181
Fig. 12. Trend in world food prices.....	183
Fig. 13. The farm’s share of food value.....	184
Fig. 14. Percentage change in the prices of retail foodstuffs v. farm gate prices between 1980 and 2000.....	184
Table 1. Framework for assessing ecological-democratic quality.....	143
Table 2. Agriculture as both source and solution for major challenges.....	195
Table 3. The ecological-democratic quality of the global food polity.....	259

List of abbreviations

AGRA—Alliance for a Green Revolution in Africa

CAP—Confederação dos Agricultores Portugueses

CBOT—Chicago Board Of Trade

EC—European Commission

EFSA—European Food Safety Authority

EU—European Union

FAO—Food and Agriculture Organisation

FDA—(United States) Food and Drug Administration

G7—International forum for the group of the seven most advanced economies (according to the IMF): Canada, France, Germany, Italy, Japan, the United Kingdom and the United States. The European Union is also represented in the G7. The G7 was actually the G8 prior to Russia being asked to leave in 2014.

G20—International forum for the governments and central bank governors from 20 major economies

GHG—Greenhouse Gas

GMO—Genetically Modified Organism

HLPE—High Level Panel of Experts on Food Security and Nutrition

IAASTD—International Assessment of Agricultural Science and Technology for Development

IFAD—International Fund for Agricultural Development

IISD—International Institute for Sustainable Development

ILO—International Labour Office

IMF—International Monetary Fund

IPCC—Intergovernmental Panel on Climate Change

IPR—Intellectual Property Rights

ISDS—Investor-State Dispute Settlement (an arbitration system that bypasses the courts)

LEAD—Livestock, Environment and Development Initiative

LVC—La Via Campesina

NGO—Non-governmental organisation

OECD—Organisation for Economic Co-operation and Development

SDGs—The Sustainable Development Goals adopted by the UN General Assembly in 2015, replacing the expired Millennium Development Goals.

TNC—Transnational Corporation

TRIPS—The Agreement on Trade-Related Aspects of Intellectual Property Rights

UN—United Nations

UNCTAD—United Nations Conference on Trade and Development

UNDESA—United Nations Department of Economic and Social Affairs

UNDP—United Nations Development Programme

UNEP—United Nations Environment Programme

UPOV—International Union for the Protection of New Varieties of Plants

USAID—United States Agency for International Development

USDA—United States Department of Agriculture

WB—World Bank

WEF—World Economic Forum

WFP—World Food Programme

WHO—World Health Organisation

WRI—World Resources Institute

WTO—World Trade Organisation

Introduction

While food intake is an inescapable physiological necessity, eating entails far more than its basic physiological dimensions. Quite clearly, the act of eating lies at the point of intersection of a whole series of intricate physiological, psychological, ecological, economic, political, social and cultural processes. Such intersections present the human and social sciences with some of their most intriguing questions and challenges. However, in order to rise to such challenges, sociologists may need to be prepared to think more flexibly about the traditional boundaries of their discipline. (Beardsworth and Keil 1997, 6)

For millions of years humans were content to provide in their food by hunting wild animals and foraging for wild plants, while maintaining a nomadic lifestyle. For reasons that are still highly disputed, everything changed around 12,000 years¹ ago, when humans in several warmer regions in the world settled down and became farmers and herders. Today, agriculture is an integral part of human physiology, psychology, and social organisation, not to mention a major environmental driver. Certainly those early humans were unaware to what extent they were changing not only the course of their own history, but that of most other species on the planet as well. The switch to sedentism coincides not only with the development of complex social organisations but also with the rise of disease, inequality, and warfare. From the outset, food production may have been a source of wealth and power for rapidly developing elites, who used agricultural surpluses as bargaining chips with their subjects and with elites from neighbouring primitive states. After the Middle Ages, food became a global business controlled by the colonialist countries and the world's first corporations, that managed to secure positions of near monopoly, at the expense of the erstwhile slaves and the modern-day cheap labour that substituted them. Besides major asymmetries in the distribution of costs and benefits in food production, agriculture has also indelibly altered landscapes all over the planet and is a major source of pollution and greenhouse warming. But despite farming's large social and ecological footprint, it is also where we can find the crucial leverage points to invert poverty and hunger and produce a much-needed respite for our ecosystems.

¹ Estimates vary, but recent excavations prove agriculture was practised at least 11,700 years ago, very possibly earlier (Willcox 2013).

The birth of the agricultural food system

Among scholars of the origins of agriculture, the debate on the reasons for its emergence is far from over and no single explanation has gained sufficient support. On the one hand, it is a biological fact that the high energy demands of humans' large brains require them to consume (and therefore provide for) a high-quality and energy-rich diet very unlike their primate relatives (Beardsworth and Keil 1997). Whether this has spurred them to farming, unlike any other species (with a few, non-mammal, exceptions), has not been proven (Wadley and Martin 1993). The latter authors summarise the puzzle as follows: "(1) virtually no other species lives this way, and (2) humans did not live this way until relatively recently".²

On the other hand, the choice to farm presents a paradox: strictly speaking, agriculture means more work, more risk of famine and disease, and the necessity of accepting crowding and other inconveniences of sedentism (Diamond 1987³). It does not appear to have offered obvious rewards to the hunter-gatherers that decided to make the switch (Wadley and Martin 1993; Diamond 1999). Farming is now recognised as presenting some significant disadvantages, such as increased labour intensity, increased risk of disease and famine, and a generally poorer diet (e.g. Wadley and Martin 1993; Beardsworth and Keil 1997; Diamond 1999). The striking deterioration of health and hygiene post-transition and the prevalence of hunger that persists to this day led Marshall Sahlins (1974) to conclude, during his observation of the lifestyle of surviving bands of hunter-gatherers, that they were "the original affluent society".

Even when we reject the idea, as is now more common, that agriculture represented an inevitable (and positive) step in the evolution of humans, there remains a plethora of hypotheses to explore on how this dramatic change came to pass, among them climate change, biogeographical factors, population pressure, competition between individuals with "accumulative personalities" (Hayden 1990, 31), and even the hypothesis of the addictive properties of milk and cereals that has been advanced by Wadley and Martin (1993). As an

2 Wadley and Martin 1993, available: <http://www.ranprieur.com/readings/origins.html> (accessed 15 August 2015).

3 Jared Diamond, The Worst Mistake in the History of the Human Race, Discover Magazine 1987, available: <http://www.ditext.com/diamond/mistake.html> (accessed 15 August 2015).

example of hypotheses that favour social explanations, Barbara Bender (1978) has argued that food production has always been about social relations: the creation and upkeep of alliances based on exchange was an incentive for surplus production, which was better achieved through farming. Brian Hayden (1990) extends this idea, positing an economic causality (the desire to accumulate) rather than a strictly social one. Both authors observe that the food surpluses achieved through production came to be controlled by an elite, leading to the development of social hierarchy as well as inequality.

Other archaeologists such as David Rindos (1984), Ian Hodder (1990) and Helen Leach (2003) offer a different interpretation, making a case for the co-domestication of homo sapiens and the plants and animals that they came to control. In this view, at minimum Homo sapiens was symbolically and socially domesticated (Hodder 1990), and at maximum biologically altered, just like the animals and plants with which humans filled their new habitats. Considering the drawbacks of a sedentary life—crowding, restricted mobility, interdependence between humans and non-humans, the risk of disease—it appears plausible that a domestication-like process occurred for humans to be able to transition to agriculture. Researchers differ as to whether they consider the domestication a pre-condition for (Beardsworth and Keil 1997) or a consequence (Leach 2003) of agriculture.

Meanwhile, the biologist and essayist Jared Diamond (1999) offers the provocative hypothesis that biogeographical conditions determined the course of history for different peoples. His reasoning is compelling and helps to highlight the interdependence between forms of food procurement and social organisation. In certain regions of the world it is not possible to farm and those that colonised these regions, even if they came from farmer tribes, had to revert to hunting and gathering. Hunting and gathering does not generate surpluses and therefore does not free up resources to support boat builders, soldiers, or even chiefs. This inhibits the development of more complex technology and limits the growth of the population. In contrast, where farming is possible, populations can be observed to increase dramatically and the social organisation necessarily becomes more complex, allowing for hierarchy and domination of one group over another. Studying the Polynesian people's expansion over the Pacific islands, Diamond shows how different climatic and geographical conditions created very different civilisations on different islands, in an effort to explain by analogy how some

peoples (Eurasian) came to dominate others (especially American and African) through the advantages conferred to them by intensive farming and the use of steel (not to mention the unintentional spread of germs from Eurasia to the Americas that exterminated more indigenous people than all warfare combined, see Diamond 1999, Preface).

Just as scientists are not in agreement as to why agriculture emerged, they also vary significantly in how they judge the relative importance of the resulting impacts. The consequences of the shift from foraging to food production are considered so momentous that many speak of an agricultural or Neolithic revolution, even though it took millennia to complete and arose independently in at least five sites (Diamond 1999, 99). Some of the more obvious impacts are those on the natural environment, through what Hole (1992, 374, in Beardsworth and Keil 1997, 8) calls the "cycle of use, abuse, abandonment and re-use": clearing forests, ploughing fragile topsoil and thus eroding the landscape. Alan Beardsworth and Teresa Keil (1997) contend that, where agriculture has been practised for millennia, it is now hard to identify areas that could be considered "natural" (i.e. completely unmanipulated by humans). Other less obvious impacts are the higher levels of diseases and diminished health conditions demonstrated by Hole (1992, 378) and Van der Merve (1992, 372) (both cited in Beardsworth and Keil 1997, 22).

Beardsworth and Keil (1997) further list a number of significant social and cultural impacts, which, although not proven to be a direct consequence, are at minimum correlated and possibly facilitated by the rise of food production:

- the concept of ownership arising with the building of food stocks that could "command the labour, obedience or political allegiance of others" (Ibid., 21) , allowing for the emergence of privileged groups and subsequent increase of social inequality;
- the concept of labour as a way to support debts and obligations owed to others that are more powerful and resourceful, as opposed to work directed exclusively to subsistence needs (Ibid.); and
- the prevalence of warfare (Harris 1978, 35 as cited in Beardsworth and Keil 1997, 23).

Likewise, the increase in population and the development of metal-based technology would very likely not have happened if humans had remained hunter-gathering peoples. Diamond (1999, 285), comparing modern-day hunter-gatherer tribes with states, observes how states expand and diversify their populations by producing food, while hunter-gatherer societies never move beyond the level of chiefdoms. Regardless of causality, changes in food procurement correlate with much more complex forms of social organisation, creating the conditions in which cities and states emerged.

States represented a big step away from the relatively smaller and simpler human social groupings that preceded them. When Diamond (Ibid.) observes contemporary hunter-gatherer societies, he finds these to have a relatively horizontal organisation and to lack notions of private ownership. He finds that "in general, the larger the size and the higher the density [of the population], the more complex and specialized were the technology and organization [...]" (Ibid., 63).

This increasing social complexity and the possibility of social differentiation in the production and distribution of food surpluses may have facilitated the rise of social inequalities.

According to Harris, in Beardsworth and Keil's review of the birth of the food system, pristine states⁴ may have emerged as an intensification of what were incipient hierarchies around "big men" who had an incentive to control food stocks so as to consolidate and increase their power (Harris 1978, 70-71, cited in Beardsworth and Keil 1997, 28). Harris contends that as populations of these pre-states grow and become denser, the food redistribution systems also become more elaborate and move from voluntary to obligatory. The chief becomes a monarch, reversing the perceived dependence: while the chief needs the allegiance of his followers, the subject of a monarch depends on the latter's generosity. This greater power generates an elaborate hierarchy that is literally fed from the reserves controlled by the monarchy. Geographical conditions, such as the localisation of early states on limited fertile grounds, may then intensify this system while the mere existence of one pristine state may encourage the emergence of secondary states, scaling up the self-reinforcing cycle of intensification (Beardsworth and Keil 1997, 29).

4 Morton H. Fried (1978) defines a pristine state as one that arose *sui generis*, neither in response to other highly organised but separate political entities nor based on pre-existing models (in El Ouali 2012, 61).

Independently of how we interpret the birth of food production, by the time the first pristine states were established, all of the characteristics that can be considered fundamental to agricultural production were in place (based on Beardsworth and Keil 1997, 30):

- a wide range of domesticated animals and plants (and, as we have seen, possibly the domestication of humans themselves);
- use of the plough and of irrigation systems;
- discovery of natural fertilisers and the practice of fallowing (setting land aside to regain fertility); and
- the trading of relatively non-perishable surpluses.

These forms of agricultural production allowed for societies to evolve, ranging from a (relatively speaking) simpler, smaller village to the splendour and complexity of ancient civilisations. This evolution was to favour, for reasons we can mostly speculate about, the dominance of Eurasian peoples over the rest of the world. Diamond (1999, Chapter 5) contends that the domestication of plants and animals set the stage for the creation and confrontation between what he calls "history's haves and have-nots" (Ibid., 94). This rift between dominant and dominated can be argued to endure in the modern food system that came of age after the Second World War, being largely "developed, run and promoted worldwide by economic institutions in the rich and powerful nations" (Tansey and Worsley 2014, 2).

Inside the modern food system

As the limits set by available technologies and forms of social organisation were gradually overcome, what has been called the modern food system⁵ came into being. This second transformation of the methods of food procurement happened faster (over the course of

5 The use of the term *food system* rather than *food chain* or *food economy*, according to authors Geoff Tansey and Anthony Worsley (2014), hints at a recognition of the interconnection and interdependence of actors, activities, and processes involved in food production and distribution, at several levels: biological, economic/political and social/cultural.

several centuries as compared to millennia for the first change in food provision), shifting both the pace and the scale of the intensification of food production to ever higher levels. During this period, food production was industrialised (i.e. standardised and mass-produced), centralised in the hands of a minority of capital holders, and, finally, globalised—uncoupling agricultural production from its consumption (Fonte 2002, 15). This new intensification of food production overstepped the boundaries of ecosystem balance, in particular through the use of synthetic fertilisers and pesticides (IAASTD 2009, Global Report, 10), as well as the boundaries of nation-states. It can be also correlated with the parallel intensification not only of environmental degradation but of social inequalities: the hierarchies that were established and evolved with the initial food production system, as described by Diamond (1999), can be found again in its transformation to an industrial system, albeit with some new actors, among them the supranational economic organisations that were founded at Bretton Woods⁶ and, most prominently, the corporation⁷.

The story of the modern world food system begins in Europe, with Britain leading the way in transforming feudal economics into capitalist economics in the lead-up to the first industrial revolution. Raj Patel (2008, 77) claims that agricultural commerce reshaped the entire planet, making "eating and drinking [...] unimaginable without it". Tansey and Worsley (2014, 35) point out how the competitive quest for profitable food stuffs (especially spices) prompted the exploration of new navigation routes and the subsequent surprise discovery of new continents by the Portuguese and Spanish. Ironically, some of the novel foods, unknown to Europeans before the middle ages, namely tea and sugar, provided a slightly addictive combination that would help exploit factory workers as much as the slaves that produced these food stuffs for them (Patel 2008, 80).

According to Patel's account of the emergence of the modern food system, slave labour, and later cheap farm labour, was an essential part of the formula to provide cheap food to European cities, which in turn would "grease" the engines of industrialisation (Ibid., Chapter

6 At Bretton Woods, USA, the World Bank and the International Monetary Fund came into being, as well as plans for what was later called the World Trade Organisation.

7 In my thesis, the word "corporation" is reserved for the large, publicly traded, incorporated businesses that came into being 150 years ago and that have become the "world's dominant economic institution" (Bakan 2005, 5).

4). Other crucial ingredients were the displacement of farmers from Europe to the colonies, where they started producing export-focused "temperate" foods like meat and grains that fed back into the world market (Ibid., 81) and the redirection of peasants and landless farmers to the factories of Europe's rapid industrialisation. Whereas Europe's expanding bourgeoisie eagerly adopted the new-found culinary delights from across the oceans, the diet of the newly created working class was very poor, based mostly on wheat and potatoes, while the slaves and low-paid agricultural workers in the newly discovered continents became the chronically poor of the Global South (Ibid., 87).

Thus Britain led the first big iteration of the modern food system until after the Second World War (WWII), when this role shifted to the new superpower, the United States of America (USA). The USA, its lands un-invaded, was coping with food surpluses and found a way to keep food prices artificially low through subsidised food aid to Europe (Ibid., 90). When, in the 1950s, this became an impediment to Europe's recovering farmers, the food aid was re-targeted at the Global South. After the oil shocks of the 1970s, food aid became too expensive to ship and was gradually replaced by the export of yield-increasing farm technologies: the package of the so-called Green Revolution⁸. This shifted food production back to developing economies, but at a price: rising oil prices in the 1970s drove developing countries to ask for credit and, when recession struck, their debt spiralled. Post-WWII supranational institutions such as the World Bank and the International Monetary Fund had the clout to demand conditions for loans that other institutions would no longer give to debt-ridden countries. These conditions are known as "Structural Adjustment Programmes" (SAPs)⁹ and their effects are well-documented (see footnote): devalued currencies made home-made products cheaper for export and foreign-produced goods more expensive, while markets were forced open and local producers left without support, unlike the foreign corporations they competed with. In

8 The Food and Agricultural Organisation (FAO) describes this package as high-yielding varieties of cereals combined with a significant increase in the use of synthetic fertilisers and pesticides as well as irrigation, available: <http://www.fao.org/docrep/x0262e/x0262e06.htm> (accessed 20 September 2015).

9 The Whirled Bank Group describes SAPs as "[...] economic policies which countries must follow in order to qualify for new World Bank and International Monetary Fund (IMF) loans and help them make debt repayments on the older debts owed to commercial banks, governments and the World Bank. Although SAPs are designed for individual countries but have common guiding principles and features which include export-led growth; privatisation and liberalisation; and the efficiency of the free market", available: <http://www.whirledbank.org/development/sap.html> (accessed 21 September 2015).

the 1960s, countries of the Global South had yearly food trade surpluses of US\$ 7 billion. After four decades of "development" this has been transformed into a food deficit of US\$ 11 billion a year (Holt-Giménez and Peabody 2008, 2). Ironically, the same rich countries that now impose unconditional free trade on developing countries, such as the USA and Great Britain, attained their developed status mainly through protectionism, interventionism, a generous subsidy system, and a large public sector, prompting Chang (2002) to speak of how wealthy countries are "kicking away the ladder" of progress.

The rise of the modern food system represents a second agricultural revolution because it did not just continue but exponentially accelerated the tremendous impact of the activity of food production on physical as well as social ecosystems. The profound multi-dimensional implications and paradoxes of the social, economic, and political organisation that food production requires makes this a challenging topic of sociological interest where boundaries, as food system scholars Beardsworth and Keil (1997, 6) recommend, must be kept flexible. Reconnecting with the origins of sociology in political economy, my thesis will focus on the political, and in particular democratic, implications of the global food production model that has come to dominate.

Researching the food polity

Food and agricultural policies have long ceased to be the exclusive purview of nation-states and become a matter of international negotiation, to which agreements such as the UPOV convention¹⁰ to protect plant varieties in 1961, and the one that founded the World Trade Organisation (WTO)¹¹ in 1994 can attest. Although agriculture was a global affair as early as the First Industrial Revolution, when fast industrialising countries needed cheap food for their new labourers, the development of global food policies is a more recent phenomenon linked to the parallel rise of global trade negotiations and global environmental "governance". The

10 International Union for the Protection of New Varieties of Plants, available:

<http://www.upov.int/portal/index.html.en> (accessed 30 June 2012).

11 Among the agreements that underwrite the WTO is the controversial Agreement on Agriculture, which restricts the support a government may give to its local food producers. Available:

https://www.wto.org/english/docs_e/legal_e/14-ag_01_e.htm (accessed 16 August 2015).

policy sector of food and agriculture sits at the intersection of different administrative areas, touching among other things on trade, the environment, human rights, and social and economic development.

The idea of governance beyond state borders is a very recent concept that started gaining meaning when the institutions of Bretton Woods, and a year later the United Nations, came into being. Mark Bevir (2012) believes governance is still mostly the process of *governing*, but argues that nowadays in empirical terms it refers to “processes of rule wherever they occur”. New actors and a variety of organisational forms have not only extended governance beyond governments' purview, but also transformed it into a practice on its own, to which contemporary frameworks for "good governance"¹² can attest: offering guiding principles such as consensus-oriented public participation, strategic vision, accountability, transparency, responsiveness, effectiveness, efficiency, equitability, and inclusiveness. However, as I shall demonstrate over several chapters, despite the vibrant rhetoric on how everyone and anyone should and can be involved in the “governance” of common affairs, the actual “governing” is still exclusively reserved for local, national and supranational authorities. I will also show how many of these supranational authorities bear no relationship whatsoever with the constituents of the governments that have legitimised these institutions. Therefore, whenever I use the term *governance*, I refer to attempts at governing and/or an instrumentalist approach to decision-making, rather than a form of democracy.

In the 1970s, the idea of governance of the human environment became key for global decision-making. The publication of impacting reports such as *Silent Spring* by the biologist Rachel Carson in 1962, the Club of Rome report *Limits to Growth* in 1972¹³ and the Brundtland report *Our Common Future* in 1987¹⁴—the latter two perhaps not as far-reaching

12 See, for example:

John Graham, Bruce Amos, Timothy W. Plumptre, *Governance principles for protected areas in the 21st century* (2003).

UN governance guidelines, available:

<http://www.ohchr.org/en/Issues/Development/GoodGovernance/Pages/GoodGovernanceIndex.aspx> (accessed 20 June 2013).

13 Club of Rome, *The Limits to Growth*, available: <http://www.clubofrome.org/report/the-limits-to-growth/> (accessed 13 June 2016).

14 Report of the World Commission on Environment and Development: *Our Common Future*, 1987, available: <http://www.un-documents.net/wced-ocf.htm> (accessed 10 May 2013).

in their critique as the former—did much to bring to light the negative impacts of industrialisation on our social, ecological, and even economic environments. These reports laid the foundations for a global environmental decision-making style based on principles and mechanisms that at best avoid, and at minimum reduce the impact of human productive activities, while aiming to achieve levels of development that are socially equitable and ecologically sustainable. Among these principles are the Ecosystem Approach, the Precautionary Principle, the Principle of Free, Prior and Informed Consent (including the right for affected groups to participate in environmental decision-making) and the Subsidiarity Principle¹⁵. The nature of the problems faced in the second half of the 20th century, together with their urgency, interdisciplinarity, uncertainty, and irreversibility, also called for a democratisation of both discourse and decision-making (Martinez-Alier, Munda, and O'Neill 1998). These problems can often not be translated into probabilities because of unforeseen interactions, negative synergies, trans-generational effects, periods of latency, and causal opacities, at the same time as their effects can be long-term, potentially catastrophic, and irreversible (Jerónimo 2006). As such, “post-normal”¹⁶ and other critical thinkers claim decision-making in these areas requires broadening the publics that should have a say (Funtowicz and Strand 2007).

Despite the consecration of strong principles for decision-making in environmental and related matters, the "deep" sustainable turn was short-lived. As the imperative of trade moved up in the international agenda, the global equity aspect of sustainability that governments initially agreed on, was soon to be ignored by the richer countries while the discourse settled into what can be termed a "weak" version of sustainability: ecological limits to development should be respected, but can also be stretched, provided the right policies are chosen (Dryzek 2005, 147). Sustainability is now being claimed by governments and industries alike, even when their activities have profound negative social and environmental impacts (Patel 2009). The powerful principles from the global environmental governance treaties have been reinterpreted to avoid conflict with trade agreements, the mandatory "proof of no harm" that is

15 For a detailed definition of these principles for environmental governance, see Chapter 2, pages 69-70.

16 The concept of post-normal science was developed by Silvio Funtowicz and Jerome Ravetz as a methodology of inquiry that is appropriate for cases where "facts are uncertain, values in dispute, stakes high and decisions urgent" (Funtowicz and Ravetz, 1991, 138).

part of the Precautionary Principle quickly becoming "no proof of harm" (Traavik and Li Ching 2007). The EU version of the precautionary principle¹⁷ introduces a measure of proportionality that weakens precautionary action: it states that where uncertainty exists, the cost-benefit analysis should merely be extended (Funtowicz and Strand 2007). Global governance has also shifted from negotiations between sovereign states to protagonism of supranational institutions, such as the WTO and the World Bank, whose decision-makers were not democratically elected and are relatively shielded from public scrutiny, while sensitive to the wishes of the most powerful groups in the world (McAfee 1999).

This is how the promises of global environmental governance agreements to halt the degradation of the natural systems that humans and fellow species depend on, while improving the conditions of that half of humanity that still lives in miserable conditions, have come up short 40 years later. Nowhere can this be felt more strongly than in the food system, with the Food and Agriculture Organisation (FAO) reporting that the number of people going hungry has stopped decreasing since 2007 and is actually increasing in some regions (FAO, WFP, IFAD 2012), and the World Resources Institute (2005) warning that 75 percent of the world's poor are from rural populations. These are the populations that are the most dependent on the "physical and functional availability of natural resources", which, according to the groundbreaking IAASTD¹⁸ report, "has shrunk faster than at any other time in history due to increased demand and/or degradation at the global level" (Global Report 2009, 3). The same report (Ibid., 2) shows that despite the enormous growth in trade of agricultural inputs and outputs, most food (at least over half) is still consumed where it is produced and 90 percent of farms worldwide are small (under two hectares). The financial benefits of resource exploitation in agriculture, however, tend to accrue not to the farmers, but to the companies that sell the inputs for farming, and those that process and retail the food resulting from farming¹⁹. Agriculture as a sector, crucial as it is to human livelihoods, does not only suffer enormous challenges, many of them brought on by its industrialisation and dependence on

17 European Commission Communication on the Precautionary Principle, 2000, available: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52000DC0001&from=EN> (accessed 24 October 2016).

18 Report resulting from the International Assessment of Agricultural Knowledge, Science and Technology for Development conducted between 2005 and 2007. Available: <http://www.unep.org/dewa/Assessments/Ecosystems/IAASTD/tabid/105853/Defa> (accessed 18 June 2012).

fossil fuels (such as the fact that agriculture may account for over 30 percent of global greenhouse gas emissions—Ibid., 3), but also produces enormous inequities, with a minority of farms occupying the majority of arable land, a small number of large transnational companies dominating food grades and standards while favouring large-scale, monocultural farms, and with food increasingly flowing from poorer to richer countries (Ibid., 7). Because of the way food and agricultural activities are at the core not only of the social arrangements in our world, but also that of the very existence of humans, this is a sociological topic *par excellence* that is hotly debated since the physiocrats²⁰ of the eighteenth century, but perhaps never more so than now, as we seem to reach the apex of the capitalist economy's penetration of the world's food production.

The IAASTD report was a response to "the widespread realization that despite significant scientific and technological achievements in our ability to increase agricultural productivity, we have been less attentive to some of the unintended social and environmental consequences of our achievements" (IAASTD 2009, Synthesis Report, 3). It revealed the deep paradoxes of what is both the most important human activity, directly linked to the most basic needs, and the biggest and for some highly lucrative industry in the world. At a time when the "right to food"²¹ is fast becoming a recognised human right, the fact that many, if not most of those working in agriculture, are caught up in a "vicious circle of poor health, reduced working capacity, low productivity and short life expectancy" (IAASTD 2009, Global Report, 2) is not just baffling, but morally and democratically unacceptable.

19 A 2013 report by the consultancy KPMG shows the agro-chemical and food companies have the highest profit levels in the food production and distribution chain, whereas traders and retailers make their earnings through bulk sales. The same report shows that farmers' gross share of the total value-chain is about 22%, even though they are the largest interest group in the production chain. Available: <https://www.kpmg.com/US/eandI/IssuesAndInsights/ArticlesPublications/Documents/agricultural-food-value-chain-report.pdf> (accessed 28 September 2016).

A study for American Congress showed the average farm share in the USA fell from about 41% in 1950 to 15.5% in 2011. Schnepf, Randy. 2013. Farm-to-food price dynamics. Congressional Research Service Report for US Congress: <https://www.fas.org/sgp/crs/misc/R40621.pdf> (accessed 1 September 2015).

20 Physiocracy was developed in France and popular just prior to Adam Smith's publication of *The Wealth of Nations*. It is sometimes considered to be one of the first complete theories of economics.

21 FAO defines the right to food as a right that "is realized when every man, woman and child, alone or in community with others, has the physical and economic access at all times to adequate food or means for its procurement". Available: <http://www.fao.org/righttofood/right-to-food-home/en/> (accessed 25 October 2016).

Delving into the paradoxes and challenges of a major human activity, my thesis will explore the social, economic, and political organisation of the modern food system to reveal the factors that perpetuate the system's inequitable and unsustainable outcomes, focusing in particular on the type of democratic world view that motivates the main food actors, among them governments, supranational organisations, NGOs, social movements, and farmers themselves.

Methodological approach

To explore the democratic substance of the current political economy of food, i.e. the social, political, and economic dynamics that tie food actors and food agents²² together in the modern food system, I have chosen a classical sociological approach, reconnecting with some of the great sociological theories that aimed to explain centrally important social issues, in particular theories of political economy. However, despite my reunion with the early thinkers of the Industrial Revolution, from whom I inherit the practice of critical analysis, I also attempt to use the bridge provided by some contemporary scholars linking the early criticism of capitalism to the observations of globalised trade and food systems in the late twentieth and early twenty-first centuries. These more recent theories include new concepts—sustainability, public participation, governance, deliberation, ecology, and food sovereignty—some of which require "foraging" into different disciplines, if I may be forgiven the pun. As I hope to demonstrate in my research, some of these new concepts are in danger of being emptied of substantive meaning and therefore require grounding in older and well-discussed ones, such as freedom, equality, equity, and popular control. By exploring the new theories in light of the sociological tradition, I wish to provide a more solid democratic framework with which to assess global environmental policies, in particular global food policies.

In this dissertation I will re-conceptualise the food system first in political economic terms, and subsequently in "substantive" democratic terms. This means I will aim to identify the power relations and main conflicts of interest, and link my observations to several theoretical

²² I use the term actor for well-defined interest groups in food politics (e.g. NGOs, business associations, supranational organisations, governments,...), whereas I reserve the broader term agent for all the interest groups in the food system (e.g. women, peasants, children, companies, consumers,...).

traditions, most prominently critical sociology, but also research focusing on the newer constructs of global governance and public participation. This profound theoretical reflection will then be used to build a tentative model for *substantive* or *food* democracy, by which I understand a democracy that is grounded in the human activity of food and basic needs production, while being both socially and ecologically responsive to its *demos*. In the next step, this exploratory model of democratic attributes will guide a documentary analysis of the food system, combined with a critical discourse analysis of nine characteristic food actors. I am looking for indications of what I have called the "food polity"²³—i.e. a democratic commonwealth, common government, or citizen body of which the main purpose is the common organisation of agriculture and food. My approach, which moves from a theoretical reflection based on thinkers from multiple disciplines, to its synthesis in the form of a democratic model, and finally to its test against documentary and discourse data, can be considered to fall within the grounded theory approach. According to Strauss and Corbin (1994), in this methodology theory is either derived from the data or existing theories are improved in confrontation with the data. In grounded theory, the research and the development of theory are considered parts of the same process, an approach that I believe does justice to the sociological and ecological complexities of the modern food system. At the same time, the use of discourse analysis is appropriate considering that food “governing” can increasingly be understood as a discursive contest over the framing of policy issues and the construction of rules, norms, and actor identities (Fuchs 2005).

A discourse in this thesis is understood as a particular way of representing aspects of social life, including aspects that are desired or possible worlds (Fairclough 2001). A critical discourse analysis offers many levels of understanding: besides the deeper intentions of the discursant, his or her relationship with his or her primary audience can be revealed, and the way he or she interprets the social order. In this manner the ideological tensions and contradictions of narratives that apparently promote well-being and equity can be unmasked, while it is also possible to observe with what arguments the cultural hegemony of dominant interest groups is reproduced, and finally how the dominant discourses interact with counter-hegemonic narratives of social movements and activist groups. This three-dimensional

²³ I use polity as I would the word *politeia* from the Ancient Greek: the order of social and political relationships in a political community, where participants are always in some way dependent on one another.

approach is used by Josée Johnston (2008) in a food-related case that helped shape my methodology. My approach also takes cues from Erica Drummond (2012), who analysed two of the food actors that are part of my research, and who worked with the idea of themes in narratives, and from John Dryzek (2005), who made a well-known attempt to classify modern ecological discourses, with important clues as to how to distinguish between discourses that are very similar at first glance.

Despite the exploratory nature of my research, it has a defined focus and is guided by initial research questions that will be answered throughout the dissertation. My focus is on the political economic structure of the food system, a choice that is founded on the strong indications that the paradoxes and challenges in agriculture stem from the conflict between food as *need* and food as *business*. My thesis is that only through substantive (or "deep") democratic proposals for the organisation of a food system-based society can we achieve an organisational model that is responsive simultaneously to questions of social equity and of ecological balance. To evaluate how substantive these proposals are, I will use the concept of "democratic quality". In its most conventional understanding, democratic quality is "different degrees of democraticness" (O'Donnell 2004, 21). However, each different democratic school and democratic thinker has a different definition as to what constitutes a "quality" democracy. Based on the theories and thoughts of illustrious predecessors and colleagues, I will develop my own model for democratic quality, which I will call "ecological-democratic quality".

The main research questions were the following:

- What is the ecological-democratic quality—the degree to which decision-making is responsive both to its *demos* and to the environmental and social challenges of our time—of the social arrangements that currently shape the global food system?
- What is the ecological-democratic quality of the food policies that are defended by different food actors in the global food system?

The following supporting questions helped to delimit the field of study, which was nevertheless vast:

- Who are the main food actors and agents in the global food system?

- What are the main factors that mediate the relations of power in the modern food system?
- What is the relative importance of each of the main facets of the food system: social, political, economic, and ecological; and how do these interact in the political economy of food?
- What are the proposals for the democratic organisation of a food system-based society that is responsive to both social and ecological questions?
- What are the most promising democratic attributes for identifying substantive democratic proposals of (re)organisation of a food system-based society that is responsive to both social and ecological questions?

The chosen methodology took me on a predominantly analytical path based on what can be considered secondary data, with the necessary risks both former and latter pose to the quality of the research. This was balanced on the one hand by using high quality sources—according to peer opinions for each area—and on the other, by using multiple sources for important facts in every phase of the thesis. I was further assisted in the endeavour to build a coherent and well-founded argument by an array of creative, knowledgeable, and systematic democratic thinkers. The test of the evolving democratic theory against documentary and discourse data provided another important validation step. The thesis was always designed to be exploratory, conscious as I was of the vastness of this field of study and the fact that I had not greatly narrowed down my research focus. Additionally, my choice of framing my research within a critical political economic perspective precludes other frameworks from which the food system may be studied, such as those that Dryzek (2005) identified as Promethean (a belief in industrialism without limits), reformist (what he calls “environmental problem solving”, a belief in pragmatic adjustments or reforms to industrialism led mostly by experts and/or the market), or ecological modernisation (a more imaginative approach to having the best of both worlds, a fairer and cleaner world and continued economic growth). My social interpretation

of the available information on our food system and food politics²⁴ is based on the assumption that the balance of power in society rests in large part, although not exclusively, on the way assets (be it physical, social, or cultural capital) are distributed and controlled. I do not subscribe to material determinism, but I do believe in, and see indications of, ever present dynamics of class, more subtle in some countries than others, which maintain the majority of our world in poverty, while a minority holds the majority of the world's natural and monetary assets. This perspective predisposes me to democracy-inspired solutions to deal with the food system's social and ecological challenges.

This declaration of intentions hopefully provides a framework within which to understand the path my research has taken. I firmly believe my predispositions have not diminished the wealth of observations on our food system and food politics, including discussing the different world views I mentioned previously. I believe my research provides many insights for the study of democratic models and democratic quality in general, for the study of the sociological implications of what has been called a "commercial society" (Hont 2015) at the intermediate level, and finally, for the study of food politics and the success factors for improving its democratic quality in particular.

Structure of the thesis

I will present the development of my arguments in a progressive manner over five chapters (excluding the introduction and the conclusion). The first chapter sets the stage for a political economy of food, which I will show is a potential conditioning factor for the other dimensions of human society (in particular social, political, and ecological). I will show how issues of control of the food economy have created path-dependent supranational policies that affect access to food, and to the resources to produce food, in practically every corner of the world.

²⁴ I use the term *food politics* in a wider sense than Marion Nestle, the author of *Food Politics: How the Food Industry influences Nutrition and Health*, first published in 2002. Nestle wished to show how food choices are not only a matter of personal responsibility, but also of political position-taking, and how governments have conspired with food industrialists to ensure the primary objective of food production is profit generation, not health or food security. I go one step further by postulating a political economy of food, where farming and food are tied into a global paradigm of growth, accumulation, and the commodification of nature. In a political economy of food, the politics of food refer to the decision-making in food production and distribution in a particular context of power relations.

Like other important resource-based industries, food is subject to conflicts not only over ownership and distribution of resources, but also over values. When Tim Lang (1999, 218) speaks of a "titanic struggle between the forces of control and the pressure to democratize", he is purposefully placing food at the heart of the democratic process, a quasi-universal struggle to reassert collective rights of peoples, to invert top-down decision-making, and to place human rights over commercial interests.

The second chapter considers the impact that the political economy, in particular that of food production, has had on the democratic organisation of our societies, and will analyse proposals for closing what many consider to be both an ecological and a democratic gap in global environmental decision-making in general, and food decision-making in particular. I will review a rights-based perspective to realising more democracy in the modern food system as well as myriad democratic theories and practices, varying from proposals for extending the existing liberal democracies to approaches that require systemic changes to be applied to our social, economic, and political organisational forms. This chapter also connects with the more recent theories of co-management of ecological resources and the relative importance of what is called "public participation"—i.e. the involvement of citizens in decision-making on resources and other matters that affect them. Many of these theories have become depoliticised in what some critics consider to be an era of technocracy and extreme utilitarianism²⁵ that has shed more holistic conceptions of equity and solidarity. The proposals for a more democratic approach to decision-making in a globalised and technological world have invariably used neutral or even apolitical concepts such as "civil society", "governance", "ecosystem management" and "public participation" (Amelung and Baumgarten 2016) while in practice these proposals have amounted to little more than window-dressing in a political economy of food that is firmly controlled by an elite. I will attempt to re-politicise what I call

25 Technocracy is generally understood to be the rule or control of society by scientists, technicians, or engineers (Gunnell 1982), whereas utilitarianism is understood here as the philosophical principle of maximising the sum of individual well-being. Rayner (2003) speaks of an "age of assessment" and says that "in both the North and the South, science, rather than society shapes the agendas for science-in-society debates". Much of Brian Wynne's work revolves around uncovering the social basis for scientific knowledge and policy decision-making. He calls attention to the "unacknowledged political-economic dimensions of today's techno-sciences, including their epistemic implications" (Wynne 2007, 109)

the "good governance" theories by linking them with theories of substantive or "deep" democracy, and by reconceptualising some of the main terms used.

In the third chapter I will analyse theoretical and empirical proposals from several thinkers for strengthening the democratic quality of decision-making, in particular in environmental and food matters, and build an exploratory democratic framework with which to assess the quality of policy- and decision-making in the modern food system. This framework will serve as a reference for the documentary and discourse analyses that are presented in the second part of my thesis, consisting of two chapters preceded by an introduction that aims to sketch the context that may have shaped the data I collected. Whereas Chapter 4 presents a biography of the modern food system in the form of substantial statistical and testimonial data that illustrate the paradoxes and challenges of the modern food system, Chapter 5 analyses the discourses of nine different food actors in the food polity, among them supranational agencies, trade-oriented international interest groups, and social movements that defend the idea of food sovereignty²⁶. The indicators resulting from the documentary and discursive research are contextualised, organised according to themes, key assumptions, the social order implied, and the paradoxes and contradictions encountered. Ultimately, three types of food policies, each linked to a particular world view and specific democratic practices, are identified, described, and compared. Subjecting the policies I have identified to the test of democratic quality, I discuss the implications of each policy style for the achievement of their purported democratic goals and for the attainment of equity and healthy ecosystems in general.

26 La Via Campesina, the farmers movement that coined the term, defines food sovereignty as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems". Available: <https://viacampesina.org/en/index.php/main-issues-mainmenu-27/food-sovereignty-and-trade-mainmenu-38/262-declaration-of-nyj> (accessed 30 June 2015).

Part 1

Constructing a model for food democracy

I

The political economy of food

Ultimately, food is both a symptom and a symbol of how we organize ourselves and our societies. It is both a vignette and a microcosm of wider social realities. (Tim Lang, 1999)

A complete transformation of the agriculture and food system, it might be argued, requires a complete transformation of the society. Certainly, any attempt to create a more humane, just, and ecologically rational society will have to embrace the struggle for sustainable agriculture. (Editors' note in Frederick Buttel, Fred Magdoff and John Bellamy Foster 2000, 188)

In their book *From Political Economy to Economics*, Dimitris Milonakis and Ben Fine (2009) meticulously document the process by which economics was stripped from its roots in history and society, leading to its splitting off from the other social sciences at the turn of the twentieth century. Once, political economy was the only social science available, and humans' productive and other economic activities were analysed in light of historic events, as well as the social, political, and even psychological aspects of human cooperation. However, for more than a hundred years already, economics has been profoundly mathematised, formalised and reduced mostly to microeconomics (Ibid., 2), whereas political economy has become a neglected, often merely optional, discipline.

As a central human activity, food production has not escaped the aforementioned mathematisation, formalisation, and reduction. Despite its "recalcitrant" nature, as Jack Kloppenburg reminds us with a term borrowed from Marx, agriculture has been deeply penetrated by the dominant form of economic organisation, which is capitalism (2004, 10). Kloppenburg explains how, for capitalism to be successful, it must achieve primitive (or original) accumulation, by separating the worker from the means of production, and it must continue to extend "the commodity form to new spheres" (Ibid., 9). Looking at how capitalism transformed farming, he notes that what was once a mostly self-sufficient process has become dependent on external resources (new commodities) that need to be purchased year after year. These inputs have spawned entire industries, often collectively referred to as agribusiness. But as I wish to show in this chapter, the transformation of agriculture into a

Fordist¹-style industry was more profound and involved orienting production towards so-called "cash crops"² rather than food stuffs, since the former are more compatible with the existence of a profitable global food industry. Even that advance was not enough and the final frontier against which capitalism has more recently been pushing is that of the reproduction of life itself, transforming seeds and genes but also the knowledge related to them into "data commodities"³, as I will demonstrate when presenting the idea of *biocapitalism* further on.

In this chapter I will present the idea of an integrated world economy revolving in large part around food and related natural resources, supported by institutions and rules that model a hyper-capitalist world view, and mostly benefitting a minority while bypassing political scrutiny by the majority. The argument will be developed in four parts: first I will justify the need for an analysis of the political economy rather than the economics of food, in light of the undeniable contradictions between economic models and the reality of markets and their impact; then I will look at how trade overtook environmental (and food security) concerns in the 1990s, despite an apparent world consensus on the imperative of equitable sustainable development; next I will show how the world's political institutions adapted to this economy-led world order; and finally, I will sketch the modern political economy of food and comment on its implications.

Political economy versus economics of food

My choice of the term political economy to describe the global food system is deliberate. On the one hand, I am reminded by scholars such as Richard Swedberg (2000), Philippe Steiner (2011), Dimitris Milonakis with Ben Fine (2009), among other economic sociologists, that

-
- 1 We can read Antonio Gramsci's original definition of Fordism in Bonanno and Constance (2001, 1): "a new form of highly rationalized capitalism involving not only mass production and consumption, and vertical integration, but also a new culture and political arrangements". Bonanno (2004) further points out that under Fordism output is heavily standardised and costs are minimised, and that it was under Fordism that multinational capital became a final reality.
 - 2 A cash crop according to the Random House Dictionary is "any crop that is considered easily marketable, as wheat or cotton".
 - 3 The recent phenomenon called "Big Data", facilitated by the enormous growth in computing and storage capacities, and not in the least limited to web data mining but involving the *crunching* of genome sequences, is still very much under-discussed. For a comprehensive overview of the challenges, see Boyd and Crawford (2012).

sociology was born from economic theory, at a time when the latter was the closest thing to a social science existing (Milonakis and Fine 2009, 1). Additionally, the initial central theme of sociology that so enthused its founders was the nature of industrial capitalism, to which Karl Marx and Max Weber most famously responded and which concerned even Emile Durkheim. I wish to reconnect with these origins of sociology. On the other hand, agriculture and food are subject to the rules of an increasingly homogeneous and global political economy, and as such I believe it is unavoidable that I will need to understand the history, characteristics, and impact of the now-dominant free market ideology⁴ if I am to understand the relations of property and power that spring up around food production, and to ultimately analyse the democratic quality of food politics or the decision-making in food production and distribution.

Milonakis and Fine (2009, 4) demonstrate how neoclassical economics, the predominant economic school today, has removed all historical and social considerations from the study of economic relations, to the point of having "become totally intolerant of approaches other than its own mainstream". Additionally, its method has separated it even more from historical and social approaches, by adhering to strict positivism and the utilitarian rationality of its basic units (households and firms), dismissing all other methodologies and entire variables of social action (gender, social or cultural capital, education, etc.) as lacking in science and rigour. Milonakis and Fine advance that with the narrower method came a "loss of discussion of methodology itself" (Ibid., 5). Christian Arnsperger and Yanis Varoufakis (2006) start by offering logical proof of the three axioms that exclusively define neoclassical thinking and practice (methodological individualism, -instrumentalism and -equilibration), but subsequently present supporting evidence for their "practical irrelevance", since these axioms are impossible to prove. The authors suggest that despite this theoretical failure, the "hidden nature of its three foundational axioms" has helped to avoid pluralist debate and lent the neoclassical school its discursive power and epistemic hegemony (Ibid., 5). The authors argue that there is a feedback mechanism that preserves the status quo: the stronger the discursive power of neoclassicism, based on opaque propositions, the less likely it is that the

4 What is now called neoliberalism or free market ideology, is a version, albeit more extreme, of the *laissez-faire* doctrine of early economists. Polanyi (1944 | 2001) describes this as economic liberalism, where the market is believed to be self-regulated, and government interference kept at an absolute minimum. He identified three central tenets for nineteenth century economic liberalism: "(a) competitive labor market, automatic gold standard, and international free trade" (Ibid., 144).

practitioners will engage in methodological debates (Ibid., 16). Facing fewer questions or discussions, mainstream economics thus becomes a "religion with equations" (Ibid., 17).

The apparent long-standing consensus on Western economic theory and methodology, although pervasive, is far from unchallenged. The best-known critique comes from Karl Marx, who embedded economic analysis firmly in historical and social factors and logically proved—using the assumptions of his predecessors (most notably the concepts of freedom and rationality) against them—that the economic reality produced by capitalism was in fact contradictory, simultaneously producing dialectical opposites such as debt and surplus (see an overview of his reasoning in Varoufakis 2015). Marx turned the neoclassical claim that wealth is privately produced and quasi-illegitimately appropriated by the state through taxation, on its head by stating that the opposite applies: wealth is collectively produced and privately appropriated through a system of production relations and property rights (Ibid.). He was not alone in placing economics back into its sociopolitical context. All the classical works in sociology—Spencer, Durkheim, Marx, Simmel and Weber—touch upon the nature of industrial capitalism, employing either moderately positivist or explicitly non-positivist methodologies founded on an understanding of both history and social relations (Young 2009). All of these thinkers postulate a strong connection between the economic and the social order, although they vary in their interpretation of the relationship: whereas Marx (1911, 11) pioneers the belief that the "economic structure of society [is] the real foundation on which rise moral, legal and political superstructures and to which definite forms of social consciousness correspond", Weber (1920/2002) attributes a larger role to social groups in the choice and development of one or the other economic model, believing the drive to rationalisation as part of a new work ethic to be a more important factor in the rise of capitalism, while Durkheim (1933) follows Marx in lending importance to the economic foundation of a society, but differs with him as to the civilising potential of modern societies, believing that advanced societies can evolve as moral societies, which rather than pursuing individual economic interests, regulate themselves through a negotiation between the state and the professional organisations of workers.

The link between economic and social forms of organisation has also been analysed by researchers of food systems. In my introduction I presented several authors (e.g. Bender 1978;

Hayden 1990) who hypothesise that socio-economic factors, such as the desire to accumulate in order to have a better bargaining position, may have motivated the switch to a sedentary lifestyle based on food cultivation. These anthropologists also observe how this budding economic model of food production and exchange quickly led to the development of social hierarchy and more complex forms of social organisation. The biologist and essayist Diamond (1999) provocatively theorises about a causal chain that starts with biogeographical conditions influencing the choice of food procurement that in turn helps determine the form of social organisation. He bases this on the observation of how the peoples of areas where farming intensified—leading them to organise themselves in states—subsequently came to dominate others that were still hunting and gathering. Finally, the sociologists Beardsworth and Keil (1997) identify potential causal links between the concept of ownership that arose with the creation of surpluses and the emergence of a dominant class, and between a new concept of labour as a way to support debts and obligations owed to others and the emergence of the feudal system.

Karl Polanyi is relevant to my analysis as he has been an important inspiration for more contemporary critiques of industrial capitalism both by economists and sociologists and because his predictions are closer to our twenty-first century reality. Whilst Polanyi follows the Marxist premise that societies are built on economic relations, he questions the nineteenth century foundation given to economics: that humans act according to a rationally calculated self-interest (1944/2001, 257). As Joseph Stiglitz would famously prove later in the twentieth century, Polanyi states that markets never have perfect or complete information that would allow for purely mathematical decisions, thus calling for interventions that could ideally improve the efficiency of resource allocation. Unfortunately, these interventions have often been used selectively to benefit a minority, often large corporations (Stiglitz in the foreword to Polanyi 2001, viii). Polanyi denounces the arbitrary use of the free market ideology, often imposed on desirable markets with government and/or supra-governmental support, and often after the corporations wishing to conquer these markets have enjoyed a major head start through protectionism and subsidies. Another contemporary political economist, Ha-Joon Chang, dedicates an entire book to proving that the dominant developed countries employed interventionist economic policies coupled with a generous subsidy system and a large public

sector to get rich and that they subsequently tried to stop other countries from doing the same, an approach that inspired the title to his book: *Kicking Away the Ladder* (Chang 2002).

Fred Block, an economic sociologist and follower of Polanyi, reminds us how the latter unmasked the radical break that classical economists made with previous thinkers, in subordinating society to the logic of the market, instead of the other way around. Polanyi builds his reasoning on the concept of "embeddedness", where economy is "subordinated to politics, religion, and social relations" (Block in the introduction to Polanyi 2001, xxiv), which he insisted was the reality of human societies until the nineteenth century. Polanyi not only argues that the economy *should* be embedded in society and the natural environment, he claims that despite the best efforts of the defenders of self-regulating markets, economy *has not become* disembedded, but that the utopia of reducing all human activities to market dynamics poses an unacceptable risk to human beings and the natural environment (Ibid.). Just as Marx sees an inevitable end to capitalism because it is based on the exploitation of a working class that also needs to ensure consumption of the products it helps produce, Polanyi sees human societies as being pushed "to the edge of a precipice" and people resisting, therefore inhibiting the full realisation of the free market utopia (Ibid., xxv-xxvii). This is what Polanyi calls the "double movement", i.e. the laissez-faire movement versus a countermovement that attempts to re-embed the economy (which Polanyi claims may include capitalists themselves in times of great uncertainty and volatility) (Ibid., vviii).

Polanyi's ideas are more predictive of twenty-first century economic policies than Marx's. Polanyi doesn't see just one class—the working class—resisting the liberalisation of markets and the increasing privatisation of goods, but believes that at some point "all groups in society have participated in this project" (Ibid., xxviii). He sees the liberal project as filled with paradox, leading him to believe it was not the result of a natural evolution: not only were governments and the public sector instrumental in creating the conditions for liberalisation and privatisation, but at several points in history restrictions to the laissez-faire doctrine were often inspired by liberals themselves, possibly out of self-protection (Polanyi 2001, 147-148). After all, as also pointed out by O'Connor (1998, 159), the growth of a capitalist market tends to destroy the social and environmental conditions on which it ultimately depends. The double movement identified by Polanyi does not just oppose liberals and collectivists, but often, for

pragmatic purposes, liberals among themselves, including those in government. He famously states that "[w]hile laissez-faire economy was the product of deliberate State action, subsequent restrictions on laissez-faire started in a spontaneous way. Laissez-faire was planned; planning was not" (Polanyi 2001, 147).

Polanyi thought that social life could be freed from the chains of economic liberalism, and that nations would find democratic means to insulate their citizens and the environment from economic excesses, finding a balance between highly integrated international trade and the right to sovereignty of participating nations (Ibid., xxxvi). Although this has not happened, the double movement observed by Polanyi still holds, and global order has not been completely given over to what is now called neoliberalism. It faces new obstacles according to Block (Ibid.), such as the conflict of interest between peoples of the global South and those of the global North. And, as predicted by Polanyi's theory on the Market Society, and as I will discuss in the next sections, not only the economy but society itself has been profoundly altered to adjust to the ideology behind economic liberalism.

Sustainable *if* tradeable

Despite the important principles for sustainability⁵ adopted respectively in 1972 and 1992⁶, at successive international environmental summits, the destruction of both human livelihoods and their habitats has been unstoppable, facts that have been reasserted time and again by peer-reviewed United Nations reports (such as the Millennium Ecosystem Assessment 2005; the IAASTD assessment of agriculture 2009; UNCTAD assessment of agriculture 2013; and

5 These are among others the Ecosystem Approach, the Precautionary Principle, the Polluter Pays Principle, mandatory environmental assessments, the protection of States from the transference of harmful activities or substances from other States, the right to access to justice and information and the promotion of participation of all manner of stakeholders, with a special mention for the role of women, youth and indigenous people. These landmark principles and guidelines for institutional change were included in the UN's action plan for sustainable development, Agenda 21 (now merged into the Sustainable Development Goals 2030), available: <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf> (accessed 9 November 2016).

6 United Nations Declaration on the Human Environment, 1972, available: <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503> (accessed 11 May 2012).

United Nations Declaration on Environment and Development, 1992, available: <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm> (accessed 8 May 2012).

IPCC assessments of climate change, 1990 to 2014⁷). A fact that has been less publicised is how, at the same time as the concept of sustainability⁸ was finally operationalised (a long process that stretches from the first environmental summit in 1972 until the creation of Agenda 21—see note 5—in the period between 1989 and 1992), what I call “trade caveats” (Horstink 2013) started appearing in international environmental agreements, starting with the Rio 1992 agreement itself⁹. The neoliberal¹⁰ camp in economic policy-making triumphed in 1995, after the Uruguay Round of trade negotiations culminated in the creation of the World Trade Organisation (WTO), putting down binding agreements for the majority of countries in the world to abide by, within an illuminist, neoclassical conception of sovereign states that voluntarily limit their sovereignty by deferring to supranational¹¹ institutions, recognising that free trade (i.e. the lowering of trade barriers and the opening of national markets to foreign competitors) is in their best interest and that the balance of world power is maintained through international law and/or mutual self-interest (VanGrasstek | WTO 2013, 3-4).

The WTO, according to Bonanno (2004, 42) has become "perhaps the most important economic regulatory agency at the global level", all the while, as has happened with most supranational organisations, having "virtually no connections with the citizens of member countries". Countries from the Global South complain that they have little or no voice in the WTO decision-making system, and consider it the "most non-transparent of international organisations"¹². Among the 60 agreements that the WTO has been mandated to oversee are areas of trade that until its constitution had been exempted, such as agriculture and textile, and

7 History of IPCC reports, available:

http://www.ipcc.ch/organization/organization_history.shtml (accessed 26 January 2016).

8 The 1987 so-called Brundtland report “Our Common Future” defines sustainable development as one that “meets the needs of the present without compromising the ability of future generations to meet their own needs.” Report available: <http://www.un-documents.net/ocf-ov.htm> (accessed 20 January 2016).

9 We can read in Principle 12 of the Rio Declaration: “Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.” Available:

<http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm> (accessed 20 January 2016).

10 Defined by David Harvey (2005, 2) as “a theory of political economic practices that proposes human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade”.

11 Supranational institutions should be distinguished from intergovernmental ones, the former gaining the capacity for decision-making independently of the governments that helped form the institution (see Sweet and Sandholtz 1997).

12 Statement of the Third World Network at the WTO Symposia on Trade and Environment and Trade and Development, Geneva 15-18 March 1999, available:

<http://www.twn.my/title/legit-cn.htm> (accessed 20 January 2016).

new areas that were becoming more important for trade such as trade-related services and intellectual property. The much disputed Agreement on Agriculture¹³, the main reason the Uruguay round was deadlocked for so long, was designed to end agricultural protectionism and trade-distorting subsidies for farmers and exporters, but has had, twenty years later, little effect on the agricultural protectionism of countries from the Global North while endangering the food security of those of the Global South (see Harriet Friedmann's 2005 overview of the consequences of first the British-led and subsequently the USA-led *food regimes*). Further trade liberalisation has so far been deadlocked in the Doha Development Round of negotiation of the WTO, because of strong protest from the Global South and from farmer-, environmentalist-, and anti-globalist movements since the late 1990s. Friedmann (Ibid.) shows how large agribusiness corporations, which have grown exponentially after World War II, lobby for more rights, such as the protection of their investments and intellectual property rights, while countries from the South and the new socio-environmental movements protest the decline in food safety, the continued agricultural protectionism of countries in the North (often subsidising environmentally damaging inputs and activities), the use of proprietary genetic technologies, and the related protection of property rights on living entities. To compensate for the lack of progress in a global agreement on trade liberalisation to replace or strengthen the WTO, the USA has focused on celebrating bilateral and regional free trade agreements (FTAs) worldwide (important ones are the North American Free Trade Agreement and the Central American Free Trade Agreement). One of the FTAs under negotiation involves 30% of global merchandise trade and 40% of world trade in services,¹⁴ if or when the European Union agrees to sign a Transatlantic Trade and Investment Partnership (TTIP) with the USA. As a supranational organisation with a mandate that partially supersedes the sovereignty of its member states (on the European Commission's site we can read that "Trade policy is an exclusive power of the EU – so only the EU, and not individual member states, can legislate on trade matters and conclude international trade agreements"¹⁵), the European

13 Agreement on Agriculture from the World Trade Organisation, available: http://www.wto.org/english/docs_e/legal_e/14-ag_01_e.htm (accessed 10 May 2012).

14 Self-reported figures from the US Department of Commerce and IMF, available: http://www.euintheus.org/wp-content/uploads/2013/07/TTIP_Publicatiopn_85x11in_High_res.pdf (accessed 21 January 2016).

15 European Commission's webpage on Trade Policy, available: <http://ec.europa.eu/trade/policy/policy-making/> (accessed 21 January 2016).

Union, through the European Commission and the Council of Ministers, can push through an agreement even if it is not supported by European citizens.

Free trade agreements almost inevitably spell disaster for the environment and the financially insecure, as Ashish Kothari (2009, 402-403) points out in his overview of the impact of the neoliberal model of “development” on India: India has experienced “exclusive” and what is called “jobless” rather than “inclusive” growth, leaving many behind in dire poverty and hunger, while the practice of clearing forest-land for mining accelerated exponentially after India joined the WTO, and while, under pressure from the World Bank, India rolled back environmental protection measures, going so far as to create Special Economic Zones where companies are unregulated. Joan Martinez-Alier (2002, 11), in his preparatory paper for his book *The Environmentalism of the Poor*, mentions just one of the many distorting effects of NAFTA on the Mexican economy, in the form of biopiracy: a North-American company managed to patent a Mexican bean variety, even though it was genetically identical to traditional bean varieties planted in Mexico, and subsequently started suing Mexican exporters of the traditional beans, while heavily subsidised North-American produce was flooding the Mexican market.

Steven Bernstein (2004, 157-158) has called the simultaneous development of environmental protection measures and neoliberal trade rules since 1992 the "compromise of liberal environmentalism", claiming that this has "premised environmental governance on embedding the environment in liberal markets". According to Bernstein, some of the immediate effects of the primacy of economic integration over political integration were the promotion of market solutions for environmental problems and the privatisation of natural resources legitimised through the concept of “natural capital”. The aforementioned Principle 12 of the Rio Declaration states specifically that "States should cooperate to promote a supportive and *open* international economic system [...]" (emphasis added), where *open* can be read as *free* (trade). Bernstein points out that the Rio Principle 12 served as a legitimisation of global trade agreements, starting with the WTO in 1995. Successive major environmental summits, namely Rio+10 in Johannesburg in 2002 and Rio+20 in Rio de Janeiro in 2012, maintained the paradox of continued growth and liberalisation in trade with simultaneous promises of protection of the environment and a more just redistribution of costs and benefits

of human activities. Rio+10 ushered in the era of *public-private partnerships*, strengthening the idea that environmental management can and should be lucrative and further diminishing the alternative of multilateral cooperation among states. Chris Sneddon and colleagues (2006, 258) define the “Rio compromise” as a move away from “statist and strong managerial approaches”, which resulted in governments accepting as perfectly normal the fact that transnational corporations should attend environmental summits, which they started doing in 2002. Kathleen McAfee (1999, 133) has coined a stronger term to describe what she—and other scholars, among them John Dryzek (1997/2005)—see as a new global discourse: “a post-neoliberal environmental-economic paradigm”, that includes Nature as part of the world's currencies and dismisses pollution or any externalities as trade-offs. Calling this discourse “green developmentalism”, McAfee warns of how it has legitimised the idea of Nature and its resources as private property, opening the way for exiling the poor and the indigenous from their lands and livelihoods in the name of progress.

The “privatization of environmental governance” as documented by Bernstein (2004, 159) has not gone unopposed, and in Chapter 2 I will show how what I have called the “sustainable if tradeable” premise and its consequences for environmental justice have helped spawn strong anti-globalisation and alter-globalisation movements, with one of the biggest of these rallying around the idea of an alternative, peasant-based food system: La Via Campesina with approximately 200 million farmer-members.

A path-dependent global political economy

Having established that the economy was never truly disembedded from society's social and political organisation, I turn now to how the economic sphere nevertheless managed to become relatively insulated from democratic politics (i.e. politics where people are either invited to participate in decision-making and/or at minimum are represented in decision-making by people they elected). The first place to look is at the process of institutionalisation of the global political economy, because in essence this is how a political economy sustains itself over time and acquires legitimacy.

Polanyi exposes the myth of a free, self-regulating market system in his book (a myth that no respectable economist will today maintain), and shows how governments took an active role to ensure that the economy would be directed by market prices. The steps taken were multiple and incremental, making it hard or impossible today to roll back everything that was achieved. In England and France, land was made a tradeable good, with its ownership protected through legislative reform in the early nineteenth century, and the trade of surplus agricultural products was allowed first regionally, then nationally, and finally worldwide (Polanyi 1944/2001, 189-190). Similarly, labour became a tradeable good through the existence of surplus labour, a consequence of the rural exodus but also of the shifting of the means of production from artisans to corporations. These changes laid the foundation for a market-style economy. But in Polanyi's view the most effective institution in the period between 1815 and the Great War was that of international finance, which kept a world economy functioning long after tensions due to market excesses appeared (Ibid., 16 and 215). When the world economy eventually imploded, Polanyi reports, so did the 100 years of peace (Ibid., 228).

Similarly, today, without the economic institutions that have sprung up to promote the globalisation of trade after the Second World War, the expansion of capitalism would not have been made possible or so far-reaching. These institutions are quite similar in function to those that Polanyi isolates as responsible for "disembedding" the economy from the political sphere prior to the Great Depression—such as the Gold Standard, which according to Polanyi (2001, 142) ultimately collapsed because it exacted too much flexibility from countries and peoples whenever times were tougher, and the Poor Laws in England, which placed a large part of the burden of capitalist unemployment on the public sector. Contrary to Polanyi's prediction, the power of international institutions created to facilitate world trade has not been counterbalanced by a stronger sovereignty of the member-countries. The institutions born from the 1944 Bretton-Woods meeting to stimulate worldwide trade have profoundly altered not only trade relations, but also the very balance of power between the trade "champions" and the countries that simultaneously provide them with resources *and* purchase the goods made with those resources. They have facilitated a scaling up of economics from the traditional units of people, households, and companies to units of corporations and countries

(with some corporations enjoying revenues that allow them to compete directly with middle-sized countries¹⁶) that compete among themselves, compelling the sociologist Leslie Sklair to speak of a "transnational capitalist class, composed of corporate executives, globalizing bureaucrats and politicians, globalizing professionals and consumerist elites" (Sklair 2001, 4). In his view, this global class exists "in order to ensure the conditions for the continued accumulation of capital and its legally guaranteed conversion into private wealth" (Ibid., 206). Sklair's argument is innovative since it extends the concept of class beyond the nation-state, where it was traditionally located by sociologists.

In his book, Sklair (2001) builds a careful argument around how global economic integration has resulted in and is further promoted by a new social class that supersedes national governments and traditional social classes. The continued accumulation of capital and its private appropriation require a global capitalist system, which in turn relies on the economic institution of the transnational corporation, the political institution of a transnational capitalist class (TCC), and the cultural institution of consumerism (Ibid., 206). By using the cultural institutions available in each country and often shared between countries, the TCC promotes the culture-ideology of consumerism, persuading people that "the business of society is business" (Ibid., 26). By appearing as a hegemony, at the same time marginalising trade unions and radical oppositions by reframing them as sectional interests, business groups convince people that their purpose is natural and universal. Any opposition is disarmed by the actions of what Sklair calls the "sustainable development historical bloc", a new version of Antonio Gramsci's concept of "new historical blocs", where dominant classes absorb their enemies to control the way problems are solved. According to Sklair (Ibid., 207), the "sustainable development historical bloc", organised by the TCC, has co-opted the concept of sustainable development and is engaging with environmentalist elites and "green" consumers to win public argument over to the idea of "manageable environmental problems" as opposed to a "singular ecological crisis".

16 The magazine Foreign Policy has been monitoring the size of the largest transnational companies, concluding for example that Apple has more cash on hand than "the GDPs of two-thirds of the world's countries". Their 2016 survey is available: <http://foreignpolicy.com/2016/03/15/these-25-companies-are-more-powerful-than-many-countries-multinational-corporate-wealth-power/> (accessed 9 November 2016).

Alec Stone Sweet and Wayne Sandholtz (1997) provide additional proof for a globally organised dominant group when they set out to show how, in a world that is economically increasingly integrated, supranational governance (i.e. “governing”) becomes the organising form of choice. Picking up Polanyi's contention that trade in a common market has been a way to avoid war since the end of the eighteenth century/beginning of nineteenth century, they attempt to show how the increase in transnational exchange creates an incentive for the expansion of supranational governance (Ibid., 298). Basing themselves on Ernst Haas's theory of neofunctionalism¹⁷, they claim that the evolution from national to intergovernmental and finally to supranational rule-making is, in their view, a gradual process where the actors that benefit from European rather than national rules, create a push for supranational rules, and EC (now EU) institutions respond by widening the scope of common rules, in the interest of transnational gains and of the spirit of the Treaties that underwrite the European community (Ibid., 306). The result is a path-dependent¹⁸ trajectory of continuing political integration to match the existing economic integration in any given domain, that the authors describe as a "self-sustaining dynamic, that leads to the gradual deepening of integration in that sector and, not uncommonly, to spillovers in other sectors" (Ibid., 299). This dynamic becomes very difficult, if not impossible, to reverse. New supranational institutions (i.e. the European Commission, the European Court of Justice) take over roles previously held nationally, by their rules facilitating not only cross-border transactions but also cross-border communications, which in turn create new, higher-level transactions. Having identified a continuum along which decision-making moves from the national to supranational level, the

17 Schmitter (2002) describes it as "a theory of regional integration that places major emphasis on the role of non-state actors—especially, the “secretariat” of the regional organization involved and those interest associations and social movements that form at the level of the region—in providing the dynamic for further integration."

18 I will follow the definition of path dependence offered by the sociologist James Mahoney (2000, 507): "[...] path dependence characterizes specifically those historical sequences in which contingent events set into motion institutional patterns or event chains that have deterministic properties." Although he recognises the attribution of path dependence is a "theory-laden process", he believes "criteria exist for determining whether an event is contingent" (Ibid., 508). Path dependence can arise either from self-reinforcing or from reactive (i.e. posterior events are in part a reaction to antecedent events) sequences of events. One characteristic of path dependence that helps to explain the concept is its inertia, about which Mahoney says (Ibid., 511): "[...] once processes are set into motion and begin tracking a particular outcome, these processes tend to stay in motion and continue to track this outcome." Self-reinforcing sequences can continue in the absence of the initial conditions that created a particular institution, and can be so effective as to "lock-in" a particular institutional pattern (Ibid., 515). And finally, path dependence can be alternatively explained using utilitarian, functional, power, or legitimation arguments.

authors (Ibid., 312) then claim there is "a high degree of 'stickiness' in movement along the continuum". All actors, whether governments, enterprises, non-state organisations, or the supranational institutions, adapt their behaviour and expectations to the new rules. Jürgen Habermas has also written extensively about the pitfalls of European integration and warned early on that "[...] the democratic processes that have gone hand in hand with the nation state lag hopelessly behind the supranational form taken by economic integration" (Habermas, 1992, 1).

The idea of institutional self-reproduction or "stickiness" can easily be applied to the supranational organisations that supervise and mediate world trade, among them the WTO, the International Monetary Fund (IMF) and the World Bank, and to the bilateral and multilateral treaties that legitimise their existence and actions. If I apply Sweet's and Sandholtz's reasoning and Mahoney's definition of power-based institutional reproduction, I would expect these global institutions to defend and increase their autonomy, and to promote the interests of a transnational group (class, if we take Sklair's view), favouring transnational governance over intergovernmental decision-making. Similarly, I would also expect these supranational organisations to start producing their own rules, independent of governments. There are indications that this is happening. Just as the European Union has become more than the sum of its member-states and can make a number of autonomous decisions, the global capitalist system has taken precedence over national economies and created a path-dependent dynamic towards further economic integration, supported by supranational supervision. Institutions such as the World Bank, WTO and the IMF have developed their own governance systems that are good examples of Polanyi's double movement in the way they simultaneously support trade *and* environmental solutions, to paradoxical results: Bernstein (2004, 162) shows how the WTO hesitates on issues such as environmental labelling and certification, because environmental measures require discrimination whereas trade norms prescribe the exact opposite.

Voss and Kemp (2005, 12), when applying the idea of path dependence (which they equate to historic determinism¹⁹) to socio-ecological transformations, argue that in a situation of

19 Mahoney (2000, 535) links path dependence and determinism in the following manner: "[...] path dependence occurs when a contingent historical event triggers a subsequent sequence that follows a relatively deterministic pattern".

continuous development such as the one we live in today, "(p)ositive feedback may occur between specific developments in technology (e.g. central electricity stations and transmission networks), corporate organisation (e.g. large-scale vertically integrated utilities), regulation (e.g. monopoly provision), consumption routines (e.g. unsuspecting commodity) and ecological factors (e.g. domestic coal reserves, invisibility of emissions)", creating a stable, often self-organising system structure. They contend that the deeper the economic integration, both horizontally and vertically, the harder it will be to roll back certain technologies or institutions, and the less control any individual agent will have.

The profound economic integration that has occurred worldwide, and the related and parallel shift in governance from the regional and national purview to a supranational / transnational scope, has had equally profound implications for the functioning of the liberal democracies that are themselves relatively new phenomena²⁰. Bonanno (2004, 38) speaks of a "crisis of legitimation in which the state is called to justify actions that it cannot fully control and regulate". He demonstrates how transnational institutions, shielded as they are from the public, have little incentive to legitimate, and depend for their functioning almost exclusively on elite bureaucracies (Ibid., 42). As I will demonstrate in the next chapter, the world's liberal democracies and the traditional labour movements are not prepared to be the counterbalance of power that is needed to halt the excesses of economic integration, and so this role has been taken up by lone critical scholars, retired bureaucrats, and increasingly global and multi-issue social movements. But first I will bring the arguments presented so far to bear on the modern food system and modern food politics.

20 Liberal democracies originated in the eighteenth century, inspired by Enlightenment thinkers (who believed in rights and freedoms as foundations of democracy) and the American and French Revolutions. The liberal form of democracy, with free and fair elections, separation of powers, and universal suffrage, spread rapidly to Western Europe after the Second World War, and to the rest of the world after the decolonisation, in some cases after an intermezzo of dictatorship.

Sketching a political economy of food

The social psychologist Tim Lang popularised the term “food democracy” in the late 1990s²¹, as an umbrella concept for highly diversely inspired attempts at making food systems more accountable to societies. He observed a shift in power from farmers to the industry that supplies the input for Green Revolution²²-style farming, and from those that process food to those that trade and retail it (Lang 1999, 217). In the process, he claims, intermediaries have become more powerful than those they mediate between, belying the myth of the consumer that has the last word. The changing nature of supply, in Lang's view, has altered the very nature of food. Because of the scale and depth of impact of a changing food economy—on public health, the environment, and social justice—Lang (Ibid., 218) considers food "a vignette and a microcosm of wider social realities", a symbol of competing interests: individual versus collective and private versus public. Against the control exerted on the food system for the private benefit of an ever smaller group of ever larger businesses, or by governments according to capricious food policies, and due to the resulting rise of mass inequity in all aspects of the food system, Lang (Ibid.) therefore proposes food democracy as a counter-pressure to democratise, to "demand for greater access and collective benefit from the food system".

Lang is not alone among scholars in placing food at the centre of the myriad paradoxes produced by a capitalist paradigm. In the second half of the nineteenth century, Karl Marx already spoke of a "metabolic rift" in relation to food production: a condition when production and consumption of food become separated and people are no longer in charge of food production, therefore losing their connection to the land. The sociologist John Bellamy Foster (1999) points out that Marx's use of the term metabolism (which he picked up from the German chemist Liebig) is related to his view of labour as a process between Man and Nature,

21 Frances Moore Lappé (1971) was probably the first to speak of food democracy in her important work on the true causes of hunger. She has stressed in her work and writings that hunger is caused not by a scarcity of food but a scarcity of democracy.

22 FAO describes how the Green Revolution spread from US experiments in Mexico and the Philippines to Europe, South Asia, and South America in the 1960s. The secret of its initial success in increasing yields in cash crops was a combination of hybrid (i.e. not freely reproducible) plant varieties, intensive irrigation, and the use of agrochemicals. However, currently FAO also recognises how the Green Revolution is responsible for the degradation of soil, systemic pollution due to chemical use, the build-up of resistance in pests and weeds, and the reduction in agrobiodiversity.

where Man acts upon Nature to satisfy his needs and in this confrontation changes not just Nature but Himself, in what Marx calls a "metabolic interaction" (Foster 1999, 380). When Marx was writing *Capital: Critique of Political Economy*, agriculture was going through what some historians consider the second phase of its industrialisation process: the discovery of soil chemistry and the growing use of fertilisers to prolong soil life. These discoveries had not yet alleviated a sense of crisis related to the near-depletion of the natural fertility of the soil that was experienced in the industrialised countries. According to Foster (Ibid., 379), Marx's theory of the metabolic rift can be firmly linked to his critique of capitalist exploitation. Marx extends his idea of "robbery" of labour to robbery of the soil, and believes this will compromise the very means of reproduction of wealth (both soil and the worker). The rift appears when industry and trade pressure rural people to migrate, filling the cities with the labour needed for factories, while exporting the products of the land far away from that same land, breaking the cycle that returns nutrients to the soil. Marx explains this best when he discusses "large-scale industry and agriculture" in volume 1 of *Capital*:

Capitalist production collects the population together in great centres, and causes the urban population to achieve an ever-growing preponderance. This has two results. On the one hand it concentrates the historical motive force of society; on the other hand, it disturbs the metabolic interaction between man and the earth, i.e. it prevents the return to the soil of its constituent elements consumed by man in the form of food and clothing; hence it hinders the operation of the eternal natural condition for the lasting fertility of the soil...
[...] (Marx, 1867/1976, 637-638)

Marx picks up this thread again when he imagines a future society of associated producers, warning that they must "[...] govern the human metabolism with nature in a rational way, bringing it under their own collective control rather than being dominated by it as a blind power; accomplishing it with the least expenditure of energy and in conditions most worthy and appropriate for their human nature" (1863-65/1981, 959).

Foster (1999, 401) notices a gap in ecological thinking in sociology after Marx and his classical sociology contemporaries such as Weber and Durkheim, who both touched upon the social and environmental implications of Western civilisation. The relation between human social development—in particular the capitalist model of development—and its environment, reassumes importance in the 1980s and 1990s, decades in which I have already identified the

simultaneous emergence of global environmental governance attempts and global trade hegemony. It is in this period of new paradoxes that James O'Connor (1998) infuses Marxist orthodoxy with the growing ecological awareness of his time, suggesting that capitalism's disregard for the limits to growth presented by the physical environment constitutes its second contradiction. Just as capitalism depends on the consumption of its goods by the workers whose wages it needs simultaneously to keep low, it also depends on the (cheap) natural resource base and the physical environment for its continued growth, the sustainability of which it is simultaneously seriously undermining. O'Connor contends that, now more than ever, Marx's teachings are useful to comprehend the negative consequences of capitalism. There is more than ever a "war of capital on labor", because the capitalist class needs those that provide them with labour to do so on their terms, and has found a way through globalisation with extreme concentration and centralisation of capital and a global division of labour, to weaken the hard-earned labour and living standards rights (O'Connor 1998, 1). There are also indications of a new class struggle in the form of international protests against supranational organisations such as the World Bank, the WTO, the IMF, against the free trade agreements that legitimate them, and the transnational corporations that influence them (Ibid., 2). These protests have united two or more distinct social classes, that of a critical, mostly Western-bred, middle class, and what I observe to be a new global class of "untouchables", mostly indigenous tribes and peasants resisting the expulsion from their lands and resources, but also the poorest of the poor and most vulnerable of all: rural migrant workers (on the latter, see for example the report of the International Labour Organisation 2012).

O'Connor attempts to stretch Marx's latent ecological consciousness, developing the latter's idea of labour as a mediator between humans and natural history, which in the process changes not only Nature but "Man" and the history of Mankind. The creation of surplus value through the exploitation not just of labour, but of Nature itself, ultimately impairs the reproduction of production conditions (both social and environmental), creating "not only threats to profits and accumulation, but also to the viability of the social and natural environment *as means of life and life itself*" (Ibid., 11, emphasis in original). O'Connor imagines that ultimately the new struggle arising from the second contradiction of capitalism could lead to a form of ecological socialism. If I fuse the thoughts of O'Connor with those of

Sklair for the sake of argument, then the new class struggle could be construed as one between the transnational capitalist class and those that are impacted by their actions but have been mostly excluded from the decision-making processes. Which classes are impacted varies from region to region, but the history of the environmental justice movements teaches us that what Martinez-Alier (1995) calls “ecological distribution conflicts” are more likely to affect groups that are poor, discriminated against or otherwise marginalised and vulnerable. Environmental justice as a strategy to resist the unfair and inequitable distribution of environmental costs emerged in the 1980s in the USA, where “people of color” were disproportionately impacted by the dumping of toxic waste (Martinez-Alier et al. 2016). Martinez-Alier et al. point out how ecological distribution conflicts “sometimes overlap with other social conflicts related to class, ethnicity or indigenous identity, gender or caste” (Ibid., 731-732).

Fred Magdoff, John Bellamy Foster and Frederick Buttel, editors of *Hungry for Profit*²³ (2000, 7), place agriculture not only at the origin of capitalism—pointing to how industrialisation in England was in part facilitated by the surpluses from agriculture while the new patterns of landholding (namely the privatisation of communal property and resulting dispossession and exodus of peasants) created a market dependency in agriculture—but also alongside its development: “the rise of industry in no way left agriculture behind but was mirrored (indeed in some cases prefigured) at each stage by changes in the latter”. In their overview, the editors state that economic concentration has occurred as much or more so in agriculture than in any other lucrative industry. Additionally, they say, its reinforcement by technological innovations has resulted in the loss of farmers' control over their own labour process—leading to what they call the “proletarianization of the farmer” (Ibid., 8), because of the way corporations now own and control both input and output of agriculture, including the ownership of the natural means of food production (plants and animals). The hitherto unparalleled scope of corporate ownership that we are seeing in the twenty-first century has been promoted and protected by policies of economic liberalisation and the deregulation of agriculture, dictated by the wealthiest countries from the Global North. Farmers, especially smaller-scale farmers, are “on a treadmill”, their hand forced by the simultaneous “downward pressure on prices they receive

23 Complete title: *Hungry for profit: The agribusiness threat to farmers, food, and the environment.*

[...] and/or the upward pressure on inputs needed for production [...]" (Ibid., 12). Even though medium-sized family farms are found to be just as or even more efficient than their industrial-size counterparts, the latter obtain advantages through bulk selling and buying, as well as financial or fiscal benefits. Larger farms also reel in a disproportionate amount of government support payments (Ibid., 14). As a result, the number of farms has shrunk considerably in the past century (in the USA the reduction was almost two-thirds) (Ibid., 13). Any alternative sought by farmers to break the chains of corporate control has resulted in inevitable pressure from agribusiness as soon as the alternative scales up, such as has happened in the organic food sector, which is becoming increasingly industrialised (Ibid., 18). Magdoff et al. claim that any alternative to the current, mostly unhealthy and unfair food system must bring people closer to agricultural land so that the nutrient cycles can be healed; break the power-hold of corporations over food production, processing and sales; and finally, ensure a plentiful and healthy food supply for all. Although they find encouragement in the myriad alternative food movements (e.g. organic farming, agroecology, fair trade), they remind us of the most important reform that needs to be taken on: that of correcting the error of commodification of agriculture and Nature, what they call "the moral of the tale", which they offer in Marx's words:

The moral of history [...] is that the capitalist system runs counter to rational agriculture, or that a rational agriculture is incompatible with the capitalist system (even if the latter promotes technical improvements in agriculture) and needs either the hand of the small farmer living by his own labour or the control of associated producers. (Marx 1894²⁴, in Magdoff et al. 2000, 21)

The rural sociologist Alessandro Bonanno, when studying the contradictions of the capitalist growth and profit-seeking paradigm, believes the agro-food sector is the methodological example of choice:

While it retains significant regional and local components, a number of agricultural and food products are either globalized commodities and/or are controlled by corporations that are global. This situation enables the agro-food sector to be used as the basis of making generalizations for society at large. (Bonanno 2004, 37)

24 Marx, Capital, Vol III, chapter 6, section 2, edited and completed by Friedrich Engels, first published 1894, this online version transcribed and published 1999. Available: <https://www.marxists.org/archive/marx/works/download/pdf/Capital-Volume-III.pdf> (accessed 18 February 2016).

Nevertheless, although agriculture has been profoundly commercialised, Bonanno and his colleague Lawrence Busch, in their *Handbook of the International Political Economy of Agriculture and Food*, point out that under all economic approaches, whether Keynesian, radical, socialist, or laissez-faire, agriculture has always been managed in some way, subject to "factors pertaining to the economic, social, cultural, political and geopolitical spheres" while "these and other factors have been considered central in the directing of agri-food development" (Bonanno and Busch 2015, 1). They claim that, contrary to the neoliberal creed and prediction, agriculture has not only been meticulously planned but also subject to significant intervention by the state. The state (especially the USA) had overt and latent reasons to intervene in agricultural production: the need to increase production and productivity to feed a growing population (overt) and to control the cost of labour and thus the satisfaction of the working class through affordable goods (latent). In less-developed countries of the Global South, intervention took the form of the modernisation of peasant-dominated sectors, favouring the strengthening of corporate presence by allowing natural resources and labour to be exploited by agri-food corporations. Here again I find that the theory of dialectical dynamics or Polanyi's double movement applies because, as this was happening, many of these countries also experimented with land redistribution, land reclamation, and irrigation programmes favouring smaller farmers (Bonanno and Busch, *Ibid.*, 3).

In their overview, Bonanno and Busch affirm that in the 1980s Fordism officially collapsed and neoliberalism took over as the panacea for global social and economic problems, with overwhelming support from the moderate political left, which moved centre and joined in the creation of the so-called Washington Consensus. The editors describe how this new economic consensus, a "convergence of interests in support of neoliberal views of political economy", reshaped the global economy, which became characterised by spatial decentralisation, organisation at the global level, and economic concentration (*Ibid.*, 3). Key commodity markets in agriculture came under quasi-monopolistic control, while ever fewer and ever larger food retailers started controlling not only distribution but also production processes themselves. Food retailers have now taken over as the regulators of the food system, determining "food choice and quality" while "legitimized by the convenience that they

provide to consumers" (Ibid., 10). States have stepped back and have let business self-regulate in many areas. The editors consider that society became "economised"²⁵, a process whereby "the organization of social relations is decentered from the state to the market" (Ibid., 4). Following principles of economic rationality, political institutions start to act in a corporate-like manner, elevating profit to a social value and making it the first criterion in decision-making. Meanwhile, individuals are left to their own devices to solve problems caused by this deregulation (a corresponding process called "individualisation", which follows logically from another process called "responsibilisation", where individuals "assume responsibility for all of their actions") (Ibid.).

In their handbook, Bonanno and Busch give concrete examples of the effects of neoliberal globalisation of agri-food in different regions of the world. The editors observe that, failing to challenge the expansion of the corporate agri-food system, most of the existing and emerging alternative food systems have been integrated into it. The consequences shared by all regions, except for the Global North, are: the loss of food self-sufficiency; the displacement of small farmholders and peasants; the concentration of land ownership by national but also international elites; and the dependence on an export-based growth model, which creates a global country-level division of labour. Within this new order, labour's ability to defend its basic rights has been seriously undermined: whereas under Fordism, rural workers, although still vulnerable, benefited from wealth redistribution mechanisms, under neoliberalism they have been left to fend for themselves, facing reduced wages, greater precariousness and the loss of their bargaining position because they now compete with a large "reserve army of labor" available all over the world (Bonanno, in Bonanno and Busch 2015, 250).

The historical sociologist Philip McMichael (2005, 288), who developed the "food regime" theory together with colleague Harriet Friedmann in the late 1980s—attributing a foundational role to agriculture within the capitalist political economy—argues that twenty-first century capitalism has found in agriculture novel ways to guarantee the continued process of "accumulation by dispossession"²⁶, starting with land expropriation, moving to the

25 For the use of the terms "economisation", "responsibilisation" and "individualisation", Bonanno and Busch take inspiration from Foucault 2004 and Dean 2010 (cited in Bonanno and Busch 2015).

26 This concept was created by the Marxist geographer David Harvey to characterise neoliberal capitalist policies.

creation of a low-cost global labour reserve (which arises among other reasons because of the displacement of peasant farmers), and finally leading to the complete transformation of the mode of agricultural production and diets.

The idea behind the food regime concept is that of a "rule-governed structure of production and consumption of food on a world scale"²⁷. McMichael and Friedmann use the concept to, in McMichael's words, "unlock the history of capitalism itself", making it possible to "refocus from the commodity as object to the commodity as relation, with definite geo-political, social, ecological, and nutritional relations at significant historical moments" (McMichael 2009a, 163). The idea of international regimes had been developed earlier by Stephen Krasner (1983, in Friedmann 2009, 335) as a "specific set of (often implicit) relationships, norms, institutions, and rules around which the expectations of all relevant actors converge". Food regime analysis thus allows for the identification of "moments of hegemony in the global order" as well as "moments of transition", besides the "various social forces involved in constructing and reconstructing food regimes" (Ibid.).

Two regimes have consensually been identified so far, one linked to the period of British hegemony (1870-1914) and the other linked to postwar US (United States) hegemony (1945-1973). Friedmann (2005) has named these respectively the "settler-colonial" and the "industrial-mercantile regime". She hypothesises that each regime lasts about 25-40 years, after which it is inevitably followed by a crisis or transition period, which in her view is proof of Polanyi's "double movement": periods of free market forces are followed by periods where regulation is tightened to attenuate the negative impact of unchecked capitalism on people and the environment (Friedmann 2005, 139).

According to Friedmann, the two successive regimes in food production have resulted in the reinterpretation of the idea of food security²⁸. In an integrated global agrofood sector, the primary objective is trade, not food, and food security is left to the markets to achieve, while

27 Friedmann, Harriet. 1993. "The political economy of food: a global crisis". *New Left Review*, no. 197: 29-57. Cited in McMichael 2009a, 142.

28 FAO currently defines food security as follows: "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life". This is a change from the original idea of "adequate food supply" that emerged in the 1970s. See FAO Policy Brief on Food Security, 2006, available: <http://www.fao.org/forestry/13128-0e6f36f27e0091055bec28ebe830f46b3.pdf> (accessed 11 November 2016).

the focus shifts to strengthening property rights rather than fighting hunger (Ibid., 134-135). McMichael (2009a, 281) describes in detail how the responsibility for food security shifted from the nation-state to the global market during the negotiations that established the WTO's Agreement on Agriculture²⁹. Under this agreement, states had to give up their food self-sufficiency and accept minimum quotas of food imports. Although in principle all countries had to give up the subsidisation of their agricultural sector, in practice, in the Global North, subsidies were uncoupled from prices, taking the form of fuel or export subsidies. This continued support allows wealthier countries to practice dumping, forcing Southern countries to drastically reduce their price standards, and severely harming the economic viability of their own producers. Additionally, McMichael points out the growing precedence of traders over producers, especially in commodity markets, with up to half of futures contracts for typical agricultural commodities on US exchanges residing in the hands of Wall Street funds (Ibid., 282). The final blow, according to McMichael (Ibid., 284-285), comes in the form of dispossession (from the land and markets), disempowerment (in many forms: through contract farming, artificial price setting, political manoeuvring), and dismissal (as inefficient) of the small farmer, in the process creating the labour reserve that corporate agriculture needs to keep costs down, while severely undermining the capacity of peasant agricultures³⁰ to sustain themselves.

McMichael (2000) speculates about the existence of a third food regime, the “corporate food regime”³¹, which he associates with the 1980s rise of neoliberalism. Here, more than ever,

29 WTO Agreement on Agriculture, available: https://www.wto.org/english/docs_e/legal_e/14-ag_01_e.htm (accessed 10 January 2016).

30 The term “peasant farming” is increasingly used by social and agroecological movements, the researchers that inform their cause, and supranational agencies that are sympathetic to their cause (such as FAO) to distinguish smallholder farming for subsistence and local markets from entrepreneurial farming, in particular from industrial farming. There is some distinction in the use of the term between activists on the one hand and researchers and bureaucrats on the other: the former tend to emphasise the criteria of “trade liberalisation, industrial chemical-intensive agriculture and genetically engineered crops”, whereas the latter emphasis the idea of landlessness and precariousness (Edelman, 2013). The Advisory Committee of the Human Rights Council tentatively defined peasant in 2015 as: “man or woman of the land, who has a direct and special relationship with the land and nature through the production of food or other agricultural products. Peasants work the land themselves and rely above all on family labour and other small-scale forms of organizing labour. Peasants are traditionally embedded in their local communities and they take care of local landscapes and of agro-ecological systems”. Available: <http://www.ohchr.org/Documents/HRBodies/HRCouncil/WGPleasants/Session2/ChristopheGolay.pdf> (accessed 12 November 2016).

31 The corporate food regime according to McMichael (2005, 295) is characterised by the “global dispossession of farmers, reorganization of food supply chains, and centralization of agri-food relations” and has world

market dynamics are revered as the prime solution for any crises. In return for access to markets, states are "willingly" liberalising, which makes them vulnerable to the industrial standards and prices set by the agribusiness sectors (Ibid., 23). The main institution of the corporate regime is the WTO's Agreement on Agriculture (McMichael 2005, 277). With the help of the WTO, who acts as a watchdog, corporations have managed to reduce price supports in markets where they wish to source, at the expense of local producers (McMichael 2000, 24-25). Thus they have managed to redefine the terms of development as "globally managed growth, with information technologies and bio-technologies as the leading sectors" (Ibid., 23), and elevate markets to the prime political institutions to which all other institutions, including the democratic institutions, must bow.

McMichael believes the current political economy of food, held together through the "complicity of governments, scientists, and agro-chemical corporations" (Ibid., 21), will not hold up to the growing dissent over how food security should be achieved (i.e. through a profit-driven biotechnological-based approach versus the reassertion of food self-sufficiency). McMichael identifies weaknesses in the corporate dominance ideology, of which prime examples are the practice of *greenwashing* (claiming sustainable products or actions that are only superficial) and the corrupted appropriation of sustainable concepts such as organic farming (Ibid., 22). The corporate food regime as a "set of power relations where formal rules and operating procedures are subject to continual contention" faces resistance not only "from the counter-movements, but the agents of the regime itself" (Ibid.). The principal food agents tend to engage in occasional trade wars. But at the same time, as McMichael recognises, the global corporate regime is nothing if not resilient, constantly adapting by co-opting some of the changes demanded by its critics, such as the need for sustainable development and increased efficiency (Ibid., 27).

The 2007 and 2008 food riots in at least 50 countries in the world, provided McMichael, in collaboration with Raj Patel, with an opportunity to collect further supporting facts for the weaknesses of the corporate regime. They construe the conflict as a clash between two very different views of food security: one view has food security embedded in the Bretton Woods economic doctrine—thus in principle provided by liberalised markets—whereas the other

prices "strikingly divorced from cost" (Ibid., 271).

reinfuses the term with the "notions of power and control" of which it has been stripped, preferring to speak of "food sovereignty", which places the decision-making over food back with peasants and peoples in general (Patel and McMichael 2009, 10-11). The authors believe that the protests may be heralding the start of a new transitional phase and are not merely the result of discontent over rising food prices, but a sign that people are becoming aware of the political economy of food, and the way it is biased towards powerful agents (Ibid.). The authors see this political protest over the rules of the economy as a reassertion of what Thompson (1971, in Patel and McMichael 2009, 12) called the "moral economy"³². In the modern food economy, hunger is not a result of food shortage, but a result of extreme poverty making people unable to buy food on the open market³³, especially in countries in the Global South that are often exporting rather than providing for internal consumption (Ibid., 14). Additionally, as I mentioned previously, prices have been decoupled from subsidies, a fact that has led to an artificially low "world price" for the major commodities from agriculture (Ibid., 17). Producers from the South are unable to compete as their countries shift to exporting staple goods and importing up to 25% of their food needs (Ibid.). With the dismantlement of social protection, price fluctuations³⁴ will hit vulnerable populations, such as dispossessed peasants, urban slum dwellers, and labourers, the hardest (Ibid., 31). Since the artificially low prices for food and the mobility of capital has helped to keep wages low, the victims of the global market are not only the small producers that can't compete but also the "vulnerable consumers of wage-foods" that can't procure (Ibid., 20). The authors conclude that the ongoing crisis is exposing how intensely degraded social reproduction within the capitalist economy has become, and how acute its contradictions (Ibid., 20-21).

In a recent article, Friedmann (2016) expresses her disagreement with the narrative of a corporate food regime as developed by McMichael, believing that in opposing "food from nowhere" to "food from somewhere"—or globally produced and corporate-driven versus locally produced, culturally appropriate food—he is precluding the continued in-depth

32 "In its original formulation, the idea of a moral economy pointed to the distance between the traditional paternal modes of support for social reproduction, and the arrangements for the poor under the new capitalist order." (Patel and McMichael 2009, 13).

33 Frances Moore Lappé was the first researcher to debunk the hunger myth with her seminal book *Diet for a Small Planet* (1971/2010).

34 In 2007-2008, the price of corn rose 130%, while rice went up 75%, with large increases also recorded for other major food commodities (Patel and McMichael 2009, 21).

analysis of the food system as a showcase of the relations between economy, polity, and society. A focus on the corporate domination of the food system may leave out crucial clues about the dynamics brought by other agents or the impact of both past and present alternative practices, while capitalism's capacity to adapt may make the concept obsolete (Ibid., 675). Observing the shift in power within the agrofood sector, from supermarkets to financial enterprises, Friedmann imagines other regimes may be in the making. The giant new business cluster that unites the industries of food, agriculture, chemicals, pharmaceuticals, seed, and even energy, lends merit to the claim that we may actually be observing a "life sciences-integrated" food regime as hypothesised by Lang and Heasman (2015, cited in Friedmann 2016, 287).

Vandana Shiva, a researcher from the Global South who has published extensively on the global political economy of food, singles out the theme of monopolisation (which, as I shall explore in the next paragraphs, occurs at several levels and in several dimensions) as a main factor in the development of inequalities both between North and South as well as within countries. This monopolisation of resources and markets is alienating smallholder farmers and peasants from agricultural land, while forcing the remaining farmers to buy proprietary packages of seeds and the chemicals that will "boost" their productivity (Shiva, 2000). Shiva shows how the promoters of corporate-led agriculture have gone one step further and globalised "patents on life": intellectual property rights on living organisms. In 1980, the US Supreme Court, interpreting life as "manufacture or composition of matter" opened the watergates for the privatisation of living organisms when it authorised a patent on a micro-organism (Ibid.). Soon after, Shiva writes, the US Patent and Trademark Office was granting patents not only on genetically modified organisms, but on biological resources and knowledge obtained from indigenous peoples, such as *neem*, *karela* and *basmati*. Even though it would be relatively simple to make this form of patents illegal, the USA has persisted in what Shiva claims can only be construed as biopiracy, using the supranational trade institution WTO as a legitimising platform (Ibid.). Any country wishing to join the WTO, must pledge to uphold the US's and other countries' patents on living organisms, even if their national legislation does not allow the patenting of plants and animals. Vandana Shiva herself, together with two other leading women, fought and won a five-year legal battle to revoke a joint patent

held by the US government and the corporation MNC on *neem*, a well-known natural pesticide from India (Ibid.). Shiva warns that besides facilitating piracy of indigenous biodiversity, current intellectual property rights regimes (IPR) also block technology transfer due to the ample protection provided by patents (in order to use the patented product, a license needs to be obtained and/or royalties have to be paid). This institutionalisation of biopiracy, she says, will:

[...] make northern countries into the monopoly owners of knowledge, including knowledge that has evolved cumulatively and collectively in indigenous cultures, selling it at high cost to already impoverished and indebted countries of the South, pushing them further into poverty and debt. (Shiva, 2000, 501)

Shiva has termed this new form of exploitation of economically poor but resource-rich countries "biocolonialism" (Ibid.) Other thinkers prefer the broader term "biocapitalism" to indicate how capitalism has been extended into areas hitherto considered off limits or "recalcitrant". Clayton Pierce defines biocapitalism as a "(re)productive model that arose from the complex set of relations existing between techno-scientific research and neoliberal practices of economic development" (Pierce 2012, 722), where under technoscience he understands the "conflation of science and technology into a fluid relationship of knowledge production" (Ibid., 742). The new possibilities of extraction provided by the advances in technoscience stretched the limits of growth in Pierce's view, as much in the natural domain as in the cultural domain, and were legitimised by the neoliberal economic restructuring that was initiated in the 1970s (Ibid., 726). Furthermore, Pierce explains, the partnering of academic science with the biotechnological and biomedical industries, which effectively fused public and private funding, "helped push the neoliberal model of growth into entirely novel regions" (Ibid., 727). Finally, a push for legislation and regulation that protected the exploitation of genes, microbes, and cells, definitively pulled life and biological processes into capitalist processes of accumulation. Pierce agrees with Rajan (2006, cited in Pierce 2012, 739) that biocapitalist production, as a special form of high-tech capitalism, is essentially based on (often speculative) promises of future productivity or profit. These more prosaic promises of profit are dissimulated and legitimised within what Pierce calls a "pseudo-religious ideology that links success in techno-scientific research to that of the salvation of the nation" (Ibid., 728-729).

José Luis Garcia (2006) understands biocapitalism as parallel movements of commodification and privatisation of the reproductive resources of Nature itself and the biological phenomena that are born therefrom. Like Shiva, Garcia points out that the manipulation of Nature through the experimentation with DNA recombination, has opened up the possibility to treat biological resources as products and as property. Whereas on the one hand the involvement of technoscience has helped to liken biological processes to mechanical ones, making them appear as logical and manipulable as a computer, on the other hand the ideological inroads made by neoliberalism starting in the 1970s has extended the right to property and the corresponding rights of maximisation of profit and capital accumulation to the biological world. Garcia warns about the active building of a "bioeconomy" by prominent political, economic, and scientific leaders, who are "channeling large amounts of financing and mobilising national and international strategies [...], with the declared aim of rendering research useful to the economy and creating leverage in the global economic competition game" (Garcia 2006, 983, my translation from the original Portuguese). Coupled with the previously mentioned expansion of the right to intellectual property, in particular by means of the more restrictive patents, capital managed to penetrate into areas of science previously considered to be of public, and not private, interest. Additionally, patents are now allowed for mere ideas for an invention, rather than the invention itself, as well as for mere methods of research and manipulation, all of which is particularly useful to the genetic industry. Most universities now require that inventions be patentable for funding to be extended. Garcia presents proof for the counterproductive nature of patents: when they are not contained, they stifle rather than stimulate innovation, while patents in the life sciences are also treading morally and even scientifically swampy ground (Ibid., 984-986). In line with Shiva's concept of "monopoly owners of knowledge", Garcia shows how companies in the bioeconomy are essentially producing and protecting information, having managed to secure highly expanded and legally enforced intellectual property rights, protecting "the informational value of the products and processes manipulated by biotechnology and by the information technologies" (Ibid., 987). According to Garcia what is "exalted" here is "[...] 'information-knowledge' founded on the right to property and conditioned by the logic of the dominant economic system" (Ibid., 988). Applied to the realm of food, this tendency is removing crop plants and seeds, and the right to produce and reproduce them, from the public domain and into the

hands of corporations. Vandana Shiva (1991, 51) sums up the threat to our food supply as follows:

To use Jack Kloppenburg's analogy of the seed: it is both a "means of production" as well as a "product". [...] The seed thus presents capital with a simple biological obstacle; given the appropriate conditions it reproduces itself and multiplies. Modern plant-breeding has primarily been an attempt to remove this biological obstacle, and the new biotechnologies are the latest tools for transforming what is simultaneously a "means of production" and "product" into mere "raw material".

Garcia further underlines that the appropriation of life and of the means of reproducing life is not just a market phenomenon, but that this has been actively supported, co-financed, and facilitated by states, as can be gleaned from the history of technoscience. States have also been instrumental in promoting a "futures market" (Garcia 2006, 1005): a market of potential or plausible rather than tangible products where consumers are "at the service of consumption" (Ibid., 1006) and that is held up by the "constancy of the myth of the substitution of time by man in his relationship with nature" (Ibid., 1009).

Conclusion

In this chapter, I have endeavoured to justify the need for a political economic theory of the modern food production and distribution system, while also sketching its contours, dynamics, and potential social, political, and economic implications. A picture emerges from the reflections and findings of the thinkers presented here of an ordered world food economy that "combines state power, the price weapon, and corporate sourcing strategies" (Patel and McMichael 2009, 16). It seems appropriate, when observing the disproportionate influence of a minority of economically and militarily powerful states together with a minority of very large transnational corporations, some of which produce more wealth than many countries of our world, to call the world food economy a "regime". Just like Friedmann, I hesitate to call it a corporate food regime, because the role of powerful nation-states and increasingly autonomous supranational organisations, as well as that of the "culture-ideology of consumerism" (Sklair, 2001), has been crucial to creating a hegemony, very similar to what Gramsci called "historical blocs". Sklair upgraded to the term "sustainable development historical bloc", while Bernstein calls it the "compromise of liberal environmentalism" and McAfee has called it "green developmentalism". The way capitalism has managed to

penetrate hitherto "recalcitrant" sectors of the economy such as agriculture (Kloppenborg 2004, 10), would never have been achieved without the synchronised efforts of something like a "transnational capitalist class", firmly in control of the processes of globalisation, as much economically as culturally. In his work, Sklair (2001, 13) puts the idea of this global class to the test, using Dahl's test for the existence of a ruling class (as incorporated by Domhoff into a "class dominance theory", cited in Sklair 2001), with questions such as: "Is it a well defined group? Is there a fair sample of cases where elite preferences run counter to the preferences of others? Do the preferences of the elite prevail?" After testing his data in this manner, he finds in favour of his thesis. Patel and McMichael (2009) present additional proof of a cultural hegemony in their analysis of the food riots: the realisation of the capitalist project in food and agriculture can be considered successful when protests from the victims of the "food regime" are reduced to protests about affording food (i.e. through higher wages), instead of issues of moral economy and civil rights.

Another important finding is the almost completed incursion of capitalism into the biological realm, bringing all of its mechanisms—the institution of the market, commodification of Nature and labour, the broadening of rights of private property—to bear on the reproduction of life itself, making life "a manageable and controllable field" in the words of Pierce (2012, 740). I would therefore contend that the global food regime we are currently witnessing might be called the "global biocapitalist food regime", something both McMichael in later work (2009a) and Friedmann (2016) hint at but have not entirely subscribed to yet.

A final concept to retain from the preceding analysis is the important role of knowledge and of who controls this knowledge in the bioeconomy that has emerged over the past decades. In twenty-first century capitalism, economic value is deemed to derive not from the natural resources that are being exploited or manipulated, but from the knowledge associated with this exploitation and manipulation, to the point where the knowledge and not the resource itself becomes the *capital*. This knowledge is aggressively protected from competitors and the general public through increasingly broad and well defended intellectual property rights regimes. The real problem with this trend is that this knowledge and the corresponding wealth accumulation increasingly derive from common resources and traditional knowledge, meaning that for all intents and purposes public endowments are becoming privatised, with

observable consequences for the world's new "untouchables", the first victims of the biocapitalist food regime, and unpredictable consequences for everyone else's food security and – sovereignty.

In the next chapter I will explore the implications that a "commercial society"³⁵ has for its democratic organisation and study proposals for closing what many consider to be both an ecological as well as a democratic gap in decision-making over the food system.

35 Term coined by Adam Smith in the eighteenth century before the term capitalism became popular, also indicating that his point of view on economic organisation is political-economic rather than exclusively economic.

A global food polity

II Food politics and the democratic question

The greatest deficit in the food economy is the democratic one. By harnessing people's knowledge and building their needs and preferences into the design of ambitious food policies at every level, we would arrive at food systems that are built to endure.

—Olivier de Schutter, former United Nations Special Rapporteur on the right to food, 2014.¹

We have every reason to think that whatever changes may take place in existing democratic machinery, they will be of a sort to make the interest of the public a more supreme guide and criterion of governmental activity, and to enable the public to form and manifest its purposes still more authoritatively. In this sense the cure for the ailments of democracy is more democracy. (John Dewey, *The Public and its Problems*, 1927²)

In the first part of this chapter I will examine the relationship between the global economic integration that has been occurring since the beginning of industrialisation and the correspondent development of the sociopolitical organisation of the societies involved, in particular where those societies, divided into nation-states, are considered democracies—i.e. to a reasonable extent responsive to their constituents. I will work from Polanyi's (1944/2001, 266) assumption that the failure to bring economic organisation under the control of democratic organisation has and will continue to cause great suffering, because it is "an illusion to assume a society shaped by man's will and wish alone". I will connect with a range of democratic theories, from classic to modern. Considering that democracy is one of the largest fields of social scientific knowledge, falling in the category of "essentially contested concepts" (Gallie, cited in Collier and Levitsky 1997, 433), I will focus my analysis on those theories that include considerations of the political economy and/or of economic globalisation, thus maintaining my focus on a political economy that drives the democratic and ecological quality of the modern food system.

In the second part of the chapter I will channel a selection of democratic theories towards the purpose of closing the observed democratic and ecological gaps in food politics (i.e. decision-making on food matters), which not only persist but appear to widen in the last decades. I will

1 Olivier de Schutter, "Democracy and diversity can mend broken food systems"—final diagnosis from UN right to food expert, March 2014, available: <http://www.srfood.org/en/democracy-and-diversity-can-mend-broken-food-systems-final-diagnosis-from-un-right-to-food-expert> (accessed 15 January, 2016).

2 Reprinted in Dewey 2012, *The public and its Problems: An essay in political inquiry*.

bring different democratic proposals to bear on my objective, which vary from extending the existing liberal democracies, to exploring a rights-based approach, and finally to exacting more systemic changes from our social, economic and political organisation.

The concurrent rise of the commercial society and liberal democracy

I borrow from Istvan Hont, a Smith scholar, to clarify the term commercial society, which was coined by Adam Smith before the use of the term capitalism became popular. Hont (2015, 3) says Smith stretched the idea of a "society in which there is much commercial activity" to that of a "fundamental type of society", a society where social relations have become "market-like", with corresponding political and moral implications.

The idea that economic organisation conditions social and political organisation is not new. For most of our democratic history, the link was explicit. Both the terms economy and ecology, apparently contradictory, stem from the ancient Greek word *oikos* or household. These disciplines are both about "running the household", i.e. the imposing of a form of organisation on a social group, something Aristotle dedicated some of his writing to. *Oikos* also refers to the household property and, in Ancient Greek times, it was not only the most important social but also the main economic unit, defining everyone's place in society and generating the income the extended family (including their slaves) needed. In what is often considered the cradle of Western democracy, economic standing determined political privileges: only those who owned property were allowed to participate in the political life of the Greek city-states. This requirement was, almost three millennia later, still inscribed in the first Constitution of the United States of America (only landowners might vote). It seems that the elite into whose hands the "people" in *res publica* entrust their sovereignty, have in democratic history invariably been an economic elite.

Aristotle, despite his dis-consideration for women and slaves and his disdain for pure democracy (which he considered to be a regime where the many ruled in their own interest), offers some important reflections on the dynamics of social organisation. In his view, it was not practical for the poor to rule, because their inevitable conflict with the wealthy would

threaten the survival of the latter. But he also did not think the wealthy should rule in their interest, because this would constitute an oligarchy. Just like the authors of the United States constitution several millennia later, Aristotle had no faith in the judgment of (most) people. His solution was to propose either an enlightened monarchy or an aristocracy, where one or a few rule in the interest of all. The solution adopted for the newly created USA was in fact an oligarchy, partially abolished in 1870 and only fully abolished much later when in the 1960s the practice of poll (or voting) taxes was finally scrapped. The dilemma of a polity (or *politeia*, which in the Aristotelian sense is a mixture of democracy and oligarchy) endangered by "the malice" of the poor and "the arrogance" of the wealthy, where the former are "consumed by envy" and the latter by "contempt" led Aristotle to place his hopes in a middle class and in education as a way of mitigating excesses.³

Almost two millennia later, Niccolo Machiavelli offers his insights on a republican form of democracy. Despite his current association with ruthless and immoral politics, having been the guide *par excellence* for many a despot (among them Louis XIV and Napoleon Bonaparte), he can nevertheless be credited with creating a contemporary and democratic conception of politics, independent from religion, which up to this point had competed with monarchs for control of the populations, often acting as a state within a state. His conception of politics is rational and pragmatic, asking politicians to decide on facts and not on values. Together with Thomas Hobbes, from whom he is separated by more than a century, Machiavelli sets the stage for secular and rational politics, aided by the discussion on the right to religious freedom in a Europe divided between Catholics and Protestants, bringing with it a corresponding clamour for the right to freedom of expression (Soromenho-Marques 1996, 1st and 2nd Essay). John P. McCormick (2011), in his account of Machiavellian republicanism, demonstrates how Machiavelli dedicates significant space to the excesses of the wealthy in his *Discourses on Livy*. Machiavelli believed the wealthy had an "unquenchable appetite for oppression", leading them to "accumulate wealth, monopolize offices, and gain renown within republics" (McCormick 2011, 4). He also believed they would defend their "property with the utmost obstinance" (D I.37, cited in McCormick 2011, 5), whilst what he called the "free

3 This summary of Aristotelian thought and comparison with the constitution of the USA was extracted from the peer-reviewed Internet Encyclopedia of Philosophy, available: <http://www.iep.utm.edu/aris-pol/> (accessed 20 December 2015).

peoples" would be more inclined to decide in favour of the common good (D I.4, in *Ibid.*, 6). He therefore proposed a model of republicanism based on tribunates that excluded wealthy citizens (inspired by the Roman tribunes of the plebs), and assemblies where the influence of the prominent would be similarly limited. McCormick claims that although Machiavelli has been dubbed the founder of modern republicanism, his views on constitutionalising class conflict actually make him the last traditional populist republican. His suggestions for strengthening the equality base of a polity have been largely ignored, and the model that came to dominate in the Western world was that of representative government, where common people rule indirectly and there is a unitary conception of citizenry. Whereas Machiavelli, just as Aristotle before him and Rousseau (but not Hobbes) after him, believed a citizen was as much one who was capable of ruling as of being ruled in turn, the liberal tradition that gained popularity in the seventeenth century understands citizenship as a legal status rather than a political office: a citizen is a free legal person who may act freely within the confines of the law and demand the law's protection against other individuals or the authorities themselves (Soromenho-Marques 1996). Inspired by Machiavelli's recommendations to control the excesses of political and economic elites, McCormick himself proposes a republicanisation of modern democracies (what he refers to as a "Machiavellian democracy") through the institution of offices or assemblies wherefrom the wealthiest citizens are excluded; the reinstating of the use of lottery in combination with election to appoint magistrates; and political trials where citizens are the ultimate judges—in this way balancing the negative impact that political and economic elites exert on the realisation of the rights to liberty and equality.

By the time Jean-Jacques Rousseau offers his thoughts on democracy, he is already a lone republican voice in a liberal world. Influential thinkers such as Thomas Hobbes and John Locke played an important role in depoliticising and de-socialising society, with Hobbes proposing an autonomous sovereign to whom subjects pledge allegiance through an agreement called a covenant—which concedes him absolute powers and separates him from his subjects—and with Locke reducing the family and civil society to "afterthoughts" of economic activity (Gottfried 1994). Rousseau's "social contract" hinges on an engaged citizen who believes that public affairs are more important than private ones (Book 3, ch. 15 of *The*

Social Contract)⁴ and his sovereign refers to the people themselves, who may appoint government officials to act as their agents, but always have the last and only word in legislation. In contrast, the liberal tradition, starting with John Locke, takes its cues from Hobbes rather than Rousseau and builds on the former's ideas of the fundamental rights of citizens and his justification of government: people form societies and governments to defend their natural rights. Locke's natural rights are still with us today, inscribed in many constitutions: "Life, Health, Liberty, or Possessions".⁵ Locke goes further than Hobbes, transforming the right to private property—a right to be defended against fellow citizens and the state itself—into the principal justification for the need for government. He believed property (and property inequality) was justified as long as it came from labour that produces goods that are beneficial to society. Since "Man" is entitled to his body and to the labour he exerts with his body, he should also be entitled to the goods he produces with that labour.

Locke's theory of property has been regarded as the cornerstone of classical liberalism, despite the fact that he premises natural law on religious as much as anthropocentric assumptions—there is a God that offers the Earth and its resources for the use of men—and even though he actually worried about inequality in the use of resources, because he believed they had been given to *all men in common* and not *in private*. In his view, each person's right to property should not jeopardise everyone else's right to property, not in the least because he thought socioeconomic inequality would at some point destabilise the legitimacy of the *res publica*. Unlike the liberals who followed him, Locke established clear limits to property. One of these was the labour criterium, which meant property had to be derived from labour (although his definition of labour was very broad and included the gathering of food). Another was the "spoilage limit": he considered unused property to be wasteful. However, what liberals took away from Locke's theory was mainly the idea of property as a natural right: morally justified because it derives from labour and legally defensible against other persons and the state.

4 Rousseau's *The Social Contract*, 1762, as translated by Jonathan Bennett, 2010, available: <http://www.earlymoderntexts.com/assets/pdfs/rousseau1762book3.pdf> (accessed 20 April 2016).

5 Analysis of Locke's ideas on property in this chapter taken from Vaughn (1980).

Property as part of the right to freedom and a natural right in itself became the cornerstone of the commercial society. But the concept, hotly debated in industrialising Europe of the eighteenth and nineteenth century, is to this day contested, in particular the utilitarian conception that came to dominate. We read in Hont (2015) that Rousseau rejected the idea of a self-balancing utilitarianism, where the pursuit of self interest is thought to ultimately serve the common good. Instead, he claimed the poor wound up giving up the regulation of private property in return for a status of legal equality. Their equality as citizens did not entitle them to equality in property, but only to a theoretically *equal opportunity* to acquire property. Other philosophers, such as Kant and Hegel, premised the ownership of property on the capacity of individuals to exercise restraint and social responsibility. Hont goes on to demonstrate how Adam Smith, the founder of classical economics and a younger contemporary of Rousseau, recognised the inequalities inherent in the right to property, but was optimistic about the self-balancing characteristics of a free market, where, given time, property would become more evenly distributed. His idea of a modern republic is one born of commerce, a commercial society, which, rather than undermining liberty and legality, adjusts its laws to the complexity of the economy.

Karl Marx (Marx and Engels 1848/1969) revolutionised the debate on property by conceptualising the idea of private property of the "means of production". He identified a new class, the "owners of the means of social production and employers of wage labour" (Ibid., 14), and a new class antagonism based on the new balance of powers facilitated by the inequality in property distribution. Although he did not oppose what he called personal property, he called for the abolition of private property—what he called "bourgeois private property"—in the case of productive resources that could be used to produce social wealth. In a capitalist society, he argued, this social wealth was exclusively siphoned off to a small class of owners. Bourgeois private property, he said, "is the final and most complete expression of the system of producing and appropriating products, that is based on class antagonisms, on the exploitation of the many by the few" (Ibid., 22).

Its critics notwithstanding, the commercial society has been unstoppable since the writings of John Locke. The resulting interdependence of politics and trade that became instituted in the

eighteenth century changed the democratic project of Western states forever. Soromenho-Marques (1996, 156) observes that the meaning of citizenship evolved towards imperial patriotism—where people are citizens of a state to which they owe loyalty and in return receive rights from—and away from the ideal of cosmopolitan republicanism as advocated by Machiavelli or Rousseau. This trend has had profound implications on the interpretation of social reality or indeed of many of the political terms used today. Jeff Weintraub (1997, 7) notes the differences between what he calls a "liberal-economistic model", which came to dominate, and a "republican-virtue" model, based on ideas of political community and active citizenship, such as advocated by Rousseau and the North-American John Rawls. The utilitarian liberalists start from the premise that individuals pursue their self-interest more or less efficiently (an activity deemed rational although it does not refer to reason but rather to an instrumentalist approach), that they enter into contractual relations among themselves and that these "private" transactions must be protected from interference by the state (Ibid., 8-9). Society here is reduced to civil society, as Soromenho-Marques (1996) also points out, and the concept of citizen refers to a legal status rather than an agency. Modern republicanism, according to Weintraub (1997, 12-13), takes its cue from the politics of the Roman empire rather than those of the ancient Roman republics. Weintraub remarks that even an avowed liberal such as Alexis de Tocqueville was of the opinion that Roman imperial law perfected civil society but degraded political society, because its people became "highly civilized and thoroughly enslaved" (Ibid., 14). In contrast, the republican-virtue approach conceives of a public space, sphere, or realm in terms of "public life", where decisions are discussed, debated, taken collectively, and executed in concert (Ibid., 10-11).

The following well-known passage from a British Select Committee in 1811 exemplifies the pedestal that economic freedom was placed on as early as the beginning of the nineteenth century:

[...] no interference of the legislature with the freedom of trade, or with the perfect liberty of every individual to dispose of his time and of his labour in the way and on the terms which he may judge most conducive to his own interest, can take place without violating general principles of the first importance to the prosperity and happiness of the community [...]. (History of Trade Unionism, 1920, 60, in Marshall 1950, 17-18)

Economic freedom is one of the key liberties birthed by the Enlightenment, and those liberties together with the principle of equality have underpinned the version of representative democracy that came to dominate: liberal democracy. This was such a successful form of governance of countries that, despite two world wars, by the end of the twentieth century Freedom House counted 120 democracies or 63 percent of the world total⁶. Polanyi would argue that its success would not have been so enduring, had social liberals, who sought to rectify the injustices that plagued industrialisation and laissez-faire capitalism, not endeavoured to temper the principles of classical liberalism that are the foundation of these democracies. Unfortunately, many of the conquests of social liberals were gradually dismantled from the 1980s onwards with the rise of neoliberalism, with special mention of the twin "reigns" of Margaret Thatcher and Ronald Reagan, heads of the two most powerful states in the world. True to Polanyi's prediction of a double movement, the general economic decline in world markets that has characterised the beginning of the twenty-first century has again revived an interest in social liberal thought and Keynesian economics⁷.

Most political scientists and political philosophers would agree that simply classifying the democratic organisation of societies in the late twentieth and early twenty-first century as liberal would be highly reductive. Attempts to interpret the developmental phase of democratic organisation that we currently find ourselves in have seen the coining of catchy labels, such as Ulrich Beck's "risk society", the German philosophers Gunther Anders and Hans Jonas' "technological age", and Anthony Giddens' "reflexive modernisation"⁸. John Keane (2009) speaks of "monitory democracy", which he characterises as a period when democracy becomes a universal value and global democracy a new and seemingly possible objective, and where decision-makers in all fields of political, economic, and social control face public scrutiny and control by myriad institutions, among them local courts, consensus conferences, think-tanks, panels of experts, new media and human rights watch panels. Pierre

6 Freedom in the world 2000, available: <https://freedomhouse.org/report/freedom-world/freedom-world-2000> (accessed 20 April 2016).

7 Keynesian economics, after the British economist John Maynard Keynes, goes against the mainstream idea of a "general equilibrium" in markets and advocates a mixed economy, where the private sector is complemented by government intervention in times of recessions.

8 Giddens developed this idea with Ulrich Beck and Scott Lash: it highlights how late modern societies oppose themselves rather than traditionalism such as in earlier modern times.

Rosanvallon (2008) follows a similar line of thought when he speaks of "counter-democracy". He understands this as "a form of democracy that reinforces the usual electoral democracy as a kind of buttress, a democracy of indirect powers disseminated throughout society—in other words, a durable democracy of distrust, which complements the episodic democracy of the usual electoral-representative system" (Rosanvallon 2008, 8). Democratic activity—out of necessity in the face of increasing risks related to decision-making in a technological era—has been extended beyond the traditional party and parliamentary politics, to include watchdogs and advocacy groups. The ideal of an "industrial democracy", which emulates democratic institutions in the non-political spheres of society, starting with the economic sphere (for example by electing the executives at companies), and which was popular at the beginning of the twentieth century, was definitively abandoned in favour of corporate control mechanisms towards the end of the same century (Ibid., 285-287). The embracing of oversight mechanisms as a way to balance excesses in the economy has led, in Rosanvallon's eyes, to the paradox of capitalism becoming both "more closely regulated and more unjust, both more transparent and more inegalitarian" (Ibid., 288-289). What appears to be a movement of democratisation has become instead the "radicalization of the 'unpolitical' character of counter-democratic powers" (Ibid., 288-289). Rosanvallon is sceptical of the monitory or counter-democratic turn in democracy, believing this to be a sign of the "demise of certain political *functions*" (Ibid., 290, emphasis in original). Instead, Rosanvallon proposes a third dimension of democratic experience (the first two dimensions are representative- and counter-democracy): "theoretical political practice", where, through reflection and deliberation, political participants revisit the principles of justice, the relation between public and private, the balance between interests of different groups, and the practical implications of the notion of popular sovereignty (Ibid., 291-292). Reflecting on the fact that many of the creators of the French and American constitutions had an elective aristocracy in mind when they proposed the institution of representative government, Rosanvallon proposes that representative government actually emerged "in opposition to democracy" (Ibid., 293). This suspicion of mass politics has stayed with us over the centuries, shrinking the democratic ideal to "little more than the wish to establish a government capable of defending the liberty of its citizens—a far cry from the old ambition of genuine popular sovereignty" (Ibid., 293). Rosanvallon

notes how the idea of a more participatory democracy, which in its most complete form he calls "democracy of proximity", has made a comeback since the 1980s, resulting in a wide range of practices and experiences, both within and outside of existing institutions. In the proposed Constitutional Treaty of the European Union, in 2004, a distinction was made between participatory democracy and representative democracy, the former defined as "open, transparent, and regular dialogue with representative associations of civil society" (Article I. 47, cited in Rosanvallon 2008, 295). However, as I will discuss in the second part of this chapter, participation in many ways was a functional choice: Rosanvallon demonstrates how it helped improve decision-making at the local level while simultaneously depoliticising it, trading popular protest for popular involvement (Ibid., 296). Rosanvallon's proximity democracy is eminently political, i.e. "understanding of problems associated with the organisation of a shared world" (Ibid., 22), and offers citizens multiple capacities for action, as long as each situation is considered according to its specificity. A counter-democracy that does not follow his principles of proximity democracy runs the risk of "[degenerating] into a destructive and reductive form of populism" (Ibid., 299). Rosanvallon believes in democracy as a process, not as an institution, as patent in his comment "*Democracy is defined by its works, and not simply by its institutions*" (Ibid., 307, emphasis in original).

In the second part of this chapter I move from interpretative theories of democracy in the late twentieth and early twenty-first centuries to more normative ones, in search of the attributes for decision-making that could help close the ecological and democratic gaps in the governing of the food system that I have postulated. Since there are almost as many theories as thinkers, exhaustiveness is not an option, and therefore, as I said before, in order to maintain internal consistency of the ideas presented in this thesis, I will focus on those theories that include either or both the economic and the globalisation dimensions of social organisation in their models. After looking at the possibility of a "rights-based" approach to strengthening democracy, I will examine a range of "democracies with adjectives" (a term by Collier and Levitsky, 1997, illustrating the proliferation of democratic projects), starting with those that merely attempt to extend liberal democracy, and concluding with those that wish to turn it on its head.

A rights-based approach to realising food democracy

Thomas H. Marshall (1950) can help us comprehend to what extent the liberal construction of the citizen has shaped modern representative democracies. Marshall was a product of social liberalism as nurtured at the "intellectual hot house" of the London School of Economics and Political Science, where his colleagues were distinguished intellectuals that helped bring about social reform in the United Kingdom, among them Beatrice and Sydney Webb, George Bernard Shaw and John Maynard Keynes (Murray 2005, 224). For a rights-based approach to democracy, his classification of rights is a good place to start. The development of each of three classes he identified, he attributed to the eighteenth, nineteenth, and twentieth century, respectively:

1. Civil rights: "liberty of the person, freedom of speech, thought and faith, the right to own property and to conclude valid contracts, and the right to justice" (Marshall 1950, 10).
2. Political rights: associated with representative democracy, including the right to vote, hold office, petition and assemble (Marshall 1950).
3. Social rights: "[...] from the right to a modicum of economic welfare and security to the right to share to the full in social heritage and to live the life of a civilised being according to the standards prevailing in the society" (Marshall 1950/2009, 149).

Each of these classes of rights has corresponding institutions that facilitate in securing these rights. Thus Marshall associates the first class with the courts of justice, the second with parliament and councils of local government, and the third and last with the educational system and social (and health) services (Marshall 1950/2009, 148-149). Marshall questions how two contradictory systems effectively developed at the same time and appear to be reconciled: the strengthening of civil rights—a system of legal equality—coincides with the rise of capitalism—a system of inequality (Ibid., 1950, 29). He suggests that citizenship was useful to capitalism, despite the contradiction and potential danger, because a free and equal "man" was presumed to be "equipped with the means to protect himself" (Marshall 1950/2009, 150-151). Likewise, a new idea of social class that emerged from the "interplay of

a variety of factors related to the institutions of property and education and the structure of the national economy", substituted the class hierarchies that existed during feudalism (Ibid., 31). But in this new system, everyone is responsible for him/herself and wealth is proof of merit, whereas the least well-off classes are now regarded as failures (Ibid., 32). The technical equality of citizens thus does not translate into effective equality. Status was not eliminated from the social system with the celebration of contracts between "men who are free and equal in status" (Ibid., 34). As Marshall elegantly puts it: "civil rights [...] confer the legal capacity to strive for the things one would like to possess but do not guarantee the possession of any of them" (Ibid., 34-35) .

Many NGOs and social movements have embraced a rights-based approach to deepening the democratic and ecological dimensions of human development. A rights-based approach builds on important precedents in the history of human rights to codify existing rights or promote new ones. Their cumulative efforts are conceptualised in the 2012 report by the Civil Society Reflection Group on Global Development Perspectives (Civil Society Reflection Group)⁹.

This spontaneous global alliance of civil society organisations considers that:

[...] the principles and values of the Rio Declaration on Environment and Development and the UN Millennium Declaration are under siege and urgently need to be revived. This includes the imperatives of human rights, freedom, equality, solidarity, diversity, respect for nature, and common but differentiated responsibilities. (No Future Without Justice report 2012, 4)

A rights-based approach compels state and non-state actors alike to go deeper in the identification of the root causes for the non-realisation of human rights and to face these head on (Ibid., 20). The Civil Society Reflection Group recommends to reconfirm existing universal principles and rights that have come out of international agreements among the world's governments, instead of inventing new ones. Their "sustainability rights framework" proposes eight foundational principles that the group considers to be universally consensual (Ibid., 23-26):

9 A joint initiative of Social Watch, Third World Network, DAWN, Friedrich-Ebert-Foundation, Global Policy Forum, terre des hommes and Dag Hammarskjöld Foundation. Executive summary of the report "No future without justice" available: <http://library.fes.de/pdf-files/iez/09144.pdf> (accessed 20 June 2016).

1. The solidarity principle: this is not linked to charity nor philanthropy, but reinforces that people are equal and have a shared responsibility for the common good.
2. The "do no harm" principle: derived from the Hippocratic oath, this principle has come to be used in humanitarian contexts by supranational agencies such as UNICEF.
3. The principle of "common but differentiated responsibilities": this principle was enshrined in the Earth Summit declaration of 1992. "The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command" (excerpt from Principle 7 of the Rio Declaration).
4. The polluter pays principle: This legal concept exists since the 1970s and was reaffirmed in the Rio Declaration, principle 16, where it states that "[n]ational authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution [...]".
5. The precautionary principle: Another milestone achieved with the Rio Declaration, this principle states that "in the absence of a scientific consensus if an action or policy has a suspected risk of causing harm to people or nature, the burden of proof that it is not harmful falls on the proponents of this action or policy".
6. The subsidiarity principle: This is a concept of self-determination that comes to us from federalism, written into the treaties of the European Union, recommending to take decisions at the lowest possible administrative and political level, and as close to citizens as possible. It needs to be applied together with the solidarity principle so as not to become an argument for arbitrary protectionism.
7. The principle of "free, prior and informed consent": This principle is present among others in the Declaration on the Rights of Indigenous Peoples of 2007 and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade of 1998. Proposed actions

or projects by governments or corporations must be subjected to the consent of the communities that will be affected by them.

8. The principle of peaceful dispute settlement: This principle can be found in the UN charter, where Article 2 says that "All Members shall settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered".

The Civil Society Reflection Group (2012, 27) also advances four fundamental values to complement the eight foundational principles, together forming a framework for justice:

1. Freedom: "Men, women and children have the right to live their lives in dignity, free from hunger and from the fear of violence, oppression or injustice". Freedom, nevertheless, has its moral limits, namely where our freedom may interfere with others' freedom and in the "do no harm" principle.
2. Equality: The interpretation given to equality can be considered its strong, non-liberal version—"No individual and no nation or group must be denied the opportunity to participate in and to benefit from development". This value includes the concept of intergenerational justice, a key characteristic of strong sustainability.
3. Diversity: "Human beings must respect one another, in all their diversity of belief, culture, language, looks, sexual orientation and gender".
4. Respect for nature: "Respect must be shown in the conduct towards all living species, the use of natural resources, and the ecosystems as a whole". The authors believe all living species have intrinsic rights and reject their objectification in current economic thought. The indigenous notion of *Buen Vivir* captures the value of respecting nature quite well: "Vivir Bien means sharing [...] living in community, in fraternity and, especially, in complementarity [...] not competing, living in harmony among peoples and with nature, producing for our needs protecting the environment [...] [to] recover the health of Mother Earth" (David Choquehuanca, Bolivian foreign minister in 2011, cited in Civil Society Reflection Group 2011, 28). Countries such as Ecuador and Bolivia have already gone one step further by incorporating the rights of nature in

their constitutions. Although theories on the intrinsic rights of Nature and the Earth have been discussed for more than a century and some examples exist of natural entities given a legal status (such as the river Whanganui in New Zealand¹⁰), the operationalisation of these rights is far from consensual and far from concluded. There is significant debate about what beings in nature should have legal identity and who is legitimised to represent these beings or ecosystems (see Fish, 2013).

Although the choice of universal principles and values as listed above may be considered ideological in the sense that together they express a world view that is openly opposed to the liberal democratic model of politics and economics, they nevertheless stem from this same model, albeit not under the exact same interpretations. Their essence has been captured by successive global declarations, conventions, and treaties on development and the human environment. Unfortunately, governments have "mostly failed to translate them into enforceable obligations and specific policies" (Civil Society Reflection Group 2012, 29). The report (Ibid., 29) offers three examples as proof: the collapse of climate negotiations (failure to accept the principle of common but differentiated responsibilities), the persistence of hunger and poverty (failure to apply the solidarity principle), and the nuclear catastrophes of Chernobyl and Fukushima (failure to comply with the precautionary principle). Some rights, such as human rights, are well-recognised, but find it hard to compete with the extended rights of corporations, which may move their capital freely, pollute, and sue governments if health regulations cut into their profits, while people are restricted in their movement and in their capacity to sue corporations for harmful practices. Other principles and values have not even been codified into rights yet, among them the principle of intergenerational justice and the granting of the status of entity to Nature.

Before I expand on how the concept of human rights can be applied to democratise food politics, a word of caution on the rights-based approach in general. Rawls and other thinkers before and after him have pointed out the downside to the defence of absolute rights, which may create perverse situations. Rawls (2001) believed, for example, that to have personal property was a basic right or liberty, but that the absolute right to unlimited private property

10 Agreement entitles Whanganui River to legal identity, New Zealand Herald, 30 August 2012, available: http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10830586 (accessed 13 May 2016).

(specifically of natural resources and means of production) was not. Marx, as we know, took a more radical view and demanded that the right to private property be abolished. Much earlier, Kant made each person's rights conditional on that of the others. Besides recognising limits to rights, and recognising that certain rights can conflict with others, we must also create a context for rights. Except for certain basic rights, rights should not be set in stone, they need to be interpreted and translated into actionable norms. This interpretation and translation, in turn, requires a healthy democratic polity, capable of asserting moral rights even in the absence of the law, and equally capable of re-examining legal rights when they have been deemed immoral. Tim Lang (2007, 12) confesses he was troubled by the notion of food rights: "Food rights can be abstract and lost. Food democracy has to be fought for and built into food culture".

The right to food that is implicit (but not specified) in the Declaration of Human Rights has been used to justify government and civil society intervention in the food regime. Since 2000, a Special Rapporteur on the right to food has been mandated by the Human Rights Council of the United Nations to "monitor the situation of the right to food throughout the world" and promote "the full realization of the right to food through dialogue with relevant actors by participating in seminars, conferences, expert meetings".¹¹ In the absence of an independently defined right to food, the United Nations Committee on Economic, Social and Cultural Rights has issued a declaration so as to refine, and where necessary remediate, the understanding of the concept:

[...] the right to adequate food is realized when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement. The *right to adequate food* shall therefore not be interpreted in a narrow or restrictive sense which equates it with a minimum package of calories, proteins and other specific nutrients. The *right to adequate food* will have to be realized progressively. However, States have a core obligation to take the necessary action to mitigate and alleviate hunger [...], even in times of natural or other disasters. (General Comment No. 12 of the United Nations Committee on Economic, Social and Cultural Rights, 1999¹², italics in original)

¹¹ Special Rapporteur on the right to food, available:

<http://www.ohchr.org/EN/Issues/Food/Pages/FoodIndex.aspx> (accessed 9 May 2016).

¹² Twentieth Session of the Committee on economic, social and cultural rights, 26 April – 4 May 1999, available:

http://www.fao.org/fileadmin/templates/righttofood/documents/RTF_publications/EN/General_Comment_12_EN.pdf (accessed 9 May 2016).

After assessing the world's food situation and the way food is tied in with dramatic challenges such as hunger, poverty, environmental degradation, and climate change, the Committee reached the consensual conclusion that:

[..] the right to adequate food is indivisibly linked to the inherent dignity of the human person and is indispensable for the fulfilment of other human rights enshrined in the International Bill of Human Rights. It is also inseparable from social justice, requiring the adoption of appropriate economic, environmental and social policies, at both the national and international levels, oriented to the eradication of poverty and the fulfilment of all human rights for all. (Twentieth Session of the Committee on economic, social and cultural rights)

Although the right to food has yet to be included as a stand-alone right according to the wider interpretation given it in later years, statements such as the one presented above have certainly aided in strengthening the demands of social movements in the field of food and farming.

This and other rights to secure sustainable livelihoods "become embedded in everyday political and social expectations", provide a strong rationale for civil society campaigns, while they help to engender "[t]he collective vision of how one should be treated and what one deserves, simply by being human" (Anderson 2008, 594). What Molly Anderson calls "rights-based food systems" is a valid, potentially effective, approach to achieving food democracy, as she reminds us when looking back on the Civil Rights struggle in the USA: "when enough people assume a right, stopping them is impossible" (Ibid.). Based on her appraisal of the International Covenant on Economic, Social and Cultural Rights and of its discussion and refinement over the years, Anderson comes up with the following six criteria for a rights-based food system:

- Absence of human exploitation.
- Democratic decision-making on food system choices that have impacts on people in more than one sector of the system (e.g., consumers and producers, or distributors and producers).
- Fair, transparent access by producers to all necessary resources for food production, including knowledge.
- Multiple independent buyers.
- Absence of resource exploitation.

- No impingement on the ability of people in other locales to meet these criteria (e.g., through trade relationships that undermine decent wages, fair prices, environmental quality, and transparency of access to information in other countries). (Ibid., 600-601, literal transcription)

A rights-based approach to improving democracy "focuses on people as rights bearers, entitled to demand accountability of their governments and other powerful entities for their policies and actions", making it superior to market-based solutions that are linked to what are generally passive consumer choices (Ibid., 601). When rights are recognised by rights-bearers, it may strengthen their resolve to demand these rights, while campaigning for rights ensures they "become embedded in everyday political and social expectations", ultimately contributing to transforming "the collective vision of how one should be treated and what one deserves, simply by being human" (Gready and Ensor, cited in Anderson 2008, 594). A rights-based framework demands the redistribution not only of resources, but of participation in decisions on resource distribution and ownership of the means of production, work conditions, and remuneration. As a universal right rather than a privilege that not all may afford, food can be rescued from the neoliberal conception of individual responsibility, becoming instead the shared responsibility of all individuals, groups, communities, and nations.

The concept and *cri de guerre* food sovereignty can be considered a radical outgrowth of the rights-based food system approach, although it goes beyond claiming rights and calls for an alternative paradigm, as such fitting in comfortably with the radical ecological democratic proposals I will discuss further on in this chapter. Publicly launched in 1996 by the global farmers' movement La Via Campesina, food sovereignty is understood to mean the human right of all people to healthy, culturally appropriate, sustainably-grown food, and the right of communities to determine their own food systems (Windfuhr and Jonsén 2005; Declaration of Nyeleni 2007¹³).

Food sovereignty offers an alternative to contemporary transnational attempts at environmental governance, and is based on four pillars: the right to food, the access to productive resources, the promotion of agroecological conversion of production, and

13 Declaration of the Forum for Food Sovereignty, at Nyéléni, Mali, 27 February 2007, available: <http://www.nyeleni.org/spip.php?article290> (accessed 15 May 2012).

equitable trade with strong local markets (Windfuhr and Jonsén 2005). The call for food sovereignty both echoes and amplifies the voices of social movements everywhere struggling for land reform, control over local resources, fair markets, neighbourhood food systems, and sustainable agriculture. It is posited firmly against the reigning paradigm of liberalised agricultural trade, which grants access to markets on the basis of market power and results in low, often subsidised, prices; denies local producers access to their own markets; and encourages less developed countries to specialise in a small number of export commodities, thereby neglecting often essential local food crops (Windfuhr and Jonsén 2005; La Via Campesina 2009). Rosset (2003) sums up the imperative of food sovereignty as follows:

Food sovereignty says that feeding a nation's people is an issue of national security—of sovereignty. If the people of a country must depend for their next meal on the vagaries of the global economy, on the goodwill of a superpower not to use food as a weapon, or on the unpredictability and high cost of long-distance shipping, then that country is not secure, neither in the sense of either national security or food security. (Rosset 2003, 1)

Food sovereignty places the resources needed for food and other basic amenities in the public realm, as a common good, to be shared equitably by peoples. It opposes the commodification and privatisation of Nature that is sweeping the globe. It advocates forms of farming and food production that are ecological, biodiverse, local, sustainable, and socially just. In the view of its proponents, agriculture must be removed from international trade agreements, and the right to farm and to eat culturally appropriate food elevated to a human right (Rosset 2006; Holt-Giménez 2009; Patel 2009). Although food sovereignty has concrete demands and policy framework proposals, it is not locked into one or other particular policy option, instead it asks to analyse all options in light of their capacity to realise certain basic rights. This prompted Patel (2009, 663) to recall Hannah Arendt's affirmation in his rundown on the etymology of food sovereignty: "the first right, above all others, is the right to have rights". Proponents of food sovereignty are "invoking a right to have rights over food" (Ibid.). As a non-instrumentalist and non-productionist approach to governance (in the sense of co-government), food sovereignty has caught the attention of thinkers and practitioners of deeper forms of democracy as a way out of our path-dependent socioeconomic systems. According to Pimbert (2010, 2) food sovereignty is "a process that seeks to expand the realm of democracy

and regenerate a diversity of locally autonomous food systems”. Food sovereignty, as a school of thought and action, forces us to reinterpret the most basic of democratic principles, liberty (liberty as autonomy) and equality (equality as equity), while introducing us to new principles and rights, such as altruism, solidarity, the rights of Nature and the right to food.

The food sovereignty movement is possibly the largest social movement in the world, and is unique in how it combines overt protest and resistance to the dispossession of peasants and indigenous peoples from their lands and resources, with the active promotion of “farmer innovation and horizontal sharing and learning” (Rosset and Martínez Torres 2013). One example of this methodology of “Diálogo de Saberes” (an interactive, horizontal learning methodology) is the “Campesino-a-Campesino” methodology or CAC, which is inspired by the critical pedagogy of Paulo Freire, further refined by his heirs into a critical peasant pedagogy (Ibid.). It is through CAC that La Via Campesina spreads and improves the science, practice and philosophy of agroecology¹⁴.

After this incursion into the basic rights that underpin most democratic theories and how they may be used as benchmarks for strengthening the democratic quality of global decision-making, in the next sections I will analyse different proposals for deepening democracy, to assess their potential success in improving the democratic legitimacy of commercial societies. Although democratic quality and democratic legitimacy will be discussed in significant detail when I construct my exploratory model for food democracy, an indication of my basic understanding of these concepts may be helpful. By democratic quality I understand the "substantiveness" of a democratic model or institution, i.e. how close it is to fulfilling its original promise of rule of the people. However, the latter concept is not at all consensual, which is why for each democratic thinker there is a corresponding democratic theory, and why it is more useful to speak of "dimensions of democracy" than "degrees of democracy". I will discuss this elusiveness at length in Chapter 3, for now it is important to retain that my idea of quality or substantiveness is linked to my objective of grounding democracy in the human

14 Michel Pimbert, a scholar who has extensively studied the concepts and practices of food sovereignty and agroecology, explains that the term was coined in 1928 by Bensin and has since evolved and become explicitly linked with food sovereignty. He says: “[a]t the heart of agroecology is the idea that agroecosystems should mimic the biodiversity levels and functioning of natural ecosystems”. In “Perspectives: agroecology as an alternative vision to climate-smart agriculture”, June 2017, available: <https://www.ileia.org/2017/06/26/agroecology-alternative-vision-agriculture/> (accessed 30 June 2017).

activity of food and basic needs production, while making it both socially and ecologically responsive to its *demos*.

Democratic legitimacy is an equally elusive (and contested) concept. Rosanvallon (2011) reminds us how, strictly, this concept refers to the acceptance of a rule or institution by all the people, in the absence of coercion. In practice however, in representative democracies, a majority (sometimes only technical), and not the totality of people, vote certain representatives into office (what Rosanvallon calls electoral legitimacy), while these representatives have received a gradually broader mandate over the decades (what he calls bureaucratic legitimacy). Legitimacy has thus become diluted. Rosanvallon endeavours to reinstitute a substantive version of legitimacy, which in his view will be an indicator for the quality of democracy: "[a] broader, more searching definition of legitimacy is [...] an essential component of any effort to expand the meaning of democracy" (Ibid., 9).

Democracies with adjectives in the twentieth and twenty-first centuries

In the oft-cited article by David Collier and Steven Levitsky (1997, 430), the authors warn to avoid "conceptual stretching" in the search for new forms of conceptualising democracy. The popular pursuit of ever fresher explanations for democratic flaws in social arrangements has resulted in a proliferation of "democracies with adjectives". Collier and Levitsky point out the importance of anchoring these "democracies with adjectives" in procedural definitions, such as suggested by Joseph Schumpeter and Robert A. Dahl (respectively 1947 and 1971, cited in Collier and Levitsky 1997, 431). They remind us of the philosopher Gallie's analysis of "essentially contested concepts", by which he meant to stress that democracy is "*the* appraisive political concept *par excellence*" (1956, cited in Collier and Levitsky 1997, 433, emphasis in original). They recommend to use Sartori's rule of thumb for the organisation of concepts:

[...] concepts with *fewer* defining attributes commonly apply to *more* cases and are therefore higher on the ladder of generality; whereas concepts with *more* defining attributes apply to *fewer* cases and hence are lower on the ladder. (Collier and Levitsky 1997, 434, emphasis in original)

In the view of these authors it is not enough to distinguish between *types* of democracy (parliamentary democracy versus presidential democracy), but the researcher should also look at *degrees* of democracy. This can be achieved by revising the root definition of democracy by adding attributes (for example whether an elected government can effectively exercise its power or whether the society in question guarantees social equality) deemed to be necessary for democracy to be realised (Ibid., 443-444). Nevertheless, if these extensions of the definition are not consensual, they will result in conflicting definitions of democracy, i.e. a continuation of its status as an "essentially contested concept". Although the authors' reflection is useful as a reminder to researchers to be careful in their definition of democracy, it does not help us to navigate the many "democracies with adjectives" that the history of political science and philosophy offers us. I contend that for practical purposes it is important to accept that democracy is a concept under construction, as John Gaventa (2006) has said. At the same time, to avoid *gerrymandering* with the definition, as Collier and Levitsky (1997) ironically warn, the boundaries and foundations of my own definition-in-progress, must be stated as clearly as possible.

Extending the liberal democratic project

A recurrent theme in my thesis is the fact that the rise of the commercial society and the corresponding version of representative democracy—called liberal democracy—which developed around it has been surrounded by controversy from the start, suffering from criticism both from the outside as well as the inside. Much of the literature on democracy has been dedicated to analysing the perceived flaws of this dominant form of social arrangement since the eighteenth century, and to devising solutions to mitigating, avoiding, or transforming its (less democratic) effects. This current of thinkers, although very diverse, can be considered to aim at extending the existing liberal democracies so that they conform more to the original republicanist idea that inspired the American and French constitutions. Many of these thinkers, because of their thoroughness in dissecting the attributes for democracy, also helped lay the groundwork for more radical democratic proposals, which I will discuss in the last sections of this chapter.

Two very prominent rationalist universalists—i.e. those who attempt to discern values and principles applicable to all humankind and believe humans can find truth through the use of their reason—are Jurgen Habermas and John Rawls, who can be considered to have done the groundwork for what is now called the deliberative school in democracy. John Rawls is generally considered to have attempted to reconcile liberal democratic ideas with a more profound conception of equality, whereas Habermas developed a model that builds on what he believed to be the rational potential of human beings (rational is here understood as the capacity to use reason through communication), present in everyday speech, and which he hopes will supersede what he considers to be the one-sided version of rationalisation of modern societies (Bohman and Rehg 2014). Both philosophers are critical of capitalism, or at least of laissez-faire capitalism. Rawls' solution was to temper capitalism with principles for justice that adjust liberties and inequalities so as to benefit the least-advantaged members of society (justice as fairness: by fairness Rawls meant equal access to opportunities). Rawls does not see the need to restructure property distribution in this way, but he does firmly reject utilitarianism, claiming that a principle of utility is incompatible with true equality (1999b, 40) and that no institution may be justified "on the grounds that the hardships of some are offset by a greater good in the aggregate" (1971/1999a, 13). To guarantee his principles of basic justice, he advocates what he calls a "well-ordered constitutional democracy", based on deliberation, where citizens "exchange views and debate their supporting reasons concerning public political questions" (Rawls 1999b, 138). Rawls' democracy maintains not only its liberal aspects, but also the institution of political representation, since he defines "public reason" narrowly: referring only to the official forums needed for achieving agreement in a pluralistic society (McCarthy 1994, 50).

Habermas' proposal is broader, he wishes to redefine basic concepts for human interaction using a collective lens, so that truth is what would be agreed upon by participants with equal capacities of discourse, equal social status, and with all of them focusing on the common good, while legitimacy is strengthened by requiring all those to whom for example a law applies to participate in its creation. Given ideal conditions for public reason (notably conditions of full inclusion, non-coercion, and equality), what Habermas calls the "ideal speech situation", he believes decision-makers can reach decisions that benefit the common

good. His conception of democracy fits in with advocates of "strong democracy" like Rousseau and Marx, extending the idea of sovereignty to the people rather than just their representatives. In this conception of sovereignty, not only actions but also laws are subject to Habermas' legitimacy test: they must gain "the assent of all citizens in a discursive process of legislation that in turn has been legally constituted" (1996, 110). This discursive process must take place at several levels, not just to arrive at the truth of the consequences of decisions, but to assess its moral rightness, to judge the authenticity of the different options available and their respective feasibility and efficiency. These discussions take place in Habermas' public sphere, which can be found not just in governing institutions but in any publicly accessible space where information is exchanged and sociopolitical discussion can take place, and where, importantly, free and equal citizens aim at a shared understanding of issues of public importance. Although Habermas initially identified this public sphere in early bourgeois democracies, he later conceded that his conception of public sphere was idealised, there are no instances in history where the ideal speech situation is consistently maintained. He instead proposes a pragmatic approach that joins philosophy with the social sciences so that his normative claims can be understood and tested within their modern historical context, that of a complex society where ideal conditions rarely arise, but of which the agents are intersubjective rational beings capable of creating meaning collectively.

Robert Dahl constitutes a school all by himself with a democratic theory that is partially founded on an analysis of the political economy. He picks up on the contention made by de Tocqueville in *Democracy in America* that liberty and equality would become incompatible ideas, an affirmation echoed by John Rawls who, as I have shown, tried to reconcile both concepts. Dahl (1985, 1) recalls how important figures of the American Constitutional Convention "were deeply concerned that political equality might conflict with political liberty". They feared that democracy, especially majority rule, could limit the rights of property owners (Ibid., 2). Majority rule is a theme that Tocqueville latches on to when analysing the democratic institutions in the USA, since he believed liberty to be the highest value and foresaw that, just as equality's rise was inevitable, so was the threat of a despotic majority, because in a democracy "all barriers to the unlimited exercise of power are removed" (Ibid., 9). Dahl places their assessments in the context of what was still largely an

agrarian society at the time, with a real possibility of, in particular white men becoming equal in property, knowledge, and standing. He tempers this with what really happened: the revolution of the modern corporation, which became the principal employer of most North-Americans (Ibid., 3). The liberty of these new corporate citizens, in Dahl's view, has seriously undermined the balance of political and economic equality, since corporations have direct access to political structures and the resources to sway political decisions in their favour. Dahl asks whether there is an "inescapable trade-off between liberty and equality, so that we can only enjoy the liberties we now possess by forgoing greater equality" (Ibid., 4). He proposes an alternative economic structure that he believes could "strengthen political equality and democracy by reducing inequalities originating in the ownership and control of firms" (Ibid.). The conflict between equality and liberty in his view resides in the broad definition of liberty, which includes a "personal and inalienable right to property" (Ibid., 161). Like McMichael and other political thinkers, Dahl classifies the current political economy as "corporate capitalist" (Ibid.). He singles out political equality as a crucial and determining value for a juster democracy, arguing that it is a pre-condition for other human values (Ibid., 5). In a similar vein, he identifies ownership inequalities as a major source of social, cultural, and economic inequalities (Ibid.). Dahl analyses in detail de Tocqueville's reasons to fear the "tyranny of the majority"¹⁵, aiming to find some core principles that may guide decision-making in a democracy so that both majority and minority interests are safeguarded. This leads him to define injustice and tyranny in a way that would permit teasing out the instances of their occurrence. Dahl agrees with Fishkin (1979, cited in Dahl 1985, 18) that there are no safeguards against tyranny: "[n]either procedural requirements, such as majority rule or its various modifications all the way to unanimity, nor absolute rights, nor 'structural principles' like John Rawls's two principles of fairness can be counted on to prevent tyranny". Dahl's original proposal for a fully functioning "polyarchy" is to strengthen associationalism and effect a change in enterprise ownership, with worker-owned and worker-controlled companies guaranteeing economic, social, and political equality and consequently a healthier democracy.

15 This famous concept by de Tocqueville touches upon the practice in most democratic governments to lend absolute sovereignty to the majority, with the corresponding risks that this power entails for the interests of minorities.

Another universalist, Salvador Giner, considers that it is more important to define human beings as moral persons than to pre-establish principles of justice or interaction. Giner, just as Rawls and Habermas, believes moral norms are produced through negotiation and agreement among different interest groups within a society. But this does not satisfy him as morally substantive. He calls for a revival of the Kantian categorical imperative (act only according to maxims that you would will to be universal law, placing all men and women on equal status in dignity and freedom, as ends rather than means), which he believes will lead to the production of a society based on moral principles, instead of the other way around (Giner 2012, 392). Like Kant, he is attributing responsibility and capacity for restraint to men and women. Giner believes human beings have moral intuitions and that our aim is "the dream of our civilization: that of making each individual, without exception, a rationally autonomous and morally sovereign being" (Ibid., 373). Giner is a representative thinker of the republican school, to which deliberative democrats also adhere. Republicanists advocate active citizenship and "republican virtue", or, as Giner calls it, "civic virtue" to counter an illuminated elite (aristocratic democracy) to run the political institutions (Giner 1998). In Giner's view, neither liberalism nor communitarianism are compatible with "full universal citizenship", only a republican polity—what he calls "third democracy"—creates the conditions for collective decision-making that promotes the common good. Giner wishes to revive republicanism, freeing the polity from both liberal formalism and the impasses of communitarian tribalism, handing responsibility for political decisions back to citizens, who, just as in Habermas' public sphere, enter into "constant, rational, secular and open dialogue" (Ibid.). For Giner, it is not enough to have political institutions to guarantee basic rights, what is needed is a vigorous citizenry.

Staying with the republicanists, it is important to mention the North-American political theorist Benjamin Barber as the epitome of contemporary "strong" democracy theory. Strong democracy, as defined by scholars Prugh, Costanza and Daly (2000, 112)—based on Barber's more complex conceptualisation—is when "people—citizens—govern themselves to the greatest extent possible rather than delegate their power and responsibility to representatives acting in their names", and when politics is "a fact of one's life, an expected element of it, a prominent and natural role in the same manner as that of parent or worker". Barber calls his

(republican) theory "participatory politics", contrasting his principles of "politics as a way of living" with the individual rights perspective of liberal democracy. A fierce critic of what he considers a "thin" version of democracy, whose values are "prudential and thus provisional, optional, and conditional—means to exclusively individualistic and private ends" (Barber 2003 | 1984, 4)—Barber wishes to develop an "alternative justification" for democracy, rescuing it from liberal culture, with which it has been associated for all of modern history (Ibid., 25). His alternative theory re-associates democracy with the idea of civic virtue based on participation, citizenship and political activity. The concept of "politics as a way of living" ties Barber in with the democratic theories of Hannah Arendt—who believed that the active engagement of citizens in the governance of public affairs provided them with public freedom, public happiness, and most importantly, political agency (d'Entreves 2014)—and of John Dewey—who called democracy "the idea of community life itself" (1927, cited in Barber 2003, 119). Barber himself rejects any resemblance to Arendt's thoughts (Ibid., 118). Just the same, these three theorists have in common that neither romanticised public life as a form of "associated life" nor humans as naturally cooperative and solidary. They believed humans had to strive to be citizens, to conquer what Arendt calls the artificiality of political life (d'Entreves 2014), but that when they did master this civic virtue, democracy became an "end as well as the means" (Barber 2003, 120), helping human relations to "transcend the necessities of life", in Arendt's words (d'Entreves 2014).

The deliberative democratic proposal

Deliberative democracy deserves a separate mention, since it has developed and matured as a school of thought for longer than any of the other "democracies with adjectives" and is cited by many scholars as a realistic extension to representative democracy. Deliberation as a criterium has also been taken up by other schools of democratic thought, whether they agree with the normative principles of deliberative democracy or not. John Dryzek (2000) therefore claims we can speak of the deliberative turn in democratic theory. Many heavy-weights in political and philosophical thought have contributed to the development of the core foundations of deliberative or discursive democracy (among them John Rawls, Joshua Cohen,

and Jurgen Habermas), while it is probably the democratic theory that has been most tested in empirical research.

The concepts of deliberative democracy and participatory democracy are sometimes used interchangeably, but should be distinguished: participation in political decision-making, a basic tenet of the participatory school, does not necessarily require the use of deliberation, a key condition for deliberative democracy. Deliberative democrats believe they are demanding more of democracy than the guarantee of basic rights. John Gaventa (2006) imagines an overlapping scale where proposals for more substantive democracy can be placed, ranging from strengthening democratic accountability through the promotion of a "robust civil society" (2006, 14); to inviting citizens to be "co-governors" through the institution of participatory practices (Ibid., 15); or improving the quality of "public talk" and the conditions for equality in public participation as proposed by deliberative democratic theories (Ibid., 17); and finally to the concept of empowered participatory governance as developed by Archon Fung and Eric Olin Wright (2003, cited in Gaventa 2006, 19)—which aims to institutionalise participatory practices in such a way as to both deepen the democratic substance as well as legitimise decisions emerging from these practices. These approaches all aim to elevate the citizen from a consumer exercising a right to choice (in the neoliberal democratic model) or as someone with strong rights to freedom from the state but an otherwise somewhat passive role in politics (in the liberal representative model), to a participant with strong rights as well as responsibilities (Ibid., 11-12). Gaventa believes the debate in participatory democracy has shifted from whether and how citizens should be involved in decision-making to what he calls "next generation questions" about concrete results of their involvement and respective implications for representative democracy (Ibid., 7).

For deliberative democrats the guarantee of citizen participation is not enough, they say the decision-making processes must also be deliberative, i.e. based on "means of arguments offered *by* and *to* participants who are committed to the values of rationality and impartiality" (Elster 1998, 8). Empirical research has in fact shown that more deliberative forms of participatory processes score higher on broad quality criteria (such as joint gains, added information and innovative ideas) than less-intensive stakeholder processes (Marris et al.,

2001; Beierle, 2002; Pimbert and Wakeford, 2003; Dryzek and Tucker, 2008). Simone Chambers (2003, 308), in her review of the history and status of deliberative democratic theory and practice, claims it is first and foremost a school that rejects liberal individualist or economic understandings of democracy, instead grounding itself in the concepts of accountability and discussion, so that "(t)alk-centric democratic theory replaces voting-centric democratic theory". The focus shifts from voting to the "communicative processes of opinion and will-formation that precede voting" and "(a)ccountability replaces consent as the conceptual core of legitimacy" (Ibid.). Thus, in her view, deliberative democracy is not designed to be an alternative to representative democracy, but rather its expansion. She places it in between the advocacy for rights (understood here as prioritising individual rights over interests of the State or a popular majority) and democratic theories that place community rights and the common good over individual rights (in line with communitarian theories) (Ibid., 309). Those steering this middle course, such as Jurgen Habermas, believe rights and popular sovereignty have a common origin, one does not exist without the other:

We are legal persons protected by rights only to the extent that we are authors of those laws. We are authors only to the extent that we are persons under the law. (Habermas 2001, cited in Chambers 2003, 310)

Without disregarding the enormous amount of literature available on the theories and projects of proponents of deliberative democracy, for the purposes of this chapter I will sum up the core arguments, relying on two of the theory's most active defenders:

- Democracy hinges on effective communication between all interested parties rather than the bargaining between or the aggregation of all preferences (Cohen 2003);
- Communication, when focused on the common good, brings those affected by decisions together to discuss alternatives on equal footing, making use of their capacity for reasonable arguments (Cohen 2003);
- The deliberative procedure is the main source of legitimacy of political decisions and even laws: "Just those action norms are valid to which all possibly affected persons could agree as participants in rational discourses" (Habermas 1996, 107).

In their analysis of deliberative democracy in practice, specifically looking at documented instances of public deliberation, Michael Delli Carpini, Fay Cook, and Lawrence Jacobs (2004, 325) find substantial indirect support for the "democratic potential of deliberation", but warn that this potential is "highly context dependent and rife with opportunities for going awry". Although there is even less research available on the political outcomes of deliberation than on its procedural aspects, the authors reach a similar conclusion for both aspects of deliberation. James Fishkin, a scientist who has designed practical models of deliberative democracy in several countries since the late 1980s, claims that deliberation "makes a difference and it makes a difference to both opinion and behavior" (Fishkin and Laslett 2003, 4). His experience with the format of Deliberative Polls that he created, shows that randomly selected participants *do* significantly change their opinion, that this can be linked to them becoming better informed, and finally that these cumulative changes have a large effect on their voting behaviour.

Deliberative democratic theory and practice is generally considered to have come of age, with a vast literature and over 25 years of experiments with deliberative publics, each of which extensively reported and cross-examined. Taking stock, some of its most recognised scholars now propose to go beyond "the study of individual institutions and processes to examine their interaction in the system as a whole" (Mansbridge et al. 2012, 2). In a systemic approach, the idea is to "assess institutions according to how well they perform the functions necessary to promoting the goals of the system" (Ibid., 10). The eight researchers suggest to use three largely consensual functions of a deliberative system—"seeking truth, establishing mutual respect, and generating inclusive, egalitarian decision-making" (Ibid., 22)—to assess the strength of certain groups of institutions and practices. Additionally, they describe five, what they call pathologies, which may hinder the deliberative ideal in any system: tight-coupling (when parts of the system are too linked to provide a self-corrective function); decoupling (when parts of the system stop being able to positively influence other parts); institutional domination by state, party, or other group with state-like authority; social domination by one type of social interest or by a social class; and entrenched partisanship (when all actors in the system are too sharply divided to listen to each other). Although deliberative theorists are not all agreed on the role of deliberation in democracy, in general they identify with three basic

functions for deliberative systems: epistemic, ethical, and democratic. The first refers to the goal of "produc[ing] preferences, opinions, and decisions that are appropriately informed by facts and logic and are the outcome of substantive and meaningful consideration of relevant reasons"; the second to the "promot[ion] of mutual respect among citizens"; and finally the third relates to "promot[ing] an inclusive political process on terms of equality" (Ibid., 11-12).

What Mansbridge et al. (Ibid., 25) call the "practical and empirical turn" in deliberative democracy has inspired a parallel, but more instrumentalist, field of research and practice, called "public participation". Before looking beyond the "tweaking" of liberal democracies, I will consider the contributions of this discipline, which has become extremely popular in liberal democracies.

The "thinness" of public participation

To evaluate the substantiveness of democratic proposals made by proponents of the field called public participation, I rely on Barber's dimension of "thin" versus "strong" democracy (Barber 2003). Thin democracies, he says, are founded on an individualistic rights perspective, vindicating private rights while undermining collective ones and diminishing the active role of citizens in democratic decision-making. Instead, a strong democracy celebrates the civic association amongst humans, and their capacity for sharing and interdependency. A strong democracy is "the politics of amateurs, where every man is compelled to encounter every other man without the intermediary of expertise" (Ibid., 152). Barber advocates that every citizen be "his own politician" (Ibid.). Barber's version of what he calls "participatory politics" requires citizens to take part in the definition of all the conditions for political debate: identifying values, issues, agendas, and options (Ibid., 157).

With these criteria in mind, I will now look at the concept and practice of public participation. The International Association for Public Participation defines public participation as "the process by which an organization consults with interested or affected individuals, organizations, and government entities before making a decision"¹⁶. To the critical democratic

¹⁶ IAP2: Good public participation results in better decisions, available: <http://www.iap2.org/> (accessed 6 May 2016).

scholar this definition immediately signals a loss rather than a gain in democratic substance, due to the implicit top-down approach. The definition leads me to think that public participation cannot be considered a theory in itself, but rather a practice that is informed by different theories.

The adoption of public participation practices in local, national, and supranational decision-making was a gradual process that is linked to the development of environmental consciousness and to the idea of "governance" beyond governments. Mark Reed traces the appearance of public participation back to the 1960s, when the focus was on raising awareness, with local perspectives included in data collection and planning in the 1970s, local knowledge recognised in new participatory techniques in the 1980s, participation becoming the norm in the sustainable development agenda in the 1990s, and finally, at the beginning of the twenty-first century, the first critiques of participation and "disillusionment over its limitations and failings" emerging (Reed 2008, 2418). Initiatives such as Participatory Budgeting, Citizen Juries, and Deliberative Polling are all examples of public participation. According to Reed (2008, 2418), the drivers most cited for the rise of citizen involvement in decision-making are:

- The recognition of the complexity, uncertainty, and potential scale of environmental problems that demands transparent, flexible and inclusive decision-making;
- the rising public scepticism about science and the public's increasing knowledge of, and interest in, environmental problems;
- the growing idea of a democratic right to be involved in environmental decision-making—as enshrined in successive international treaties: the 1992 Rio Declaration, the European Commission's White Paper on Governance¹⁷, and the 1998 Aarhus Convention¹⁸, but also in national legislation, for instance in member-countries of the EU;

17 EU Commission (2001). European Governance - A White Paper. COM (2001) 428 final, 25 July 2001, available: http://europa.eu/rapid/press-release_DOC-01-10_en.htm (accessed 20 November 2016).

18 The Aarhus Convention of the United Nations, available: <http://ec.europa.eu/environment/aarhus/> (accessed 2 May 2016).

- the embracing of concepts and practices of sustainability by an increasing number of scientists and politicians;
- and, finally, claims of higher quality and durability of decision-making that involves the impacted citizens.

Even the staunchest defenders of "free" global markets, such as the World Bank, have embraced some form of "participation" (see the 2009 World Bank's Guidelines for Multi-Stakeholder Engagement¹⁹). The integration of Agenda 21—the action plan resulting from Rio 1992—in local and national policy-making was especially successful in Europe. Many local and national governments have, at least in spirit, moved beyond the mechanics of representative democracy by introducing legislation that mandates not only integrating environmental concerns into decision-making but also consulting those that are impacted by these decisions.

Notwithstanding a number of encouraging examples of effective public participation (e.g. participatory budgeting in Brazil as reported by Avritzer, 2009; citizen-driven debate and decision-making on controversial technologies in India as reported by Pimbert and Wakeford, 2003), the jury is not out yet on its impacts. The review of best practices undertaken by Reed (2008) suggests that effective public participation is contingent on many different factors, such as the degree of empowerment and capacity-building in participants, the stages of the process that citizens are involved in, the representativeness of the participants, the degree of clarity and participants' agreement on objectives, the suitability of the methods for the context of a particular participation process, the skills of the facilitators, and the incorporation of local as well as scientific knowledge. So far, there are only enough indications to claim that public participation can in fact improve the quality of environmental decisions. As discussed under the section on deliberative democracy, deliberative forms of participatory processes are superior, according to broad quality criteria, to less-intensive stakeholder processes. The inclusion of lay people in even the most complex environmental issues has been shown to

19 Guidance note on bank multi-stakeholder engagement, available:

<http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/244362-1193949504055/4348035-1298566783395/7755386-1301510956007/Multi-Stakeholder-Engagement.pdf> (accessed 18 June 2016).

result in the generation of better, more consensual, sometimes highly creative alternatives, while they also help to educate, resolve conflict, and build trust (Beierle, 2002, Felt and Fochler, 2008). But at the same time, Reed (2008, 2426) warns us that the quality of decisions in participatory contexts is also contingent upon the factors mentioned earlier, or in other words, depends on the quality of the process that leads to the decision. Other scientists have found that participation is in most cases not associated with actual changes in the behaviour of public and private decision-makers, nor connected explicitly with the actual decision-making processes (Dubreuil and Baudé 2008, Sclove 2010). Brian Wynne (2005) questions the substance of public participatory initiatives, claiming the framing limits of these processes, such as the exclusive discussion of downstream effects and the embedding of the debate in risk discourse, are inhibiting substantive participation and failing to confront the deeper cultural assumptions and commitments of scientists and policy-makers. Wynne was one of the scientists involved in the European Commission's PABE project²⁰, which revealed entrenched views about the public shared by numerous policy actors. These preconceptions hinder the debate and increase the discrepancy between public demands and public policies (Marris et al. 2001). In their study, Ulrike Felt and Maximilian Fochler (2008) found that participation—in Europe—is too often presented as an end in itself and defined, and practised, in a top-down manner. Alan Irwin (2001) found that, at least in the British context, the link between policy concerns of citizens and practical outcomes of participated decisions is, at best, weak. The lack of substantive results in the democratisation of decision-making may be explained in part by the narrow view that policy-makers tend to have of public participation. Institutions of decision-making conventionally understand public participation to be the process wherein those institutions consult with interested or affected individuals, groups, or other organisations before making a decision (Rowe and Frewer 2004), as opposed to an on-going effort of joint deliberation and decision-making such as idealised by deliberative democracy (Dryzek 2000) and by “post-normal science”²¹ theorists (Funtowicz and Strand 2007). Fonseca, Schmidt and Delicado (2015), in their analysis of a popular participatory methodology called World Wide

20 *Public Perceptions of Agricultural Biotechnologies in Europe*, available: <http://csec.lancs.ac.uk/archive/pabe> (accessed 20 June 2014).

21 The concept of post-normal science was developed by Silvio Funtowicz and Jerome Ravetz as a methodology of inquiry that is appropriate for cases where "facts are uncertain, values in dispute, stakes high and decisions urgent" (Funtowicz and Ravetz, 1991, 138).

Views, found that, despite the enthusiasm of participants—who felt the discussion was impartial and balanced—this model tends to favour participants with higher education, limiting debate because themes are suggested in a top-down manner while the expression of opinions is restricted to a questionnaire. In another study, this one on risk perceptions, Delicado and Gonçalves (2007) confirm the "participatory" bias towards more educated and wealthier social groups, which have the conditions to search for (environmental) information, to process it, and finally, to act on it.

Whether despite or because of the disillusionment with formal public participation and the lack of results in attempts at global governance, uninvited forms of participation in policy-making have sprung up, changing the political landscape from easily identifiable and clearly delimited political actors to myriad amorphous organisations and movements that act across borders. These spontaneous forms of public participation, such as the rise of online petitions and online fora for mass mobilisation—sometimes resulting in off-line mass protests as was the case of *Acampadas* and *Occupy*, protesting against what are often construed as elite excesses or abuses of power—as well as local mobilisations against technocratic decisions, should, *en rigueur*, be grouped under what Pierre Rosanvallon has called "counter-democracy" or what Keane terms "monitory democracy": the emergence of "power-monitoring and power-contesting mechanisms, both within the 'domestic' fields of government and civil society and beyond, in cross-border settings that were once dominated by empires, states and business organisations" (Keane 2008, 3). Counter-democracy exists when citizens are no longer content to just cast their vote but wish to "express themselves", "become involved", and "intervene", actions that in Rosanvallon's view should be viewed "not as anti-democratic, but rather as a corrective to the failures of legitimacy in electoral democracy" (Jerónimo and Garcia 2011, 12). Despite the conceptual distinction, these spontaneous forms of bottom-up politics have positively influenced the generally top-down initiatives of public participation, freely experimenting with new forms of collective decision-making and lobbying. Facilitated by the communicative and organisational functionalities of the Internet, they may also have opened the way for what Andrew Chadwick (2007) calls "hybrid mobilization movements"—somewhere between an interest group, a social movement, and the wing of a political party—of which the Internet based organisations

350.org, Avaaz, and MoveOn are examples. These can be considered new attempts at governance, in the sense of rule-making, which are as innovative and flexible as they are democratically "thin" and potentially dangerous (see Horstink 2017 for an in-depth analysis of these new movements).

Rosanvallon (2008) is extremely critical of the twin concepts and practices of governance and participation. He argues that governance is too vague a concept, since it can refer to any form of rule-making, whether corporate or public. Its promotion and increasingly popular practice represent, in his view, a disfavour to democracy and to the idea of sovereign nation-states, since it implies the depoliticisation of decision-making under the guise of heterogeneous networking, complex decision-making, and a false absence of hierarchy (Ibid., 260-261). Choosing governance over the strengthening or transformation of liberal democracies opens us up to the risk of the subversion of national and international laws and of our deeper democratic ideals. Governance solutions tend to override national and international law, even when decisions are made by a minority of governments, corporations, and/or supranational agencies. Governance may seem like a quick fix to complex problems, but its publics are dubious (non-state actors can be any group ranging from indigenous tribes to multinational corporations) and its democratic quality, in the sense of *substance*, leaves much to be desired. Instead, its focus is on practical attributes, such as transparency and accountability, that are normally associated with business management practices, and that have now penetrated institutions of supranational decision-making, to which the UN's good governance guidelines can attest.²²

In a similar vein, Rosanvallon warns against seeing participation as a "simple and comprehensive solution to all the problems of democracy" (Ibid., 297). As examples of its limitations, he reminds us of the tendency for opinions to become polarised, the danger of systemic bias when following a "consensual as opposed to conflictual conception of democracy", and the impact of inequality in the resources of different participating groups (Ibid., 298). When participation really means consultation, pairing it with governance makes

²² UN governance guidelines, available: <http://www.ohchr.org/en/Issues/Development/GoodGovernance/Pages/GoodGovernanceIndex.aspx> (accessed 20 June 2013)

for a dangerous cocktail. This is what Gaventa (2006, 8) means when he warns that "democracy is an ongoing process of struggle and contestation rather than the adoption of a standard recipe of institutional designs". It is not enough to get the procedures of democracy right, "deepening democracy" means creating "a process through which citizens exercise ever deepening control over decisions which affect their lives" (Ibid., 11). Avritzer (2009) also criticises what he considers a Northern-inspired democratic elitism within the conception of democracy. In democratic elitism, public participation is the institutional answer to the fear that active minorities have of the "indisciplined masses" and their capacity for mobilisation. By institutionalising public participation, an elite may create the illusion of political inclusion, when in fact it is practicing social exclusion. Avritzer says:

Democratic elitism was based on two main theses: first that in order to be preserved, democracy must narrow the scope of political participation; and second that the only way to make democratic decision-making rational is to limit it to elites and to restrict the role of the masses to that of choosing between elites. (Avritzer 2002/2009, cited in Gaventa 2006, 13).

Nina Amelung and Britta Baumgarten (2017), editors of a special issue on transnational participation, make the bold recommendation to do away with depoliticised terms such as public participation, civil society, or civic engagement, and to instead use the term political participation. They cite Berger (2009, in Amelung and Baumgarten 2017) to define what they mean by this:

[...] political engagement encompasses most of the activities that we normally associate with political participation or citizenship: voting, contacting representatives, contributing financially to representatives or interest groups, following political issues (via any media format), associating with groups intended to influence political outcomes, attending rallies or demonstrations intended to influence political outcomes, or running for (or holding) political office.

They claim public participation is a misleading term because there is never just one public, rather, as Dewey proposed, there are many publics and each has its own issues. The confounding of public participation with participatory democracy is arguably a recent phenomenon: in reality, most democratic thinkers (Habermas, Saward, Beetham, Dahl, Avritzer) favour the term political participation, whereas the term public participation has

become popular mostly among environmental scientists and governance practitioners, who have drifted away from democratic theories towards instrumentalist approaches.

Beyond liberal democracy: radical theories

My journey into democracies “with adjectives” continues as I look at proposals that do not simply remedy or extend existing liberal democracy, but instead ask for the realisation of the foundational principles of democracy, bringing it closer to the ideal of “rule by the people”. Examples of classical attributes of democracy that are considered insufficiently realised are equality—although it may exist as a legal right, enormous social and economic inequalities persist, which can be argued to negatively affect people's political rights, as discussed under Marshall—and freedom—power imbalances limit the extent of freedom all people may enjoy. For example, people are not free to take up jobs anywhere they wish, they may not say all they like (risk of libel in some countries), and their unequal conditions may limit their choices. Even when citizens are, in principle, allowed to vote and run for public office, and when elections are regularly realised, these democratic *desiderata* are not necessarily fulfilled. Arjan Appadurai argues that the era of globalisation has brought to the fore a contradiction between the simultaneous practice of state-bounded democracy and weak respect for democratic values at the global scale (Appadurai 2001, 42), creating severe inequalities between peoples living in different parts of the world and, as Sklair (2001) argues, between peoples of different classes (a transnational capitalist class versus the rest of the world).

The conceptions of more “substantive” democracies that live up to or even improve on the original democratic ideal have been grouped under different names, which I will roughly classify as the schools of deep democracy and radical democracy. Some of the thinkers previously discussed (such as Barber) have proposed strengthening democracy in ways that approach them to the deep democracy school (which has a profound neo-humanist inspiration), compelling me to avoid over-classifying each typology.

Deep democracy originally emerged from the reflections of the Jungian psychologist Arny Mindell and offered a new way to see reality, based on a holistic appreciation of all people, all

awareness levels—both individual and collective— and all frameworks of reality. Mindell (2002, Preface) went on to develop concrete tools for deepening democracy in groups and forums, transforming group processes so that "everyone and every feeling" is represented and all participants are aware of the "diversity of people, roles and feelings" and of how to communicate and switch roles according to the requirements of the moment. Subsequent thinkers, in particular the philosopher Judith Green and the anthropologist Arjan Appadurai, have stretched the concept to societal and transnational levels, respectively. Green (1999, vi) advances the project of deepening democracy as an existential and cultural emergency, because there are strong indications that "*a purely formal democracy is existentially unsustainable and culturally unsustainable, as well as ideologically hollow and operationally subvertible*" (emphasis in original). She points to two pathologies that plague societies such as that of the USA: "existential nihilism"—where people lose all sense of security and agency and daily activities have no meaningfulness nor permanence—and "ontological rootlessness"—where the connection with place and with "communities of memory and hope" is disrupted (Ibid., vii). Green claims deep democracy is the ontologically and epistemologically more realistic project. Deep democracy "would prepare people to understand and to act effectively within the relational processes that are actually emerging within our shared social and natural environment" (Ibid., xiv). Green's book seeks to guide scholars from all disciplines to take full advantage of a comprehensive philosophy of deep democracy. Appadurai (2001) expands on this, claiming non-governmental actors are here to stay and part of a new paradigm for enlightenment and equity that transcends the traditional locus of politics at the nation-state. For Appadurai, deep democracy is a "democracy without borders" (2001, 43), developed from the roots up in local conditions and offered as a mediator of the "speed of capital, the powers of states and the profoundly local nature of actually existing democracies" (Ibid., 39).

Within radical democracy, many subtypes have been proposed, some of them the product of a single scholar, such as ecological democracy (of which Vandana Shiva's earth democracy is a sub-subtype), inclusive democracy (Takis Fotopolous), social ecology (Murray Bookchin), living democracy (Frances Lappé) or empowered democracy (Roberto Unger). As the term implies, radical democracy returns to the roots of democracy. It does not accept the liberal

compromise of a having a bit less political influence in exchange for individual and largely consumption-based freedoms. In most instances, rather than adhering to the individualist perspective of democracy, it embraces the communitarian view, placing the group or community and its common resources over the individual and his or her needs. Roberto Unger (1987, 213) defines radical democracy as "one that carries to a further extreme the authority of combinations of will over social arrangements" and that "destroys privileged holds upon the resources for society making" (Ibid., 286). While different inspirations exist (participatory politics as proposed by Polletta, 2002; a post-structuralist view of power as suggested by Laclau and Mouffe, 1985; or concerns with global social justice as in the case of Della Porta, 2004²³), the proposals all have in common a contestation of all forms of power hierarchies and the care they take to avoid "totalizing grand narrative(s)" (Pickard 2006, 22). Ernesto Laclau and Chantal Mouffe (1985/2001) are generally credited with conceptualising and popularising the term radical democracy, although many other thinkers (like Paulo Freire decades before) have offered what can be termed radical proposals for democratic practice. Laclau and Mouffe argue that oppressive power relations in society should be made visible in order to change them. They propose to build democracy around difference and dissent. A key concept in their influential thinking is hegemony²⁴, adopting Gramsci's definition, as an explanation for the "very unity existing in a concrete social formation" (Laclau and Mouffe 2001, 7). In the authors' view, hegemony explains the dynamics of oppression better than the concept of class. They consider the Jacobin imaginary of a "unitary and homogeneous collective will" and on "history in the singular" to be on the verge of being dissolved, creating a theoretical crisis, which they propose to solve through the logic of hegemony, framed as a "logic of the social", a new definition of social relations (Ibid., 2-3).

Joshua Cohen and Archon Fung (2004) take a different perspective on radical democracy, bringing it back into the folds of realist democrats. This deradicalisation of radical democracy is questionable, especially since other democracies "with adjectives" (single or double) exist that could satisfy these deliberative democrats' desires for distinguishing their project (i.e.

23 Authors cited in Pickard 2006.

24 Antonio Gramsci is credited with the concept of cultural hegemony, which demonstrates how a dominant class need not rule through oppression, but by having its definition of reality accepted by other classes as common sense.

strong democracy or deep democracy). Nevertheless, there is some merit in their suggestion of typifying a radical project according to its focus on three political values: responsibility (in the sense of civic virtue), equality, and political autonomy (linked to legitimacy in the sense that people should "live by rules they make for themselves"). But their solution stays within participatory-deliberative arrangements that enter into a dialectic with arrangements of competitive representation, hopefully transforming and strengthening each other. This account leaves out core questions that Laclau and Mouffe answered more convincingly, albeit complexly, through the concept of hegemony. When issues of power are not addressed, any democratic solution risks being co-opted within the dominant discourse.

Finally, radical democratic practice and thinking in the last two or three decades has benefited greatly from the (re) emergence of the values, experiences, practices, and world views from indigenous and peasant communities that were forced to fight for their lives and livelihoods when corporations, often supported by local or national governments, took the place of the old "conquistadores" in depriving them of their land and resources. The philosophies of Buen Vivir or living well (I use the plural because unlike the Western ethical tradition, Buen Vivir is not a universal proposal but a diversity of world views that share some key principles), and its counterparts in India (Swaraj or self-rule) and Africa (Ubuntu or humanity) are original in that these alternative proposals for social and economic organisation come from groups that have been traditionally marginalised, namely indigenous tribes and peasants (for a more complete explanation, consult Kothari, Demaria and Acosta 2014). Social movements and radical democratic scholars have picked up on these philosophies and politicised them, while two countries, Ecuador and Bolivia, have actually institutionalised the rights pertaining to Buen Vivir. What grants the sister concepts of "Buen Vivir", "Swaraj" or "Ecological Swaraj", "Ubuntu", and the more recent umbrella concept of food sovereignty as well as the Northern-born idea of degrowth, their counter-hegemonic appeal is the fact that they invert the role of the community versus the market, and that they equate the rights of people with the rights of Nature—not to mention that they demand that these rights trump any private economic rights. This represents the most radical break with the anthropocentric capitalist tradition attempted thus far, and is also what makes these alternative world views so subversive in the eyes of the established powers. As an example, in this alternative world view, the rights of the community

are allowed to curb the freedom of individuals—including legal persons such as the corporation—when this freedom encroaches upon the well-being of the entire community or the health of the natural organisms it depends upon.

I will now look at some spin-offs from radical democracy before finalising with concrete democratic proposals centred on the food system.

Takis Fotopoulos, who is simultaneously extensively praised and criticised, has earned his place in the democracy debate. He espouses the most radical of approaches within the radical democracy current, and is therefore very useful to the task of finding measures of substantive democracy. Fotopoulos' Inclusive Democracy project rejects the enlightenment's belief in progress and, like Laclau and Mouffe's proposal for radical democracy, places power structures and relations at the centre of the analysis, postulating that these "structures and relations [...] crucially condition values and culture rather than the other way around" (Fotopoulos 2000). This places him, as well as Laclau and Mouffe, and other radical/ecological democrats, firmly apart from the reformist and progressive proposals for deepening democracy. Fotopoulos is highly critical of post-modernist and what he calls "new social movements" (he places political Greens and feminists in this category). He advocates creating new structures based on new outcomes (for example, alternative economic institutions to work towards a confederal economic democracy), rather than teaching people a new ideology and values. Fotopoulos argues that we can only get rid of the growth ideology and its internalisation through consumerism, by dismantling the market economy and "its offspring, the growth economy" (Ibid.). Our current commitment to affluent living standards stems from the internalisation of "the values and ideology of the market economy's ruling elites" (Ibid.). What Fotopoulos (Ibid.) calls "life-style changes" are not sufficient to "create an alternative consciousness for a radical transformation of society, as they do not specify any clear aims related to the institutional framework of a sustainable society". The philosopher and economist proposes instead to fuel a mass political movement that has as its main aims: "to replace the market economy and representative 'democracy' with institutions securing the equal distribution of political, economic and social power and to create a new 'hegemonic' ideology based on the values of inclusive democracy". An inclusive democracy brings polity,

economy and Nature back together in society, from which they have been long separated, leading Fotopoulos to establish the abolition of state, money, and market as *sine qua non* conditions for the realisation of his democratic project. Fotopoulos rejects movements (such as many deep ecology movements) that embrace spirituality as part of the development process, arguing that "irrationalism is incompatible with a democratic society" (his take on rationalism is based on reason and/or an appeal to facts, as opposed to intuitions, instincts, feelings, or revelations). Instead, the movement Fotopoulos and his supporters advocate is one that works at two levels from the start: changing ideas and values, and changing structures. By creating "popular bases of political and economic power", i.e. "local public realms of direct and economic democracy", the movement works to change social organisation from the bottom up. Fotopoulos presents both a strategy and a programme for the inclusive democracy project in the book he edited in 1997, *Towards an inclusive democracy*.

The political theoretician Murray Bookchin initially was an inspiration for the inclusive democracy project, but ended up parting ways with Fotopoulos. Bookchin developed his own "liberatory social project", to aid the "transition from a hierarchical society to an ecological one" (Fotopoulos 1999). Like Fotopoulos, Bookchin had a Marxist background, and like him later embraced libertarian socialist views, incorporating the concept of ecology as a political category to the New Left (Bookchin 2015, Introduction by Debbie Bookchin). He was the first to "equate the grow-or-die logic of capitalism with the ecological destruction of the planet" (Ibid.), even before Rachel Carson's *Silent Spring*. His readings and reflections led him to propose the theory of "social ecology", tracing the "historical, anthropological, and social roots of hierarchy and domination and their implications for our relationship to the natural world" (Ibid.). His interest and experience with face-to-face participatory democracy, general assemblies, and confederation, led him to dedicate the last fifteen years of his life to the democratic concept of communalism or communalist politics, proposing libertarian municipalism as a concrete first step towards its realisation. The basis of his vision is the recurrent formation that can be found in any revolutionary moment in time: the phenomenon of the popular assemblies, what Hannah Arendt called the "lost treasure" of the revolutionary tradition (Ibid.). Bookchin is one of few thinkers to avoid entrapment by the attraction of democracies with adjectives and to propose a profoundly new ideology, firmly grounded in

the necessities of our time, arguing against ideological extremes and offering instead a radical but realistic emancipatory alternative. Libertarian municipalism walks a political middle ground between accepting an authoritarian state and demanding full autonomy, without avoiding any of the issues discussed under Fotopoulos (i.e. the need to confront power relations and an irrational growth paradigm). By infiltrating local government while changing its structures, and then linking municipalities in a confederation, using the institution of the popular assembly for decision-making, Bookchin believes humanity has a real chance of fulfilling a liberatory social project that combines "the state and the street".

Bookchin also brought his theories to bear on agriculture, which he considered a "social and cultural phenomenon unique to humanity" that has been "reduced to a mere industrial technique" in the past century, "divorced from its roots in the totality of nature". Bookchin (1976) early on advocated a radical approach to agriculture based on the recognition of the land as our home and that of the species supporting us (*oikos*) and letting go of the illusion that humans are the masters of the natural world. A radical agriculture combines science and art in an ecological outlook that is not just environmentalist, but holistic, communitarian, and anti-Promethean. It should be part of an ecological society, as opposed to isolated, and aim to re-establish ecocommunities that link decentralised cities to villages and the land, "scaled to human dimensions, both to afford the greatest degree of self-management possible and personal comprehension of the social situation" (Ibid.). It should be guided by what Bookchin calls an "ecotechnology", which chooses a middle way between existing "highly centralized labor-extensive forms on the one hand and decentralized, craft-scale labor-intensive forms on the other" (Ibid.). It is easy to see how this vision of radical agriculture fits in with the proposal for libertarian municipalism Bookchin was to develop later in life. It enriches both the democratic and the ecological dimension of his proposal for social organisation.

Leslie Sklair—discussed several times in this thesis—has a Marxist inspiration similar to that of Bookchin and Fotopoulos. He analyses alternatives to capitalism and their relative usefulness in facing the double crisis he has identified—class polarisation and ecological unsustainability. These are: cooperative democracy, socialist globalisation, and the culture-ideology of universal human rights (Skclair 2002, Chapter 11).

"By genuinely expanding the culture-ideology of human rights from the civil and political spheres, in which capitalist globalization has often had a relatively positive influence, to the economic and social spheres, which represents a profound challenge to capitalist globalization, we can begin seriously to tackle the crisis of class polarization and ecological unsustainability". (Sklair 2002, 299)

In Sklair's view, an expansion of human rights should be the basis of a new world order, while cooperative democracies would be the transitional forms of society—helping to strengthen the agenda for self-reliance and localisation—whereas the final objective would be socialist globalisation. He shows how the broadening of human rights is a realistic project, since there is growing recognition of the positive link between human rights and human development (as evident in the UNDP Human Development Report, 2000, and in the discussion on the right to food, presented earlier). Parallel to these demands, the movements for the inherent rights of Nature and for the recognition of the crime of ecocide are finding echo with ever more politicians²⁵. Sklair presents examples of market socialism—an intermediate step towards social globalisation—such as producer co-operatives in Spain that are countering undemocratic corporations with democratically run workplaces, the exclusion of public utilities and resources from the market, and the restriction of private ownership of productive resources in general (2002, Chapter 11). The minimum condition for these alternatives is that "private ownership of the means of production, distribution, and exchange is restricted to small-scale enterprises, in order to prevent the emergence of a transnational capitalist class and its local affiliates" (Ibid., 302). Sklair's conception of democracy is that of a participatory, bottom-up democracy, where people "have an ongoing voice in what is done in their names" (Ibid., 323). His practical proposals can be aligned with those of Dahl, Fotopoulos and Bookchin (who all advocated decentralising economic control), as he believes the ideal basic units of socialist globalisation to be self-governing producer-consumer cooperatives.

It appears most of the radical democratic proposals embrace the joint cause of social and ecological justice. I will look at a few more examples, before turning to food-centred democratic proposals. Berkeley-based Randolph Hester, who combines landscape architecture and sociology as his passions, explains why ecological democracy makes sense:

25 The last Climate Summit also provided a stage for the Third International Rights of Nature Tribunal, organised by ecological movements in collaboration with renowned lawyers. Information available: <http://therightsofnature.org/rights-of-nature-tribunal-paris/> (accessed 16 May 2016).

Democracy is government by the people. It is exercised directly through active involvement in a locality and indirectly through elections, following principles of equality and attending to individual needs and broader community goods. Ecology is the science of the relationships between organisms, including our environment and us. It encompasses the study of natural processes, ecosystems, and interactions of humans with each other, other species, and the cities we occupy. It includes principles of social and environmental function and interconnection. It is also a comprehensive, long-term way to think creatively. Ecological democracy, then, is government by the people emphasizing direct hands-on involvement. Actions are guided by understanding natural processes and social relationships within our locality and the larger environmental context. (Hester 2006, 4)

Ross Mitchell defines ecological democracy in a more pragmatic manner, coming closer to a minimum requirement for a liberal democratic society that recognises the inevitability and democratic foundation of a strive for sustainability:

Ecological democracy can be conceived as an alternative democratic model that: 1) strives to incorporate interested citizens into environmental decision-making, and 2) lacks structural features that systematically concentrate environmental amenities into the hands of particular social groups, while imposing environmental and ecological degradation on others (Mitchell 2006, 463).

The environmental geographer Michael Mason (2012), who prefers the term environmental democracy, reminds us that the origins of modern environmentalism, especially in Europe, were largely conservative, with its defenders believing that the conservation of natural resources was compatible with the maintenance of elite democracy. It was only in the 1960s, after the publication of *Silent Spring*, that environmentalism developed into many different political projects. The environmental euphoria was short-lived, as early as the 1980s neoliberals started gaining ground, sowing denial of systemic environmental problems. Nevertheless, within liberal democracy, conceptions of strong sustainability, strong equality, and justice, such as those advocated by Habermas, Rawls and Barber, although largely reformist, helped to gain recognition for the imbalance between the economic and the political maturity of Western societies, and broke ground for more participatory approaches to decision-making. But Mason (2012, 38-39) argues that in order for environmental democracy to "acknowledge the critical, irreplaceable, role of formal political institutions (and environmental planning) in making collectively binding decisions", it will have to be a more critical project than the liberal perspective provides. Mason attributes a moral and a

deliberative dimension to environmental democracy, suggesting that "those existing democratic practices and institutions which further environmentalist ideas in an inclusive manner are more likely than market-based or bureaucratic decision-making models to generate decisions which are strongly responsive to social and ecological concerns" (Ibid., 212). Finally, at the global level, Mason suggests embracing an environmental rights project and opening up obligatory spaces for collective decision-making at national and supranational levels whenever environmental implications are expected.

The concept, also considered a perspective, of the "commons", bears relation to ecological democracy but spurred its own theory and practice called democracy of the commons or commons democracy. The term derives from a traditional English legal term that was most famously used in the 1968 article by Garrett Hardin entitled *The Tragedy of the Commons*, which spurred a debate on management of common resources that continues to this day. The late Elinor Ostrom rescued the term from the doom that Hardin condemned it to and provided many examples of successful commons management, besides systematising the factors involved in developing ecologically and socially sustainable co-governance of common resources. She argued both against strong state control over resources and against market control (i.e. privatisation of common resources by either corporations or individuals) as solutions to resource dilapidation, proposing a third way: the development of durable cooperative institutions which are run by the resource users themselves (Ostrom 1990). She managed to identify the variables, rules, and constraints that are at play in complex systems of so-called "common-pool resource management", and developed an open-ended framework for the self-organisation of common-pool resources. She never explicitly formulated a democratic theory to sustain her perspective for resource governance, but around her thought and work a current sprung up, summarised by Joan Subirats in the following way:

The great objective of democracy should be to build a world capable of including everyone. Everyone as they are. A democracy inserted in a world that is not obsessed by continued growth while sniffing at the consequences that this brings. A democracy in a world that allows for a reconciliation between subject and nature. A common world. (Subirats 2011, 5-6, my translation from the Castellan)

Subirats argued that the reflection over commons management has matured enough for us to elevate it to the status of socio-economic paradigm. Inspired by Harold Laswell's definition of

politics as "who gets what, when, how",²⁶ Subirats places the commons back into the centre of policy-making. In this way, a new logic of governance emerges where needs trump consumption, use and relations trump exchange and transactions, relative abundance replaces scarcity, cooperation takes over from competition, sharing from a standpoint of autonomy takes over from an authority in charge of regulating conflict (Subirats 2011, 78-79). Subirats believes the commons perspective opens up very different paths than the ones we have become used to and that are often presented to us as the only ones possible. Instead of the State-Market dichotomy that offers us a choice between hierarchy and competition, a democracy and economy based on a shared responsibility for the commons have the potential of creating a space of social autonomy where state and market have subordinated roles.

As Hester aptly puts it, the building of ecological democracy is like preparing for a wedding with "something old, something new, something *recurring*, something *true*" (Hester 2006, 4, italics in original). Hester understands it as the marriage of applied ecology and participatory democracy: two areas that enliven each other, direct democracy infusing ecology with local wisdom and the community spirit, ecology supporting democracy with the knowledge needed to create sustainable human habitats. In my observation, theorists that combine more substantive forms of democracy with strong ecological concerns, whether they call their approach social ecology, political ecology, ecological democracy, environmental- or earth democracy, will premise a strong correlation between political-economic choices and levels of social and environmental development versus degradation. They will argue that the benefits of economic growth are more likely to accumulate in the hands of an elite of countries and powerful classes within those countries, whereas the costs (such as pollution, loss of soil and biodiversity, less access to nutritious food, and increased poverty) are largely supported by poorer countries and more vulnerable population groups. They will point out a direct link between increased economic prosperity and increased environmental burden, arguing the former is "predicated upon the increased *privatized-maximization* of profits via the increased *socialized-minimization* of the costs of production" (Faber and McCarthy 2003, 38, italics in original). Furthermore, they will argue that the balance of power between capital, state, and communities decides where the weight of the ecological burden will rest (Ibid., 39). They will

26 This is the subtitle of Harold Laswell's 1950 book on politics, cited in Subirats 2011, 77.

usually embrace the notion of environmental justice, understood as the fair distribution of benefits versus environmental risks and harms across social groups (Dryzek 1999; Faber and McCarthy 2003). Finally, proponents of ecological democracy converge in the belief that bringing the potential victims of environmental degradation within the political process not only improves the fairness and legitimacy of environmental decision-making but also its quality, in terms of the effective protection of natural resources and satisfaction of those that depend on them.

Thinkers of ecological democracy differ, however, on how far they are willing to go in their rejection of the industrialist model of production and how much autonomy they grant the communities that are affected by social and environmental degradation. Some thinkers remain within the liberal tradition, even though they firmly reject neoliberalism, instead advocating the effective realisation of the principle of democratic equality in order to achieve "ecological rationality" (Dryzek 1999, 266). But others, like Ashish Kothari and Vandana Shiva have become voices from the "radical ecological democracy" current, opening up a new tendency for *double* adjectives to distinguish between the plethora of democratic proposals and projects. Radical ecological democrats add, to the basic tenets of ecological sustainability and social equity, values that are part of a vision of an alternative world, inspired by indigenous tribes and peasant communities, such as respect for diversity and pluralism, the need for cooperation instead of competition, assigning responsibilities to rights—i.e. ethical citizenship—recognising the dignity of labour, acknowledging the subsistence economy—which sustains most small farmers and rural populations—and finally, envisioning a new conceptualisation of the Buen Vivir or "good life" as "simple living and the qualitative pursuit of happiness" (Kothari 2009, 404). Vandana Shiva, having developed her democratic theory over the course of three decades in which she was engaged in diverse social and environmental movements, calls her version of struggle-inspired ecological democracy "earth democracy"²⁷. Contrasting with the social-liberal and deliberative-democratic traditions, and with the more anthropocentric theories within radical democracy, these two views connect with indigenous traditions and values, going beyond purely cognitive arguments, placing common interest over individual interest. Vandana Shiva phrases it as follows:

27 This is also the title of her 2005 book.

Earth Democracy is both an ancient worldview and an emergent political movement for peace, justice and sustainability. Earth Democracy connects the particular to the universal, the diverse to the common, and the local to the global. It incorporates what in India we refer to as *vasudhaiva kutumbkam* (the earth family)—the community of all being supported by the Earth. Native American and indigenous cultures worldwide have understood and experienced life as a continuum between human and nonhuman species and between present, past, and future generations. (Shiva 2005, 1)

In this outward-going perspective, the need for ecological democracy comes from a profound, empirical understanding of the interconnectedness of all life. There is no attempt to achieve rational enlightenment, because it is assumed we can rely on a collective consciousness and wisdom that goes back to the dawn of humans. This traditional wisdom tells us "the earth does not belong to man", in the words of the nineteenth century Indian chief Seattle (cited in Shiva 2005, 1). Earth democrats denounce the ownership of the rich because it is based on the dispossession of the poor (Ibid., 2). As I have discussed in the chapter on Political Economy, the concept of ownership has been stretched to include the reproductive capacity of life itself. Shiva (2005) denounces the "ownership society" that she claims is leading to a new and final "enclosure of the commons" (a reminder of the tragic dispossession of English small farmers in the eighteenth century, when common land was converted into the exclusive private property of large landowners). Shiva proposes the concept of "living economies" where "the earth's resources are shared equitably to provide for our food and water needs and to create meaningful livelihoods", economies that are globalised through "ecological processes and bonds of compassion and solidarity, not the movement of capital and finance or the unnecessary movement of goods and services" (Shiva 2005, 5). Similarly, earth democracy is a living democracy where fundamental freedoms and basic rights are reclaimed, while people accept common responsibility to "protect life on earth, defend peace, and promote justice" (Ibid.). Shiva coined ten principles that have served as an inspiration for communitarian movements:

1. All species, peoples, and cultures have intrinsic worth;
2. The earth community is a democracy of all life;
3. We must defend biological and cultural diversity;

A global food polity

4. All beings have a natural right to sustenance;
5. Earth democracy is based on economic democracy, which protects the common good;
6. Local economies are at the heart of living economies;
7. A living democracy means inclusion, diversity, ecological and social responsibility;
8. Earth Democracy is based on living cultures, that each have equal right to existence based on our shared humanity and shared membership of the earth community;
9. Living cultures are not only diverse but ecological, based on reverence for life;
10. What is globalised is peace, care and compassion as opposed to competition, conflict, greed and fear.
(Shiva 2005)

Vandana Shiva connects neatly with the food democrats who will conclude my forage into democracies with adjectives, because she chose to focus on seed, food, and water—resources she considers vital to the survival of the human species—in her endeavour to help shape an earth democracy.

To make the review of “double-adjective” democratic proposals more complete, I should expand a bit more on the concept, currently also a political slogan, of *degrowth*. The term was proposed by political ecologist André Gorz in 1972 but only three decades later picked up by environmentalists keen on re-politicising environmentalism, which by then had been thoroughly weakened by ideas of reformism, ecological modernisation²⁸ and “green growth”²⁹. We can read in the article reviewing the evolution of the degrowth current of thinking that “degrowth is an attempt to re-politicise the debate on the much needed socio-ecological transformation, affirming dissidence with the current world representations and searching for alternative ones” (Demaria, Schneider, Sekulova, and Martinez-Alier 2013, 192). More than 40 years ago, Gorz already foresaw the paradox between the survival of the capitalist system

28 Ecological modernisation “claims that new technologies and efficiency improvements are key solutions to the ecological crisis” (Demaria et al. 2013, 198).

29 Green growth is understood by the OECD (Organisation for Economic Co-operation and Development), one of its major proponents, as “fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies”. Available: <http://www.oecd.org/greengrowth/whatisgreengrowthandhowcanithelpdeliverustainabledevelopment.htm> (accessed 15 December 2016).

and the need to halt or even invert growth as a necessary precondition for global equilibrium (Gorz, 1972, in the proceedings from a public debate organised by the Club du Nouvel Observateur, cited in Demaria et al. 2013, 195). Currently employed as a counter-hegemonic discourse, degrowth, despite being a product of European schools of thought, shares some interesting similarities with the radical democratic proposals from the Global South: the idea that ecosystems (in Buen Vivir philosophies these terms are not used, instead they speak of Nature or Mother Nature and living beings) have value in themselves and do not simply provide useful resources or services; the idea that we may privilege the survival of these ecosystems / living organisms over industrial production and consumption systems; a rejection of the idea of growth as development and of “human beings as economic agents driven by self-interest and utility maximisation” (Ibid., 197); a re-conceptualisation of what constitutes well-being; and a strengthening of popular control over essential natural resources. The equally recent concept and slogan of food sovereignty also shares these communitarian and bio-centric principles. Like food sovereignty, degrowth also draws on additional disciplines and schools of thought, both enriching and diversifying the concept. Among these are ecological economics, commons democracy, post-normal science, and the concepts and practices of environmental justice and climate justice activism. Unlike food sovereignty, degrowth is not a universal proposal, but a dynamic academic as much as activist field, where some thinkers complement others, and other thinkers get into conflict with each other. Whereas many degrowth activists focus on actively opposing the existing growth paradigm, others prefer to build the alternatives for a “degrown” society, and there is no agreement on whether reformism rather than revolution may be used as a transitional strategy. Demaria et al. conclude that degrowth is a good example of a science that is led by activists, bringing an activist slogan into the academic arena where it may be strengthened in the ensuing debate, and then fed back into activist struggles (Ibid., 210).

Where degrowth differs markedly from democratic proposals from the Global South, including food sovereignty, is in its relative silence on class issues, whether the growing inequalities that can be observed in even the wealthiest countries or the conflicts between industrial elites (including corporations and the governments, supranational institutions and

financial enterprises that support them) and the poorest of the poor: indigenous peoples and peasants.

Proposals for food democracy

The term food democracy was popularised by the social psychologist Tim Lang in the late 1990s. He felt the study of food politics was enlightening because it touches not only on our modern economies but also our modern societies, and requires drawing on many different disciplines in order to reach a comprehensive understanding of their workings and implications. He launched the idea of food democracy to "highlight the great struggle over the centuries, in all cultures, to achieve the right of all citizens to have access to a decent, affordable, health enhancing diet, grown in conditions in which they can have confidence" (Lang 1998, 18). Neva Hassanein picked up the thread when she analyses the concept's usefulness in achieving change in the food system in her 2003 article. She asserts that, since the discussion over the sustainability of food and agriculture systems is deadlocked in conflicts over values and in uncertainty as to outcomes of the different approaches, democratising the agro-food system appears as a pragmatic choice to further its transformation. Hassanein quotes Prugh et al. (2000, in Hassanein 2003, 79) who in turn draw on Benjamin Barber's strong democracy theory to argue that "because the conflict is about values, sustainability must be socially and politically defined". Food democracy means "people can and should be actively participating in shaping the food system, rather than remaining passive spectators on the sidelines" (Ibid.). Hassanein believes food democracy would not be complete without what Welsh and MacRae (1998, cited in Hassanein 2003, 80) call "food citizenship": when people are empowered to regain the food-related skills that have been lost with the industrialisation of food, transforming them from "passive consumers into active, educated citizens". Hassanein (Ibid., 83) creates a parallel between the rationale of post-normal scientists for the application of a more participatory, non-linear science, and the rationale for food democracy—"a method for making choices when values and interests come into conflict and when the consequences of decisions are uncertain". Hassanein (Ibid., 84) concludes that food democracy can be considered a pragmatic methodology in Dewey's

understanding of democracy—as a process, "an ongoing method requiring gradual, participatory, intelligent action on the part of educated and informed publics".

The struggle to elevate access to food and to resources to produce food to an intrinsic right benefited tremendously from the tireless work of engaged researchers to document and map the failings of the food system. Though they are many, two merit special mention: Josué de Castro and Frances Moore Lappé. Already in 1946, Josué de Castro, physician, social scientist, author, activist, and the son of a farmer, published the first book of many on the phenomenon of hunger, *The Geography of Hunger* (later republished as *The Geopolitics of Hunger*). His work was highly original, because at the time hunger was an under-recognised problem and its causes, mostly economic, were obscured. De Castro divided Brazil into food areas classified according to food availability (type and quantity) and food accessibility (affordability). For example, if half of the population in a certain area suffered from malnutrition, that area would be classified as an "area of endemic hunger" (Vasconcelos 2008). De Castro made an important link between socio-economic class and hunger and denounced the reigning ideas that the hungry were just lazy and that over-population caused hunger, attributing responsibilities to the capitalist class and to the state in the persistence of hunger. During his time at the Food and Agriculture Organisation of the United Nations, his ideas became known worldwide.

Frances Moore Lappé followed De Castro's footsteps when in the late 1960s she started investigating the causes of poverty, in particular the way hunger is linked to poverty, and in the course of her research discovered that the world was actually producing enough food, but that the food system that had been put in place perpetuated hunger. This led her to publish *Diet for a Small Planet* in 1971, a book that helped denounce both the myth that hunger persists because there is not enough food and too many people, as well as the dramatic environmental and social consequences of the modern Northern diet, in particular its reliance on meat (Lappé 1971/2010). Lappé is famous for saying that the problem of hunger and malnutrition is not "scarcity of land or food [but] scarcity of democracy" (Ibid., introduction to the 2010 edition).

Conclusion

The first chapter of this thesis attempted to reconstruct the political economy of the food system. My analysis revealed the dominance of a political and economic elite on the structure, decision-making, and outcome of human food production and distribution activities, on a global scale. This elite, which Sklair calls the transnational capitalist class, secures its power on the one hand by relying on the path dependence that characterises the global growth economy and locks it in institutions that are favourable to an elite, and on the other hand by fomenting the "culture-ideology of consumerism"—persuading people that "the business of society is business" (Sklair 2001) and that there is no alternative to global capitalism (Sklair 2002). Inspired by Friedmann and McMichael's idea of regimes, and by Garcia and Shiva's analysis of the "ownership society", I have tentatively called the food system that is now in place, the "biocapitalist food regime", in which the commodification and ownership of Nature, a necessary condition for capitalist expansion, has breached hitherto "recalcitrant" sectors of activities—not just agriculture but the reproduction of life itself. The present chapter then embraced the lengthy, never complete, but important task of reviewing the concept and practice of democracy in what some have aptly called a commercial society. If certain elites, among them corporations, powerful governments, and supranational institutions that were not mandated through democratic processes, are deliberately (often covertly) subverting political decision-making, this is a serious threat to the basic democratic values of freedom, equality, and responsiveness, making our liberal democracies very "thin", in Barber's words. It is also a considerable threat to the realisation of even the most conservative notions of food security. "Thin" democracies that are based on an economic rationale have no incentive to adequately feed the world, especially those who can't afford what's offered on sale. In my search for remedies to heal the democratic and ecological gap in political decision-making, I therefore scrutinised democratic theories, ranging from those extending or strengthening liberal democracy, to those calling for a new economic order—for example where workers rather than corporations call the shots. Taking into account the progress made at supranational level with the expansion of human rights to include economic and social rights, some of which have already been adequately operationalised (such as the right to food and to resources to produce food), any proposal for a more substantive democratic form of

social organisation, would greatly benefit from using these established rights as their foundation—even in the absence of an international court to judge violations of the right to food. Human rights is a well-established doctrine in multiple disciplines, able to generate consensus among widely different schools of thought. Taking these rights and expanding them as far as they will logically and morally stretch, will then provide room to add other criteria of democratic quality, whether related to content, procedure, or outcome of democratic processes. Starting with the most solid theories and theorists, it is possible to build a model of democratic quality that has an incontestable framework (at least to self-avowed democrats), even though the "upholstery" may turn out to be too radical for the taste of those that prefer to remain within the liberal democratic tradition. This is the task I take on in the next chapter, where I present my analytical model for achieving democratic and ecological quality in food politics.

III The dimensions of food democracy

Quais são os fatores ocultos desta verdadeira conspiração de silêncio em torno da fome? Será por simples obra do acaso que o tema não tem atraído devidamente o interesse dos espíritos especulativos e criadores dos nossos tempos? Não cremos. O fenômeno é tão marcante e se apresenta com tal regularidade que, longe de traduzir obra do acaso, parece condicionado às mesmas leis gerais que regulam as outras manifestações sociais de nossa cultura. Trata-se de um silêncio premeditado pela própria alma da cultura: foram os interesses e os preconceitos de ordem moral e de ordem política e econômica de nossa chamada civilização ocidental que tornaram a fome um tema proibido, ou pelo menos pouco aconselhável de ser abordado publicamente.

What are the true concealed reasons for this silence conspiracy on hunger? Is it merely a coincidence that the theme hasn't properly attracted the interest of modern speculators and creators? We don't believe that. It is such a prominent phenomenon and so very stable that very unlike a coincidence, it seems to be conditioned to the same rules that control all other social manifestations of our culture. It is a deliberate silence that comes from the very essence of our culture: the interests and prejudice of moral, political and economic nature of our so called western civilization made of hunger a taboo or at least an issue considered improper to be dealt with publicly.

—Josué de Castro, Preface for the ninth edition of *Geografia da Fome*, 1965¹.

In my quest for a democratic model that can respond adequately to the twin challenges of social equity and ecological balance, while placing food production—the oldest and most important social activity of our civilisations—at its centre, I will explore the notion of democratic quality. Democratic quality, just as the concept of democracy to which it refers, is an elusive term that, according to more prudent political thinkers, requires careful clarification and constant review, and, ideally, a consensus about its minimum indicators. The most conventional understanding of democratic quality is "different degrees of democraticness" (O'Donnell 2004, 21²), while the terms dimensions or indices of democracy are equally popular, conveying the same idea of a democratic scale. The notion of democratic quality is generally used to evaluate the democratisation of nation-states, starting from some bare minimum threshold—such as that proposed by Leonardo Morlino (2004): universal suffrage; free, competitive and fair elections; more than one political party; and more than one source of information—and from there on assessing the relative degree to which they have achieved what are understood as the main objectives of democracy. In the liberal tradition these are

1 Cited in and translated by Silva and Garcia (2016, 161).

2 Guillermo O'Donnell (2004) attributes a common grounding (human agency) to human development, human rights, and democracy, and warns that "(i)t is theoretically impossible to identify precisely the set of rights and capabilities that would be necessary and jointly sufficient for generating an 'adequate' level of human development, human rights, or political rights" (Ibid., 11), although he believes this should not inhibit us to attempt to define them.

usually understood to be freedom and political equality, with some tendency for North American scholars to emphasise freedom, while their Western European counterparts stress equality (Campbell 2008). Well-known democratic rankings are those from the *Polity* project³, Freedom House⁴, Robert Dahl, David Beetham, Guillermo O'Donnell, Arend Lijphart, and Axel Hadenius. In this chapter I will assess the different conceptions of democratic quality to arrive at my own definition.

Defining democratic quality

Leonardo Morlino (2002, 3-4) offers a pragmatic, if quasi-instrumentalist, contribution to the conceptualisation of democratic quality, which derives from his observation of how the term is applied in industry and marketing. In this tradition, quality is thought of as something that is satisfactory in procedure (using replicable, precise and timely processes), in content (in structure and functioning), and in result (satisfying the target audience). When applied to democratic states, a "quality" democracy would then be one that demonstrates efficient, effective, and accountable decision-making and application of the law (procedure); where citizens, associations and communities "enjoy at least a moderate level of liberty and equality" (content); and, most importantly, will have instituted a "broadly legitimated regime that completely satisfies citizens" (result) (Ibid.). This conceptualisation is similar to the dual definition that Carayannis and Campbell (2009, 224) offer: "democracy as a method or procedure, based on the application of the rule of the majority", but also as a substance or substantial, as a realisation of fundamental rights. The dual or triple definitions in both cases are not meant to be distinctive, but rather overlapping.

Morlino defends the use of the term democratic dimensions rather than democratic criteria, to underline that democracy comes in degrees. He illustrates this matter of degree with a case-study from his own country of birth, Italy: despite being a developed country with a mature democracy, it shows many fragilities in the effectiveness of the protection of political, civil, and social rights. An established democracy may have many or even all of the institutions in place, but they can be distorted, circumvented, only partially implemented, or created just for

3 Available: <http://www.systemicpeace.org/polityproject.html> (accessed 13 July 2016).

4 Available: <https://freedomhouse.org/report-types/freedom-world> (accessed 13 July 2016).

appearances. As an example, Italy grants legal equality between women and men, but women are persistently discriminated against on the job market (Ibid., 36). The absence of positive discrimination means disadvantaged groups continue to be marginalised, among them women, homosexuals, unemployed, and poor. Also, even though Italy has a pluralistic party system, the dominant parties have a strong gate-keeping role, impeding the participation of citizens in political decision-making.

In order to assess the democratic quality of a state or organisation, scholars need to create a framework that defines democracy and its attributes or dimensions, and, if they wish to conduct an empirical study, choose indicators for each of the attributes. To that effect, Michael Saward (1994, 7) warns that "defining democracy is a political act". Saward argues that indices of democratisation or democratic quality can only be known within a full theory of democracy. He claims that defining democracy according to reality would constitute a definitional fallacy, whereas an etymological approach will generate diverse and ambiguous interpretations of such claims as "rule of the people". In Saward's view, a more promising approach is to define democracy according to certain basic principles. He exemplifies with David Beetham's focus on popular control and political equality as key principles, Robert Dahl's choice of competition and participation, and Axel Hadenius' preference for the free expression of the will of the people (i.e. through elections) and the guarantee of political freedom as the pillars of democracy.

Not all democratic scholars agree that what we should be measuring is the degree of democraticness—O'Donnell (Ibid., 65) goes as far as to say "in dubio pro democracy", thus placing democracy as an end in itself. Some propose that, instead of assessing whether a democracy (or democratic organisation) is fulfilling its potential, we should look at whether it is realising its main purpose, which generally follows from its most basic definition: rule by the people. In this line of thought, Stein Ringen (2011) suggests that to fulfil the purpose of democracy is to satisfy the *will* of the people. Even if scholars accept this, their job is far from concluded, they will still have to define who "the people" are. John Dewey's answer to this question was to define a public for each situation that demands political decisions:

The public consists of all those who are affected by the indirect consequences of transactions to such an extent that it is deemed necessary to have those consequences systematically cared for. (Dewey 1925-27/2012, 21)

A further distinction may be made between necessary—basic freedoms and rights—and sufficient conditions for democracy—or what O'Donnell (2004, 18) calls a "minimal sufficient set". O'Donnell claims that the necessary conditions are theoretically undecidable, therefore "there is no theoretical or intersubjectively general valid way of clearly and firmly establishing a minimal sufficient set of these rights" (Ibid., 20). Even if we agree on a set of freedoms and rights, their meaning varies across generations, between countries, from democratic theory to democratic theory. He therefore turns the question around, asking what are the basic conditions that will enable an individual to function as an agent⁵. I will discuss his elaborate answer further on.

There are also substantial differences in how narrowly or how broadly democracy is defined, or, in Campbell's (2008, 20-21) words, how focused—democracy as a property of the political system—or how comprehensive—also referring to society, the economy and /or the environment—the underlying theories of democracy are. Whatever the key dimensions chosen, Saward (1994, 7) recommends that, for any definition of democracy and democratic quality to be "of real value", "the assumptions involved must be justified explicitly and convincingly". He offers the example of the principle of equality: its justification could start with the claim that all people are equal in some respect (such as in self-determination or in rationality) and from this it may be deduced logically that they should therefore be treated equally in the political organisation of society. Once the equality principle is established, the logically necessary conditions for democracy can then be further deduced.

I will now look at the attributes for democratic quality as defined by different traditions, starting with the participatory and strong democrats, most of whom adhere to the basic principles of liberal democracy—freedom and equality—but who accord a bigger role to the state for improving the conditions of the less fortunate, complementing political equality with social and economic equality (Dewey 1925-27/ 2012, 3). As Dewey says, later to be echoed by John Rawls and Thomas Marshall: "Liberalism, has to assume the responsibility for making it clear that intelligence is a social asset and is clothed with a function as public as is its origin, in the concrete, in social cooperation" (Ibid.).

5 O'Donnell's (2004, 13) definition of the human being as an agent is of someone "endowed with sufficient autonomy for deciding what kind of life she wants to live; has the cognitive ability to reasonably detect the options available to her; and feels herself to be, and is construed by others, as responsible for the courses of action she takes".

Liberal democratic theories of democratic quality

John Dewey's 1927 pragmatic but substantive interpretation of democracy can be considered foundational for the (new) republican, civic virtue, and strong participatory theories of political organisation that were to come later. Dewey is especially critical of classical liberalism in the way that it separates the individual—whose interests are considered absolute and to be protected at all costs—from political society—where government is accorded the most limited of roles and where the public sphere only exists to regulate the rights of individuals. In early deliberative democratic fashion, Dewey believes the interpersonal relations between people are a necessary (though not sufficient) condition for democracy (Dewey 1925-27/ 2012, 8). Decisions derive their legitimacy from the deliberative process whereby minorities and majorities make their positions known in a reciprocal manner. Dewey believed the majority of today could be the minority of tomorrow, as long as political equality is made effective and citizens participate in the public sphere (Ibid., 12). He rejects elitism, despite recognising the limitations of ordinary citizens in making fully informed decisions. Citizens are nevertheless, in his view, in the best position to judge the issues that affect them. Dewey came up with an interesting condition for legitimacy (a potential attribute of democracy): "[...] the burden of proof must rest with those who seek less rather than more inclusive arrangements" (Ibid., 22). This means that a decision cannot be considered legitimate if it is not informed by those who will suffer the consequences of the decision. By placing this condition, Dewey transforms the idea of freedom: on the one hand, freedom is restricted by legitimate political decision-making, on the other, only by legitimising the decision-making in the sense of giving citizens control over it, is freedom made possible. He thus resolves the tension between ruler and ruled, by ultimately placing political power with the latter. Dewey, an early strong participatory and deliberative democrat, views political participation as constituent of democracy, in that it is not just *actual* participation that defines democracy, but also *potential* participation, to be employed whenever the need arises so as to review, possibly overturn, decisions that have been taken (Ibid., 23). This idea also ties in with his definition of publics: each public is a polity that needs to take or review decisions together. John Rawls (2001, 8) constructs a theory of liberal democracy from the idea of what he calls a "well-ordered society—a society effectively regulated by a public conception of justice". This

conception of justice, which he emphasises is political and not general, needs to be widely shared, the political and social institutions—including the judiciary, the economic system, family, education,...—must adhere to its principles, and finally, people have to be able to apply the publicly recognised principles of justice. Rawls recognises that the deepest foundational principles of democracy through the ages, freedom (or liberty) and equality, are in reality conflicting values, because liberty hampers equality—such as the freedom to accumulate property—whereas equality limits liberty—criteria of distributive justice will inevitably limit the freedom to accumulate property. Because of this clash, there is no general agreement as to the order and weight of each of the basic principles (Rawls 2001, 2). By postulating a hypothetical "original position"—where people are unaware of their social or economic status—Rawls is able to generate principles of justice that all free and equal people would agree to, because each person will have exactly the same opportunity as the next, thus realising the fairness aspect of justice. For Rawls, freedom is predicated on the capacity of people to influence the institutions of society, whereas equality is based on people's moral capacity to engage in social cooperation. He therefore has a republican view of the polity, conceptualising society as a "fair system of cooperation" where free and equal people are its "fully cooperating members" (Ibid., 24). This polity is guided by two principles of justice, presented below, which have the role of specifying the fair terms of social cooperation: what are the rights and duties of the cooperants, how benefits arising from the social cooperation should be distributed, and how burdens to sustain the cooperation should be assigned (Ibid., 7).

(a) Each person has the same infeasible claim to a fully adequate scheme of equal basic liberties, which scheme is compatible with the same scheme of liberties for all; and

(b) Social and economic inequalities are to satisfy two conditions: first, they are to be attached to offices and positions open to all under conditions of fair equality of opportunity; and second, they are to be to the greatest benefit of the least-advantaged members of society (the difference principle). (Rawls 2001, 42)

Robert Dahl, a contemporary of Rawls, was equally interested in improving the substantiveness of the two basic principles of liberty and equality. However, he did not believe structural principles like those proposed by Rawls could avoid injustices in liberal democracies. He postulated that democracy evolves along two dimensions, which are essentially his interpretations of liberty and equality: contestation—also called public contestation or political competition—and participation—operationalised by attributes such as

inclusiveness and the right to be elected. His argument builds from the fundamental assumption that all persons are equal, in the sense of being equally capable and equally entitled to participate in decision-making about their fate and that of their community. An ideal democratic process, according to Dahl (1998, 37-38) is based on strong equality and should include at minimum effective participation, voting equality, enlightened understanding (i.e. access to comprehensible information), exercising final control over the political agenda, and inclusion of (all) adults. Dahl distinguishes between smaller democratic associations and what he calls "large-scale" democracy, the modern representative democracies. For the latter to realise his stronger version of equality, he expects them to fulfil six conditions or political institutions: the existence of elected officials; the occurrence of free, fair, and frequent elections; freedom of expression; access to alternative sources of information; associational autonomy (the right to form independent associations or political parties); and inclusive citizenship (Dahl 2005). In essence he is describing the polity of his home country, the United States of America, where the sixth requirement was (at least technically) fulfilled in the twentieth century. The fact that it took 25 centuries for democracies to start fulfilling all six conditions, prompts Dahl to distinguish modern democracies with the epithet "polyarchal", in the sense of "rule by the many" (Dahl 2005, 192).

Dahl's criteria are interesting starting points for a democratic quality framework, since they are based not only on his own reflections but also those of great democratic thinkers that preceded him and whom he had widely read, among them John Dewey. His initial rationale to restrict liberty and strengthen equality (which got diluted when he developed the idea of polyarchal democracies) is very useful for "deeper" democrats. But he is also criticised for proposing criteria that are more appropriate to ideal democratic associations than as standards for democracy, be it constitutional, substantive, or procedural (Tilly 2007). Dahl's requirements for large-scale democracies are questionable, they appear to describe the ideal interaction between citizens and the officials that represent them rather than offer indicators for measuring or comparing democracies, while some requirements may actually conflict with others (Ibid., 11).

Michael Saward (2000) points out the lack of correspondence between Dahl's initial five criteria for democratisation and his definition of a polyarchy, i.e. modern representative

democracies. Whereas the five criteria derive from a strong version of political equality, with each adult person deemed equally well-qualified to participate in decision-making affecting his or her interests, the six institutions that characterise polyarchies according to Dahl, have shed all instruments of direct democracy.

Thomas Marshall, who wrote in the aftermath of the Second World War, also did not consider freedom and equality to be sufficient conditions for democracy. He proposed to strengthen democracy through the promotion of social rights, which he considered the third wave of rights to be gained by citizens (after political rights, the first wave, and civil rights, the second). He famously stated:

[...] civil rights [...] confer the legal capacity to strive for the things one would like to possess but do not guarantee the possession of any of them. A property right is not a right to possess property, but a right to acquire it, if you can, and to protect it, if you can get it. (Marshall 1950, 34-35)

His core argument is that to possess liberties (rights) is not the same as being able to exercise them. The right to freedom of speech is of little substance for uneducated people, because they might have difficulty to formulate what they want to say and most likely will not be heard even if they tried speaking. Marshall claims that freedom and equality are not realised just because they are enshrined in law, their realisation must come from the guarantee of social rights⁶.

Benjamin Barber (2003, 4) developed a theory of "strong democracy", in opposition to the "thin" democracies that result, in his view, from liberal democratic thought, by serving exclusively individualistic and private ends. In a strong democracy, citizens "are made capable of common purpose and mutual action by virtue of their civic attitudes and participatory institutions rather than their altruism or their good nature" (Ibid., 117). Barber's proposal is that of an enlightened participatory democracy, similar to Dewey's idea of a pluralist society. Barber criticises Rawls' conceptualisation of democracy, arguing that John Rawls never offers any other motive for justice than that of rational self-interest: inequalities are to be distributed so as to benefit the least advantaged in a society, because you may end up least advantaged yourself; tolerate others because you wish to be tolerated; be careful what you decide as a majority, because one day you may be a minority. The dangers of this

6 As discussed in the previous chapter, social rights are defined as: ranging "[...] from the right to a modicum of economic welfare and security to the right to share to the full in social heritage and to live the life of a civilised being according to the standards prevailing in the society" (Marshall 1950/2009, 149).

minimalism, says Barber, are that when majorities are enduring they will systematically discriminate minorities, they have no "good" reason to respect them. Barber rejects the epistemological assumption of liberal democratic theory that there is a knowable independent foundation for democracy. He sides with Dewey in viewing politics as necessarily experimental, as a process. Dewey believed that "democracy entails a kind of openness in which its substantive meaning—that is, what concerns it addresses and what ends it pursues—is always in the process of being determined" (Dewey 1925-27/ 2012, 24). Barber (2003, 131) echoes this practical spirit: "Politics is what men do when metaphysics fails; it is not metaphysics reified as a constitution". The key attributes of a strong democracy that Barber advances (although he did not offer a systematic list like Dahl has done) are: effective participation, autonomy—a central tenet, necessary to realise "the idea of a self-governing community of citizens" (Ibid., 117), and the guarantee of social and economic rights. His theory embraces conflict, pluralism, and the existence of private and public spheres of action, and at the same time rejects elitism. Since he resists universal truths that may underlie democratic conceptualisations, his proposal for democratic legitimacy is the constant test of politics, albeit recognising the need for civic education to avoid constant and chaotic bargaining.

Amartya Sen (1991), although essentially remaining within a liberal democratic tradition with its emphasis on individual responsibility, offers economists a solid argument for the realisation of equity (a strong form of equality, signifying the equal distribution of a good among members of a community). Studying famine, he found that the conditions for acquirement of food were the determining factors when people went hungry, not whether enough food was being produced. This led him to conceptualise market relations as an exchange of entitlements. A person's entitlement is the "set of alternative commodity bundles that the person can acquire through the use of the various legal channels of acquirement open to someone in his position" (Ibid., 36). Famines in this conception are failures of entitlement relations, people starve when their "entitlement set does not include any commodity bundle with enough food" (Ibid., 37). He later expanded on this concept, by creating the idea of a "capability set", a broader metric than the classical "growth in GDP per capita", and which was adopted by the United Nations Development Programme. Poverty and development, in Sen's framework, respectively limit or expand a person's capability to live a good life. The

capability approach is useful as a way of humanising economics, as it goes beyond the idea of people simply acquiring means and instead considers what they can do with these means.

Sen's approach is however, by his own admission, not a theory of justice or democracy, and therefore not specifically useful for my framework.

Guillermo O'Donnell, some of whose contributions I have already discussed in this chapter, advances an original conceptualisation of democracy that is grounded in the moral assumptions that all human beings are agents—endowed with autonomy for making decisions, capacity for reasoning, and responsibility for his or her actions—and that democracy cannot be dissociated from human development and human rights. A crucial argument in O'Donnell's reasoning is that, although the moral assumption of agency has been legally enacted in modern democracies, it requires conditions for the exercise of the rights that derive from this agency (as I have also discussed under Marshall: political rights without corresponding civil and social rights risk becoming empty promises). According to O'Donnell, a democratic regime—i.e. one that has fair and institutionalised elections and offers equal opportunity for political participation (O'Donnell 2004, 17)—is a necessary, but not a sufficient condition for democracy. To safeguard the agency of human beings, some basic rights and capabilities—which are possibly overlapping—must be guaranteed, but since it is not possible to theoretically define what this minimum set of rights and capabilities must be (among other reasons, because they are context-bound), they must instead be determined in an on-going political process (Ibid., 11). O'Donnell offers the following proposition as a definition of democracy:

Democracy has five unique characteristics in relation to all other political types: (a) fair and institutionalised elections; (b) a set of participatory rights and political freedoms without which those elections would be meaningless; (c) an inclusive and (boundedly) universalistic wager; (d) a legal system that enacts and backs—at least—the rights and freedoms included in the definition of a democratic regime; and (e) a legal system that prevents anyone from being de legibus solutus. The first three characteristics pertain to the regime, the last two to the state. (O'Donnell 2004, 33, emphasis in original)⁷

The conditions that O'Donnell sets for achieving democratic quality are particularly pertinent to the democratic model for social and ecological realisation that I am attempting to construct. He builds a careful framework that starts with conditions for a democratic regime, to which he

⁷ Two clarifications: 1. O'Donnell's concept of the universalistic wager has its equivalent in the term "political equality", every adult has the same right to participate in political organisation "by voting and eventually by being elected" (O'Donnell 2004, 16). 2. *de legibus solutus* means "not bound by the laws". O'Donnell understands by this that no one is above or beyond the law.

adds conditions for a democratic state, and finally those for a diverse, non-discriminatory, and tolerant social context. He claims that, in order for the rights of political citizenship to become effective, the social context must nurture the development of human beings as agents and legally protect diversity—in information, opinion, and association. The quality of democracy according to O'Donnell is dependent on the quality of human development and the guarantee of human rights, the exact description of which must be discussed in an on-going manner in the political arena.

When constructing his Democracy Ranking, David Campbell (2008) takes a cue from O'Donnell by extending the quality of democracy beyond the quality of politics, to the quality of society—to which he also adds the environment, as an unavoidable factor of human development. He adds five non-political dimensions to his ranking: gender fairness, economic wealth distribution, knowledge sharing and -advancing, health of the population, and health of the environment. They are intended to measure the performance of a democracy, in addition to the traditional political dimensions, such as freedom, and free and fair elections.

David Beetham, who, together with Stuart Weir, undertook a democratic audit of the United Kingdom in the 1990s, elects two key dimensions—popular control and political equality—for his conceptualisation of the quality of democracy. He argues that they derive logically from the historical conception of democracy as rule of the people, and defends his choice as follows:

The first principle [popular control] is underpinned by the value that we give to people as self-determining agents who should have a say on issues that affect their lives; the second [political equality] is underpinned by the assumption that everyone (or at least every adult) has an equal capacity for self-determination, and therefore an equal right to influence collective decisions, and to have their interests considered when they are made. (Beetham 1993, 7, in Beetham 1994)

The principle of popular control ensures that people have a say in decision-making within their society, whereas the principle of political equality ensures that everyone has an equal opportunity to exercise control over decision-making. The principles are like dimensions, since they may be more or less fully realised. Because these dimensions are too broad to measure the degree of democracy in a society, Beetham developed what he called "intermediate" principles. For instance, to measure popular control, the intermediate principles are, among others: the authorisation of public officials by the people, the

accountability of a government to the people (directly and through institutions), and the responsiveness of government to the demands channelled through public opinion (Weir and Beetham 1999/2002, 8-9). In turn, these mediating principles require the realisation of a number of rights and capabilities, such as the access to information, the freedom of expression and association, and the active participation of citizens. The other key principle—political equality—is embedded in all of the above intermediate principles and indicators. However, the authors believe the best indicator for political equality is representativeness: "the degree to which [the political institutions] reflect the diversity and pluralism of society, not only in respect of political opinions, but of social composition and identities" (Ibid., 9). For the purposes of their audit, Weir and Beetham operationalised their key and intermediate principles by creating four areas or "components" of democracy: open and accountable government; a democratic society ("richness of associational life, the accountability of economic institutions, social inclusion, [...], a culture of tolerance and civic responsibility"); free and fair elections; and the guarantee of civil and political liberties (Ibid., 9-10). The final step in order to be able to measure a country's democratic score, was to create a set of criteria for each of the components of democracy, based on their respective definitions.

Michael Saward (1994) elects political equality and responsive rule—in the sense of satisfaction of the wishes of a majority of citizens, a stronger principle than one that is based on procedures—as key democratic principles. Saward then stipulates 24 constitutionalised conditions or indices of democratisation that can be grouped under the headings of: basic freedoms (speech, movement, association,...); citizenship and participation (conditions for voting, running for office, and decision-making); administrative codes (institutional procedures); publicity (public documentation of political decision-making); and social rights. These are, says Saward, the "logically necessary conditions of democracy" that follow deductively from the equality assumption and the responsive rule definition. The conditions he identifies refer predominantly to rights, freedoms, and decision mechanisms. Saward warns that some popular values—political stability, justice, nationalism, the environmental imperative, and efficiency—may actually enter into conflict with the democratic principle. Saward believes these conflicts must be handled on a case-by-case basis since there is no "satisfactory trade-off principle" to guide their resolution, and suggests that "ever more democracy is not necessarily a good thing" (Ibid., 20).

Pierre Rosanvallon's (2008) theory of counter-democracy is an attempt to broaden definitions of democracy beyond the electoral process, reconceptualising the existence of conflict and distrust as inevitable but also necessary for the maintenance of healthy democracies. Counter-democracy is in effect a conceptualisation of the democratic dimension of popular control. Rosanvallon (Ibid.) proposes that counter-democracy manifests itself through three democratic mechanisms that go beyond traditional democratic institutions: 1. powers of oversight over or surveillance of the elected (which Rosanvallon demonstrates has historically been a fundamental right complementing the right to vote); 2. forms of prevention (by organising to veto certain decisions); and 3. the testing of judgments (a demand for accountability in the absence of responsiveness, what Rosanvallon calls a "democracy of accusation"). This reconceptualisation helps to shine a different light on modern democracies, a less pessimistic one, where citizens may have lost interest in voting but have taken up other forms of exercising control. But, according to Rosanvallon, the rise of counter-democracy brings with it the risk of depoliticisation of democratic institutions (Ibid., 22). Counter-democracy explains that people are, perhaps more than ever, participating in influencing decision-making, but because they do this outside of democratic institutions, Rosanvallon says: "[t]he problem today is an absence of meaning rather than an absence of will" (Ibid., 306-307). Rosanvallon relies on Dewey's idea of publics for every situation, coupled with what he feels is a need for new democratic legitimacy in the face of crumbling democratic institutions, and puts forth a democracy where legitimacy is provided by proximity, i.e. those closest to the situation or problem should be the ones involved in the respective decision-making.

Finally, Larry Diamond and Leonardo Morlino (2005) propose eight conceptual dimensions of democracy to assess the quality of representative democracies, based on their three-fold definition of quality: five procedural dimensions, concerning the rules and practices in a democratic state—rule of law, participation, competition, vertical accountability, and horizontal accountability; two substantive dimensions, related to "content"—respect for civil and political freedoms, and guarantees of political equality (with underlying social and economic equality); and finally a dimension for "result"—responsiveness to citizen demands and preferences. For each of these dimensions, the authors provide an empirical definition based on assumptions about the conditions under which each dimension is strengthened or

weakened. The authors recognise that "the different elements of democracy are so densely interactive and overlapping that it is sometimes difficult to know where one dimension ends and another begins" (Ibid., xxxii). When one of the dimensions is maximised, other dimensions may be neglected, such as when a government is highly responsive to majority wishes but might overrule the demands and needs of minority groups, or when bureaucratic processes to ensure popular sovereignty diminish freedom and equality. Diamond and Morlino claim a high-quality democracy is one that manages to balance the "virtues that lie in tension" (Ibid., xxxiii).

Two other empirical approaches may serve as an example of how the theories of quality of democracy that I have so far discussed can be operationalised. The International IDEA framework for democratic assessment⁸ recognises that democratisation is a process and that democratic practices can be compared but not prescribed. Its researchers therefore moved away from the more common practice of country ranking and developed a more comprehensive framework. Its key democratic principles are popular control over decision makers and political equality of those exercising that control, supported by seven "mediating" values, "through which people have sought to give effect to these principles in a country's institutional arrangements and practice" (Beetham et al. 2008, 22). The mediating values identified by the authors were: participation, authorisation, representation, accountability, transparency, responsiveness, and solidarity (Ibid., 23). With these values in mind, the researchers built an extensive assessment framework that assists assessors in the task of (comparatively) evaluating the democraticness of the institutions in a given country. True to their belief that democracy is a process, they further stress that the assessment should be adapted to local conditions and legitimised by widening the assessment team so that it is representative of the country in question, and by making it accountable to the people of the country.

Axel Hadenius, who took it upon himself to isolate valid and measurable criteria for democracy, remains within the political democratic conceptions of Beetham and Saward by claiming that public policy "is to be governed by the freely expressed will of the people whereby all individuals are to be treated as equals" (1992, 7-9). Hadenius conducted an

⁸ Developed by researchers at the International Institute for Democracy and Electoral Assistance. See Beetham et al. 2008.

assessment of the level of democracy in 132 countries, using the key dimensions of electoral process and degree of political freedom (granted to citizens of a democratic state). He operationalised them with attributes such as level of suffrage, periodicity of elections, effectiveness and honesty of elections, organisational freedom, media freedom and absence of political oppression and violence. In contrast with the previous approach, Hadenius' indices of democracy are measured by aggregate and quantitative indicators that are not open to debate.

Deliberation as democratic quality

Deliberative democrats have had some success in operationalising what they believe to be a key condition for democratic quality: deliberation is how citizens rule their common affairs through the public use of reason. It can be considered an attribute of the principle of political participation, which has been advanced as a key dimension by most if not all of the democratic thinkers presented here. According to the reasoning of deliberative democrats, deliberation is an important, for some the only, source of democratic legitimacy, while it greatly improves the quality of political participation, which further strengthens the substance of democracy. As I discussed in the previous chapter, there is considerable empirical support for the claim that deliberation improves decision-making according to broad quality criteria such as joint gains, added information, social learning, and innovative thinking.

Communication among equals employing their capacity for reasonable arguments, when focused on the common good, is deemed superior to the bargaining or aggregation of preferences that typify representative democracy (Cohen 2003). One of the staunchest defenders of deliberative democracy, Jurgen Habermas, developed a standard of communicative rationality based on his evolutionary theory of communicative action. In what he called the "ideal speech situation", free and equal participants genuinely attempt to understand the issues under discussion and the respective arguments, accede to the "force of the better argument", and accept the consensus that results from this process (Habermas 1979). Barber also attributed a central place to politics in a strong democracy, grounding politics in "reasonable public action based on community consent" (2003, 161), and placing his faith in talk as able to "build community as well as maintain rights and seek consensus as well as resolve conflict" (Ibid., 177). According to Mansbridge et al. (2012), after more than

25 years of theorising and experiments, deliberative democracy has now taken a "systemic turn". They propose to look at the interaction between democratic institutions and processes, in order to assess to what degree they are fulfilling the three largely consensual functions of a deliberative system: "seeking truth, establishing mutual respect, and generating inclusive, egalitarian decision-making" (Ibid., 22). Deliberative democracy boasts a comprehensive set of methodologies to guarantee these outcomes, among them smaller-scale formats such as Citizen Juries and Deliberative Opinion Polls, and larger-scale ones such as Participatory Budgeting. The double challenge remains to scale deliberation up sufficiently to ensure that it goes beyond mere case studies of participatory "governance", and to ensure that it produces responsive political outcomes.

The inclusion of deliberation as a democratic condition is not without its detractors. While few will deny that democratic deliberation strengthens democracy, many are cautious to adopt the idea of a deliberative democracy. Laclau and Mouffe (1985/2001, xvii) agree with the idea of going beyond an aggregative model of democracy, but reject the search for consensus, reconciliation, or a "fully inclusive we", arguing this goal is a conceptual impossibility. Instead, they see key roles for conflict and division in pluralist democratic politics. Saward (2000) sums up the main questions about deliberation's role as a democratic condition: How important is it to legitimacy? Who deliberates? Should standards of rationality dictate the process? What are the goals of deliberation? What are the appropriate sites for deliberation? He rejects the idea of a deliberative democracy, believing there is a difference between "(1) having an opportunity to participate, and (2) having an opportunity to have an opportunity to participate" (Ibid., 16). Instead, he sees a democratic need for the more institutionalised elements of a democratic society, claiming "[f]ormal democracy is best seen as democracy built upon direct democratic foundations" (Ibid., 21).

Grounding democratic quality in ecological democracy

Having discussed the wealth of proposals for operationalising democratic quality within the liberal democratic tradition, I turn now to the suggestions that arise from "deep", radical, and ecological democracy. The criteria proposed by its proponents arise from democratic theories

that often turn entrenched democratic dimensions such as freedom and equality on their heads. Although there are a number of political theorists within the liberal democratic tradition that criticise the liberal model and call for significant changes in political organisation, they rarely advocate abolishing the capitalist socio-economic model, and although they may not agree with utilitarianism, they tend to remain within an individualist, instrumentalist view of social action. In other words, they are often progressive, but never radical. A radical view takes an unforgivingly close look at the workings of modern polities, at how they are interwoven with the economic model that has been reigning the planet since the eighteenth century, and at their consistent unresponsiveness to a large part, if not the majority, of the world's people. Although some radical democratic theories, discussed in the previous chapter, tend to emphasise the empowerment of the disenfranchised (Laclau and Mouffe, Unger, Fotopolous), most also incorporate, or have more recently incorporated, political ecological considerations (Bookchin, Sklair), and some are founded on an explicit recognition of the socio-ecological dynamics of human organisation (ecological democracy, Earth democracy, food democracy). The first group, firmly rejecting the atomism, instrumentalism, and alienation that are characteristic of capitalist democracies while clamouring to abolish all forms of domination and inequality, sees the autonomisation of interest groups as crucial in order to achieve a radical and plural democracy where difference, political struggle and contestation are actually welcomed (Laclau and Mouffe 1985/2001). The second traces the persistence of social and ecological destruction to the existence of a capitalist hegemony that perpetuates hierarchy and domination, as much over humans as over Nature, and proposes to have the culture-ideology of human rights—or in Bookchin's version the idea of popular control—invade the economic and social spheres, where it would present the most profound challenge to the capitalist model (Sklair 2002). Finally, the last group, although not in the least homogeneous, generally favours the adoption of concepts from ecology (holism, interconnection, synergy, and a bio-centric point of view) and communitarianism (attributing rights not only to individuals but to the community, with a focus on social cohesion and solidarity), in some cases adopting traditional and indigenous notions of "earth care", into democratic theory.

Laclau and Mouffe (2001) merit special, though necessarily brief mention because of their profound theory of radical democracy, grounded by their own admission in critical theory,

post-structuralism, post-marxism, and Gramsci's concept of hegemony. Their complex conceptualisation of democracy does not specifically embrace an ecological perspective but its proposed methodology is useful to any radical theory of democracy. They build their model around concepts that most democrats avoid or seek to overcome in some way: the concepts of difference, dissent, and antagonism. Rejecting the Third Way that has become popular with the Western political Left, who have come to conceive of politics as a neutral terrain where controversial issues are resolved through dialogue, Laclau and Mouffe take the idea of dissent a lot further than Rosanvallon, all the way outside of the liberal democratic model. Their prime condition for achieving radical democratic quality is the acceptance of antagonism by balancing the democratic ideal of unity with the democratic necessity of autonomy. No single struggle should be allowed to impose its agenda on the other struggles, but nevertheless each struggle learns from the other, in the process striving to improve the democratic quality of social organisation.

I will next consider the conditions for ecological democracy that have been advanced by the very diverse camps within ecological democratic thought, starting with the more pragmatist approaches and then moving on to the more normative ones. The practical camp is represented here by Dietz, York, and Rosa (2001), and Mitchell (2006), who have all put their criteria to the test. Rooted in two premises—that the existence of participatory democratic institutions correlates positively with the improvement of environmental conditions, and that the future of today's democracies is in turn dependent on the equitable distribution of natural resources—Mitchell offers five facilitating and five hindering factors for the realisation of ecological democracy, which are respectively: environmental altruism, discursive modes of democracy, strong perceptions of environmental crises, cultures supportive of participatory democracy, and mutually reinforcing local-global networks (facilitating); and international capital and related powerful interests, closed democratic systems, inequities in social conditions, the prioritisation of scientific knowledge over other forms of knowledge, and ineffective or nonexistent political mediating structures (hindering). The sociologists Dietz, York, and Rosa (2001, 4), in their quest for "trying to identify the social structural and cultural determinants of sustainability", reject the measures of sustainability proposed by the camp of ecological modernisation (an optimistic but also "thin" approach discussed previously) and of reflexive modernisation (an upgraded version of the previous camp, which pays more

attention to the democratic quality of decision-making). They argue that what is missing from studies measuring countries' sustainability, is an analysis of "the structural forms that will facilitate or inhibit the kind of societal discourse that will lead to discursive rationality around environmental problems" (Ibid., 11). Dietz et al. propose three structural forms or conditions for ecological democracy, which they define as a democracy where environmental problems are effectively engaged with:

1. Underpinning discourse with altruism and diversity—the former facilitates a focus on the common rather than on selfish "good", and the latter empowers minorities or oppressed groups in decision-making;
2. the availability of information from different sources on the analysis of environmental problems (what they call *substantive grounding*, from Habermas' idea of drawing on both the life world—daily experience—and the systems world—scientific study and accumulated knowledge); and
3. the absence of constraints such as excessive power of capital, military, religious or other interests that do not embrace sustainability.

Dietz et al.'s work is promising, but the above categories are broad and normative and their indicators are therefore necessarily very crude. Nevertheless, by retesting existing indices for welfare and environmental impact on 80 nation-states, the authors discovered that rising affluence is correlated with rising environmental impacts—contrary to the claims of ecological modernists, even though countries that score higher on the Freedom House index do express more concern about sustainability. The ecological-democratic indicators developed by the authors, such as women's empowerment, cultural diversity, international NGO participation, and lack of state repression, did appear correlated with indicators for sustainability, but the results did not allow for concrete conclusions.

Roy Morrison (1995) offers a prescriptive theory of ecological democracy that has inspired many thinkers who arrived at this concept later. He sees ecological democracy as a balance between freedom and community, which he considers two indivisible values. Freedom is understood here not as the negative rights protected by governments, but "in the context of responsibility and self-management" (Ibid., 12), whereas the community provides the

structures to protect individual rights (Ibid., 5). To build an ecological civilisation, Morrison (Ibid., 12-13) envisions three interdependent pillars: democracy (free, but enlightened choice); balance (between freedom and community, supported by notions of justice); and harmony (resting upon "the ability to articulate and understand needs, and to search for points of agreement").

Non-Western conceptions of ecological democracy have greatly enriched this school of thought. For example, Vandana Shiva's idea of "living democracy" captures indigenous traditions and values, while developing a modern political movement for peace, justice, and sustainability, where life is understood as "a continuum between human and nonhuman species and between present, past, and future generations" (Shiva 2005, 1). For radical ecological democrats like Shiva or Kothari, the values ascribed to an ecological democracy have a decidedly communitarian and bio-centric inspiration: granting equal rights to existence and sustenance to all beings, placing the common good above individual interests, insisting on preserving biological and cultural diversity, and finally, calling for inclusion and ecological as well as social responsibility.

The concept of "Buen Vivir" or Good Life, having become popular at the World Social Fora that are now a landmark counter-meeting to the government-dominated Earth Summits⁹, and having been adopted into constitutions of two Latin American countries (Ecuador and Bolivia), is offered by radical ecological democrats, as well as social movements and some political parties, as an alternative development paradigm for living on this Earth that is both new and old, balancing life, culture, and work, and creating harmonious relations between people, community, society, and Earth. In its politicised version, Buen Vivir's guiding principles attempt to compatibilise solidarity among people with the respect for Nature through the deepening of democracy by promoting certain social, economic, and environmental rights and conditions (Acosta and Martínez (org.) 2009). One of the concrete developments in Buen Vivir advocacy has been the granting of rights to Nature, included in the constitutions of Ecuador and Bolivia, with Bolivia having taken the step in 2010 to translate the concept into law, in which Mother Earth is defined as a collective subject of

9 Example of the World Social Forum 2016, available: "<https://fsm2016.org/en/sinformer/a-propos-du-forum-social-mondial/>" (accessed 27 July 2016).

public interest with inherent rights to life, diversity of life, water, clean air, equilibrium, restoration, and to be free of contamination¹⁰.

Food sovereignty and degrowth are quite recent, eminently political concepts, used as *cris de guerre* on a global playing field, which have been inspired by the socio-biocentric world views presented by the Buen Vivir philosophies. Where these approaches differ is in that food sovereignty is overtly linked with radical ecological democracy (the democratic anchors of which I will discuss next) and its roots in the Global South, whereas degrowth is characterised by a wider spectrum of proposals ranging from moderate radical views to deeply radical ones, and from more decidedly Western-inspired world views to indigenous cosmo-visions.

Ashish Kothari is a prominent proponent and scholar of radical ecological democracy, which was inspired by grassroots initiatives in India and other parts of the world. Its core principles for democratic and ecological quality are direct democracy, local and bioregional economies, cultural diversity, human well-being, and ecological resilience. Kothari stresses that the transition to this new framework needs to be "guided not only by hard-headed rationality but also by a strong ethical and emotional foundation" (Kothari 2014, 36). Criticising the ever-dominant focus on growth, whether staunchly neoliberal or softened by an ecological or reflexive modernisation inspiration (such as the concept of Green Economy¹¹ that was launched in 2012 by supranational agencies), Kothari appeals to a pathway "to shared well-being led not by the state, nor by the market, but instead by communities and collectives of citizens" (Ibid., 37). In a radical ecological-democratic framework, equity and social justice remain at the core of democracy, but are complemented by a respect for the limits of the Earth and the rights of all species. The idea of human well-being is broadened, like in Buen Vivir, beyond physical and material dimensions to include socio-cultural, intellectual, and spiritual dimensions. The dual key dimensions for this framework are not freedom and equality, but ecological sustainability and human equity. Also patent in radical ecological democracy is the

10 Bolivia's Law of the Rights of Mother Earth as summarised by Sourcewatch, available: http://www.sourcewatch.org/index.php/Bolivia's_Law_of_the_Rights_of_Mother_Earth#cite_note-1 (accessed 27 July 2016).

11 Although there is no real consensus on the meaning of Green Economy, on the site of the United Nations Department of Economic and Social Affairs we can find a possible definition: "one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient, and socially inclusive". Available: <https://sustainabledevelopment.un.org/index.php?menu=1446> (accessed 15 December 2016).

rejection of liberal democratic principles and neoliberal economics, to be replaced with community and solidarity inspired principles, besides economic and localised democracy.

Food democracy as a special case of ecological democracy

Turning now to conceptualisations of food democracy, which I consider to be a version of ecological democracy that has food at its centre, and where food is viewed as a key resource for human welfare as well as a key condition for improving the health of our ecosystems. Molly Anderson (2008), whose rights-based approach was discussed in the previous chapter, advances six conditions for the realisation of food democracy, inspired by the Economic, Social, and Cultural Covenant of the United Nations:

1. the absence of human exploitation;
2. democratic decision-making about the food system choices that impact more than one interest group in the system;
3. fair and transparent access to the necessary resources for food production;
4. multiple independent buyers;
5. the absence of resource exploitation; and
6. the absence of factors that may hinder the realisation of the previous criteria.

She justifies her choice for rights-based criteria over the more commonly cited conditions of localisation and sustainability, by pointing out that the ideas of local and sustainable food, besides lacking in coherent definitions, are easily subverted—as when a large supermarket chain sells industrially produced organic food, displacing both small producers and retailers; or when local sustainable food is only affordable to an elite, with poorer population groups finding themselves in so-called "food deserts"¹². Linking the environmental and economic dimensions of food to the social dimension, and grounding the latter in human rights, is in Anderson's view the best route to democratising the food system, which in turn she believes heightens the chances for ecological concerns to be incorporated in decision-making.

¹² This term will be further discussed in Chapter 4.

Food sovereignty may be considered a practical outgrowth of the rights developed within the Buen Vivir school, which was its inspiration. Operationalised gradually over the two decades since the term was coined by the peasant movement La Via Campesina, food sovereignty singles out the following priority areas: the right to food, the access to productive resources, the promotion of agroecological conversion of food production, and equitable trade with strong local markets (Windfuhr and Jonsén 2005). Although the first two principles can be considered conditions for food sovereignty or democracy to occur, very similar to the conditions that Anderson advances, the latter two are closer to being goals and would be more difficult to operationalise. There are nevertheless strong empirical as well as moral arguments in favour of the objective of founding an agricultural conversion on the science, philosophy, and practice of agroecology—with the double aim of making agroecosystems healthy and making food systems just (see among others Altieri and Uphoff 1999; IAASTD 2009; de Schutter 2010).

The general consensus on the conditions that need to be fulfilled for food sovereignty to occur, are:

1. recognition of the constitutional right to food;
2. agrarian reform benefiting the landless and farming people;
3. the protection of natural resources so that they remain healthy and free of restrictive intellectual property rights;
4. the prioritising of food production for nutrition over trade;
5. ending the speculation of food and restricting control of transnational corporations and institutions over food policies;
6. promoting social peace, rejecting the use of food as a weapon;
7. reinstating democratic control over food, by giving access to food decision-making to smallholder farmers and rural women, at all levels, including the United Nations.

The right to food, a core claim in food sovereignty activism, is actually a set of rights.

Believing this, as mentioned in Chapter 2, Patel manages to reduce the conditions for food

democracy to one essential right, inspired by Hannah Arendt's right of rights: "a right to have rights over food" (Patel 2009, 663). This right to have rights incises upon attributes of strong democracy: the right to participate in decision-making about food production and distribution, the right to control what happens with our food, and the right to have access to essential resources for food production and/or acquirement, including knowledge.

Michel Pimbert's (2006) proposal for realising food sovereignty draws on different, more republicanist and deliberative democratic inspirations. At the heart of systemic change, in his view, lies the need for "transforming knowledge and ways of knowing". Based on this insight, he proposes six "interrelated processes and mutually reinforcing processes of transformation" (Ibid., 16) to achieve food sovereignty:

- developing citizenship—"politics are too important to be left to professionals" (Ibid.);
- creating interdependent confederations composed of networks of citizen-based organising bodies that link villages, towns, neighbourhoods of cities and ecological units, similar to proposals of bioregionalism;
- employing dual power—combining the grassroots organising model with infiltration in local government, similar to Bookchin's proposal of municipalism;
- embracing equity and gender inclusion, by raising the voices of poor women in policy discussions;
- reclaiming property rights and territory, by redistributing land and access to natural resources, thus widening the self-determination of indigenous communities; and finally
- democratising globalisation by "levelling the economic playing field for democratic participation and sustainable livelihoods" (Ibid., 17), for example through the creation of a minimum income, curbing financial speculation, and providing a more equitable sharing of jobs.

Other proponents of food democracy (Lang 1998; Hassanein 2003) stress the importance of empowering people—by informing and inspiring them—to play an active role in shaping the

food system, in other words to regain social control over the food system. They place food production, a fragile as well as destructive, abundant as much as scarce, essential, lucrative, and much disputed human activity, as the "locus of the democratic process" (Lang 2007). The democratisation of food production holds the promise of solving many of humanity's major challenges simultaneously: ecosystem degradation, social and economic inequities that perpetuate hunger and poverty, malnutrition (both undernutrition and obesity result from lack of nutrients), and climate change. Since the concept of sustainability is persistently contested because it "inevitably involves both conflicts over values and uncertainty about outcomes", it follows that sustainability needs to "be socially and politically defined", requiring the widest possible participation of all affected parties (Hassanein 2003, 77 and 79). Lang and Hassanein are not specific on the conditions they would demand for food democracy to occur, since they focus more on the development of food policies, but the ideas that stand out in their thoughts are: popular control, effective equality in decision-making, equal access to knowledge, and "food citizenship"—a concept that moves decision-making on food beyond neoliberal notions of "food as commodity, people as consumers, and society as marketplace" (Hassanein 2003, 79-80).

The search for attributes of the strongest possible democracy would not be complete without a consideration of Shiv Visvanathan's concept of cognitive justice, which he defines as "the right of many forms of knowledge to exist because all knowledges are seen as partial and complementary and because they contain incommensurable insights" (Visvanathan 2001). The project of "democratising" democracy would not be possible without democratising knowledge. It is not enough to involve communities, stimulate participation, and to label alternative knowledge systems as "ethno-science" or even "non-knowledge" (Visvanathan 2005). An epistemic challenge is needed and this entails not just participation but cognitive empowerment, not just being heard but changing the terms of dialogue. Looking at examples of social movements in India, Visvanathan (Ibid.) argues that a rights-based approach was not sufficient: although it was adequate against torture, it was relatively helpless against scientifically legitimised discourses, in which the notions of Nature, food, and nutrition, have all been changed to suit the techno-scientific¹³ policy model.

13 Even though the term technoscience has been with us since the 1970s, its definition is highly complex and not at all consensual. Common to most conceptualisations, however, is the idea of a blurring of boundaries between "science, technology and society, between natural and engineering/technical sciences, between

Constructing a framework for the ecological-democratic quality of decision-making

Gerardo Munck and Jay Verkuilen (2002) offer useful recommendations for the construction of a democratic framework for purposes of analysing data. I will use them as *caveats*, even though my proposed documentary and discourse analysis will be qualitative and exploratory. The researchers recommend conceptualising democracy using explicit and well-justified criteria, anchored in a theory of democracy: first identifying the attributes of democracy and then organising them by level of abstraction, neither delimiting excessively nor deficiently¹⁴. The next step is to select multiple indicators from multiple sources to measure the attributes, taking care to cross-check their overlap and to decide what the measurement level will be. Finally, when applicable, rules should be specified as to the level of aggregation of data.

An example of their method for operationalising democratic indices, based on Dahl's attributes for democracy, follows in Figure 1., gradually moving from more to less abstract (Ibid., 24).

After reviewing existing democratic indices, the authors conclude that most of them have important flaws: whether because of how democratic quality is defined—either overly restricting or overly extending their definitions; or the way the empirical scope is often restricted; how key attributes are omitted or exaggerated; and finally how indicators are selected. The high correlation found between the indices may indicate that all are drawing on the same "fundamental underlying realities", but at the same time may also be reproducing the same biases (Ibid., 29).

biology and technical systems, between theory and practice, between nature and culture, between the given and the fabricated, between autonomy and algorithmicity, between eternal facts and human-made values, between science and politics" (Schmidt, 2011). For those that use the term negatively, it rejects the idea of science as a pure and value-free practice, and instead places it at the heart of politics and economics, which it is deemed to serve.

14 The authors claim that the dominating tendency is that of minimalist definitions, leaving out important attributes, often for the sake of measurability.

Concept	▶ Attributes	▶ Components of attributes	▶ Indicators (examples)
Democracy	▶ Contestation	▶ Right to form political parties	▶ Number of political parties
			▶ ...
		▶ Freedom of press	▶ Number of media companies
			▶ Size of media companies
			▶ ...
	▶ Participation	▶ Right to vote	▶ Existing laws
		▶ Fairness of voting process	▶ ...
		▶ Access of parties to public financing	▶ ...
		▶ Extent of suffrage	▶ Percentage of suffrage

Figure 1. Level of aggregation in democratic indices
 Source: Munck and Verkuilen 2002, 24.

I will now present my choice of attributes that I consider will best operationalise my version of democratic quality. My search is for a model for substantive food democracy, by which I understand a democracy that is grounded in the crucial human activity of food and basic needs production, while being both socially and ecologically responsive to its *demos*. I argue that a strong conceptualisation of democracy is warranted because globalised human economic activities, in particular those related to basic needs production, are arguably as much behind the growing class polarisation (simultaneous growth of wealth and poverty) as they are behind the ecological crisis that humanity is facing (Sklair, 2002). The demonstrated unstoppable privatisation of wealth (including "natural capital") and socialisation of social and environmental costs that characterises capitalism, in particular its most recent form—which some call biocapitalism—are not solvable through procedural adjustments, but call for considerable structural changes in order to bring common resources back under popular control. The enormous socio-ecological challenges that persist in the twenty-first century call

for socio-ecological responses, leading me to define democracy beyond the purely political realm, as O'Donnell, Campbell and other thinkers have done. I hope to have shown in this chapter that the classic dimensions of freedom and equality are insufficient to guarantee the "ecological-democratic" quality of modern decision-making.

My analysis of proposals for democratic quality and the realisation of ecological democracy has provided me with an extensive list of potential attributes of ecological-democratic quality. For the purposes of a documentary and critical discourse analysis, some of these attributes, although strong candidates, are impractical. Variables that measure outcome had to be excluded or adapted, such as social learning and responsiveness. Others are too prone to populism to distinguish between discourses, such as accountability and diversity, but couldn't be left out for normative reasons. Finally, some variables require empirical measurements, such as the existence of constraints for democracy, the rule of law, and the facilitation of implementation. My final framework considered these research limitations as well as my intention to distinguish between weak and strong forms of democracy. It is my belief that strong forms of democracy will deliver the equitable distribution of costs and benefits of natural resources, and the management of those resources according to the interests of all peoples. Equity and social control over common resources are thus core attributes in my democratic framework. But other attributes are needed to stay true to the inspiration of ecological democracy and to the philosophy of democracy as an ongoing political process. I decided to keep the list longer, in order to be able to test the comparative effectiveness of attributes in measuring the ecological-democratic quality of decision-making in food politics, but also to be able to compare food discourses and policies on a range of attributes ranging from a more liberal-inspired style, to a participatory style, and finally a radical-ecological style.

As Diamond and Morlino warn, any combination of the democratic attributes discussed in this chapter runs into problems of high interaction between attributes, boundary blurring, and over- or under-emphasis of certain attributes in detriment of others. To minimise these pitfalls, I followed Munck and Verkuilen's (2002) advice and aimed for completeness in defining each attribute. Nevertheless, my final model is exploratory and open for adjustment after testing it against empirical data.

I chose to work with four main democratic dimensions, which I describe in the following paragraphs, whereas the resulting model is presented in Table 1:

1. **A dimension of basic democratic attributes**, which are those that most democratic thinkers would agree with and that are generally part of the value system of liberal democracies. The most important attributes in the "basic democratic" dimension are freedom and equality. Since freedom is too broad a concept, ultimately also meaning "autonomy", which I placed in a separate dimension, I will refer here to classic basic freedoms, which are those of speech, movement, religion, petition and association, whereas equality will refer to political equality, an equal right to participate in decision-making. Freedoms, or liberties, are tangled up with the idea of rights, such as the right to life, to justice, to be free from slavery and torture. Despite the promises of a rights-based approach, I prefer to focus on attributes of democracy that do not necessarily need a legal system to be upheld, but can be agreed upon by members of a given organisation, community, or even society, staying true to a radical theory of democracy.
2. **The dimension of popular control**, as proposed by many proponents of stronger democracy. In the broadest sense, this is the core democratic idea of rule of the people. In a stricter sense, popular control is social legitimacy, which is the idea that people should decide on issues that affect their lives, although for instance Beetham (1994) kept it more open (less radical), saying that people should *have a say* in issues that affect their lives.
3. **The dimension of autonomy**, understood here in the more radical sense of self-determination or the "right to have rights". The "right to have rights" means people can decide which rights they want to have, they are not simply rights *bearers*, but rights *makers*. The concept of autonomy has always been implicit in democratic thinking, but is rarely made explicit. In its implicit understanding, it means people are autonomous in their conscience and reasoning, and can decide about their lives, a necessary precondition for democracy. Autonomy also plays a part in the idea of state sovereignty, of each state deciding autonomously within their own borders. But autonomy as self-determination has a dark side to it, at least from the viewpoint of a

state, a government of a state, or a supranational organisation. Autonomy as *autarchy* (self-rule) opens the way for individuals or groups to act or function independently, which in turn may conflict with the rule-making of a majority group. And autonomy as *autarky* (self-sufficiency) opens the way for individuals or groups to detach themselves from national and/or global economies, which may harm the interests of other groups that rely on this national/global system of exchange. At the same time, it is important that autonomy be reconciled with other (more solidary) democratic dimensions, as Laclau and Mouffe (2001) attempt, so that whatever social arrangement results from the political struggle of wills, may satisfy all peoples. Precisely because of this controversy, autonomy is in my view a key dimension of democracy, one that should not be ignored.

4. **A negative democratic dimension**, understood as democracy's function of preventing the existence of *unfreedom*, *inequality*, and *inequity*. Typically, I should include human rights in this category, but as I stated, my framework focuses on social arrangements between individuals and groups who are interested in establishing principles for the flourishing of both humans and their habitats.

Table 1. Framework for assessing ecological-democratic quality

Dimension of democracy	Democratic attribute	Definition	How to operationalise the attribute
<p align="center">Basic Democratic Dimension</p>	<p>Political equality</p>	<p>This is political participation in decision-making without domination of any group's interests and without discrimination on the basis of factors such as gender, age, ethnic, or socioeconomic group.</p>	<p>I rely on O'Donnell's (2004) argument for equality, that all human beings are agents—endowed with autonomy for making decisions, capacity for reasoning, and responsibility for his or her actions. The moral and legal recognition of agency, in his view, extends each human being a set of basic rights necessary to support their agency. Beetham (1994) justifies the democratic attribute of equality with the assumption that "everyone (or at least every adult) has an equal capacity for self-determination, and therefore an equal right to influence collective decisions, and to have their interests considered when they are made".</p> <p>Political equality ensures that everyone has an equal opportunity to exercise control over decision-making. Although political equality is generally uncontested, social and economic equality is more controversial.</p> <p>A good indicator of equality is representativeness (Weir and Beetham 2002).</p>
	<p>Political freedom</p>	<p>The basic political freedoms that need to be guaranteed in democratic decision-making: freedom of speech, movement, religion, petition, and association. It is also a criterium to ensure that all parties to the decision-making are free from coercion.</p>	<p>Dewey (1925-27/ 2012) transforms the idea of freedom: on the one hand, freedom is restricted by legitimate political decision-making, on the other, only by legitimising the decision-making in the sense of giving citizens control over it, is freedom made possible.</p> <p>Equality and Freedom are realised by certain basic rights: political, civil, and social, which I have not explicitly included in this framework. These rights hold the promise of realising a number of key democratic attributes, but are in themselves not sufficient.</p> <p>The basic freedoms recognised by most democratic thinkers or practitioners are freedom of speech, of movement, and of association.</p> <p>Morrison (1995, 12) proposes a balance between freedom and community, where freedom is understood "in the context of responsibility and self-management", whereas the community provides the structures to protect individual rights.</p>
	<p>Accountability</p>	<p>This refers to the accountability of both decisions and decision makers, and in that sense also encompasses the principles of transparency and publicity.</p>	<p>To verify the claim we need to ascertain whether and how balanced and comprehensible information informing policies and the process and results is presented by decision makers, and whether it is possible to hold decision-makers responsible for their decisions.</p>

Table 1. (cont.)

Dimension of democracy	Democratic attribute	Definition	How to operationalise the attribute
	Responsiveness	The responsiveness of decisions and resulting policies to the beneficiaries of these decisions. Also the extent to which beneficiaries wishes under-build the decision-making or are satisfied by it.	Saward (1994) defines responsiveness as the satisfaction of the wishes of a majority of citizens. More radical thinkers, including myself, believe decisions have to be responsive to the needs of the groups affected by decisions. Since it is not always possible within the context of this dissertation to measure the results of the policy proposals analysed in the next chapters, I will assess responsiveness as an intention to satisfy the wishes of beneficiaries (not necessarily the majority) of certain policies or measures. The food actors that are more willing to make difficult decisions and show they are orientated towards action, are valued more positively.
Popular Control	Active inclusion	This is a stronger version of equality, seeking to include and empower all interested and affected parties in the decision-making process.	Active inclusion means an ongoing endeavour to ensure fair and meaningful participation of people affected by decisions, providing free and transparent access to information and knowledge, and the necessary democratic spaces for civic involvement to occur. This is based on Habermas' (1991) conditions for the public sphere. According to Dewey (1925-27/ 2012, 23), it is not just actual participation that defines democracy, but also potential participation, to be employed whenever the need arises to review, possibly overturn, decisions that have been taken. Cohen (1997a) advocated deliberative inclusion as a condition for democracy. All citizens having equal rights, regardless of their background or culture, they should be included in discussions that concern them.
	Equitable distribution of common resources	Ensuring benefits and costs resulting from common resources are equitably distributed among the users of those resources, according to both their level of usage and their needs. In the strongest sense it is a willingness to re-balance the existing power structures by placing all interested parties on equal footing, independently of their pecuniary investments in the exploitation of common resources.	This means ensuring intergenerational, inter-gender, and socioeconomic equity in the access to resources that are important to human survival and development, and in access to welfare. The ideas of equity and gender inclusion go beyond freedom and equality. Equity involves understanding what people need to live full, healthy lives, and to participate in the steering of public affairs. Equality does not result in equity. I understand equality as giving everyone the same rights or resources, whereas equity means giving each person what they need to thrive. The term equity unfortunately may have different, sometimes opposing, meanings. For example, in Morton Deutsch's (1975) understanding, equity is a more liberal concept than equality: equity means redistributing benefits according to merit, whereas equality implies that all interested parties have the same right to the benefits. To resolve the tension, as a third principle of redistributive justice, Deutsch identifies <i>need</i> . Here I merge his idea of need with that of merit to be able to use equity in the justest possible sense.
	Deliberative decision-making process	This is the practice of converging on common interests through the	According to Dryzek (1995), democracy is a matter of effective communication between all interested parties, not just preference aggregation. Habermas (1996, 107) believed the

Table 1. (cont.)

Dimension of democracy	Democratic attribute	Definition	How to operationalise the attribute
		<p>advancement of rational-critical arguments (Cohen 1997a). Cohen describes the ideal deliberative procedure as one where all those that are affected by decisions come together to discuss alternatives on equal footing, presenting reasonable arguments to defend their interests, while aiming to reach decisions focused on the common good that are agreeable to all.</p>	<p>deliberative procedure to be the main source of legitimacy: “Just those action norms are valid to which all possibly affected persons could agree as participants in a rational discourse”. His "ideal speech situation", is one where all participants have free and equal access to each other, reasonably discuss the issues and weigh the arguments, accepting the "force of the better argument", and the resulting consensus (Habermas 1979). Habermas (2008, 50) identifies four presuppositions for deliberation to be legitimate: 1. all those capable of making a relevant contribution have been included; 2. all participants have equal voice; 3. all participants are free within the deliberative process to speak their mind without deceiving others or themselves; 4. the deliberative process can be found free of sources of coercion.</p> <p>For Dewey (1925-27/ 2012, 11), decision-making is a "process by which the social organism weighs considerations and forms its consequent judgment: that the voting of the individual represents in reality, a deliberation, a tentative opinion on the part of the whole organism".</p> <p>In the deliberative democracy tradition, which has solidified considerably in the last decades, the debates are expected to take place in terms of conceptions of the common good as opposed to bargaining for particular interests. Barber (2003, 156) insists that for politics to succeed, all individuals and groups must put their values and ideas and conceptions of the good to the test of politics itself.</p> <p>On the other hand, Bohman (1996) is less concerned about discursive rationality and the pursuit of consensus through the better argument, defending instead an open, plural, and inclusive public interaction where common interests are constructed based on cooperation, dialogue, and a willingness to commit to the resulting decisions. I will take some cues from Bohman when developing the questions for my own ecological-democratic survey, thus supporting a more communitarian form of deliberation.</p>
	Cognitive justice	<p>The constitutional right of different systems of knowledge to exist as part of a dialogue and debate, thereby strengthening the participation of lesser-recognised groups with cognitive representation, and democratising knowledge itself (Visvanathan 2005).</p>	<p>Visvanathan (2001) believes that many forms of knowledge should be allowed to co-exist "because all knowledges are seen as partial and complementary and because they contain incommensurable insights". For him, this entails not only the right to be heard, but also the right to change the terms of dialogue, achieving cognitive empowerment rather than merely cognitive participation.</p> <p>Michel Pimbert contributes to a more complete conception of cognitive justice—what he calls "knowledge that is ecologically literate, socially just and relevant to context" (Pimbert 2006, 1)—in the context of food democracy:</p> <p>"The whole process should lead to the democratisation of research, diverse forms of co-</p>

Table 1. (cont.)

Dimension of democracy	Democratic attribute	Definition	How to operationalise the attribute
			<p>inquiry based on specialist and non-specialist knowledge, an expansion of horizontal networks for autonomous learning and action, and more transparent oversight." (Ibid., 16-17)</p> <p>He goes on to state that this "implies 1) cultural values that emphasise more direct citizen participation in determining research agendas, regulations and policies; 2) new professional values, participatory methodologies and behaviour; 3) the adoption of a learning process approach in the production and validation of knowledge; and 4) enabling policies that offer citizens adequate material security and time for democratic deliberation in the context of more localised food systems and economies" (Ibid., 9).</p> <p>Dietz et al. (2001) offer a possible operationalisation with their term "substantive grounding": the availability of information from different sources on the analysis of environmental problems. This in turn is based on Habermas' conciliation of the information and experience created in the "life-world" (society) as opposed to the "systems-world" (world of more formal knowledge) (cited in Dietz et al., Ibid.).</p> <p>Finally, Cohen (1997b) also emphasises the idea of "reasonable pluralism": accepting different world views, even when they are incompatible, so that the holders of these views may co-exist on terms that are acceptable to all.</p>
	Social legitimacy	<p>Can be construed as a strong version of accountability and of democratic legitimacy when those that bear the consequences of decisions by others have a final say or, in an even stronger version, a definitive say in decision-making;¹⁵ Beetham (2013) defines legitimacy as "the normative dimension of power relations, and the ideas and practices that give those in power their moral authority and credibility". Social legitimacy takes this a step further and hands this power over to those affected by decisions.</p>	<p>One possible operationalisation of social legitimacy is to determine "that the burden of proof must rest with those who seek less rather than more inclusive arrangements" (Dewey 1925-27/ 2012, 22).</p> <p>For social legitimacy to be achieved, liberal rights need to be radicalised so that all stakeholders bear the collective responsibility for and ownership of decisions (Munton, 2003). The criteria to assess this legitimacy may be either external or internal (to the belief system in question).</p> <p>Dryzek (2000) claims social legitimacy is achieved when those that bear the consequences of decisions by others have a final say in decision-making, whereas Shiva (2005) proposes a stronger form, demanding that "those who bear the consequences of decisions and actions are the decision-makers".</p>

15 Deliberative democrats prefer the term "democratic legitimacy", whereas social legitimacy has been used more often in legal contexts. The latter term is however closer to Habermas' idea of legitimacy as requiring the consent of all those to whom decisions or laws will apply.

Table 1. (cont.)

Dimension of democracy	Democratic attribute	Definition	How to operationalise the attribute
	Political participation	In its strongest and more republicanist definition, political participation is how members of a group, community, or society, take responsibility for decisions that affect their lives.	<p>Dewey considered political participation to be constituent of democracy. The possibility of participation (what he called <i>potential</i> participation) should be ever present, to be employed whenever the need arises to review, possibly overturn, decisions that have been taken (1925-27/ 2012, 23). He further claimed that there is a public for each decision-making situation.</p> <p>Berger (2009, cited in Amelung and Baumgarten 2017) gives an idea of the activities that should characterise political participation: "political engagement encompasses most of the activities that we normally associate with political participation or citizenship: voting, contacting representatives, contributing financially to representatives or interest groups, following political issues (via any media format), associating with groups intended to influence political outcomes, attending rallies or demonstrations intended to influence political outcomes, or running for (or holding) political office".</p> <p>Political participation asks of members of a polity to get involved in the shaping of their own common destinies. Participation should not just be extensive (with as many involved as possible), but intensive, with people regularly taking part in the running of their communities.</p>
Autonomy	Contestation	Contestation is defined less liberally here than Dahl's original term: as the acceptance of the ideas of dissent, <i>conflict of ideas</i> as well as <i>conflict of interests</i> . The term also overlaps with Dewey's idea of <i>potential participation</i> , in the sense that affected parties must be able to overturn decisions when these are found to harm "more inclusive interests".	<p>This concept simultaneously embraces Dahl's more liberal idea of contestation as competition and debate, as well as the idea of conflict or antagonism derived from diversity as advanced by Laclau and Mouffe, and finally, Rosanvallon's concept of counter-democracy.</p> <p>Machiavelli embraced the idea of conflict for his Tribunes of the Plebs. Geuna (2013, 18) demonstrates how Machiavelli attributed an important role to conflict, as much at the inception of the republic as during its normal functioning: "developing within particular institutional channels, conflict preserves the liberty of the republic even when this has become a form of rule of law". Machiavelli believed that the institutionalisation of the crucial value of liberty owed more to the political conflict between antagonistic parties than to the orders and laws that came later.</p> <p>Contestation partially overlaps with the idea of reflexivity, of diversity or pluralism, and that of "right of rights". But it is more than an effort to accept different opinions or ways of living, or to introduce the practice of reconsidering certain decisions and rules: it is the cultivation of a new culture where <i>dissent</i> is welcomed. This means ideal decisions are neither reached by majority voting nor by consensus in the sense of consent, but are based on a comprehensive agreement that faces the conflict of ideas and interests head on, and which no participant decided to block. Decisions must ensure, as discussed under social legitimacy, "that the burden of proof must rest with those who seek less rather than more</p>

Table 1. (cont.)

Dimension of democracy	Democratic attribute	Definition	How to operationalise the attribute
			inclusive arrangements".
	Reflexivity	This is an attitude of collective self-awareness, self-inquiry, and self-confrontation that is deemed a necessary condition to break with path dependency in decision-making and for social learning in democratic practices to occur (Voss, Bauknecht, and Kemp 2006).	Voss et al. (2006, 7) define reflexivity as “the dealing of modernity with its own implications and side-effects”. Although their intention is largely reformist, reflexivity holds great promise since it permits the development of critical thinking and the adoption of a social learning approach, working to improve the capacity for future decision-making by learning from our mistakes. Properly carried out, reflexivity enables us to emancipate ourselves from our path-dependent choices. This concept partially absorbs the ideas of contestation, conflict, and counter-democracy advanced respectively by Dahl, Barber, and Rosanvallon. Democracy here is viewed as a process, or in Dewey's (1925-27/ 2012, 24) words: "democracy entails a kind of openness in which its substantive meaning—that is, what concerns it addresses and what ends it pursues—is always in the process of being determined". Barber firmly rejected universal truths about democracy and believed democratic legitimacy is achieved by the constant test of politics, whereas reflexivity is a component of "honest" politics. In this latter sense, reflexivity is the capacity to keep conflict productively alive in decision-making.
	Social control over common resources	This is a strong version of democratic control and of the attribute of equitable distribution of costs and benefits of the use of common resources. It suggests bringing common resources for human development and welfare under the control of those who depend primarily on these resources.	Democratic control over resources has been proven insufficient, especially in liberal democratic regimes. Common natural and other resources (such as knowledge) have been systematically privatised. The idea of social control over common resources aligns itself with theories of the commons and claims of food sovereignty and of radical ecological democrats, asking that common resources remain in the hands of its primary users, whose right to access, use, and decision-making must be guaranteed by secondary users.
	Diversity	This is the acceptance of different cultures and life styles, as long as they are, within reason, equally accepting of others.	The concept of diversity places conditions on other attributes, in particular those of active inclusion and deliberation. It exacts tolerance and respect from groups wishing to decide on issues of common interest, and the courage to face potential conflict of values, ideas, and interests when dealing with groups that diverge in belief, culture, language, sexual orientation, or gender. It also means granting autonomy to groups that wish to run their own affairs. Diversity is not a consensual term, and its place in democracy is contested. It can interfere with political equality. That's why I introduce a limit to tolerance of difference, which is that given by Hannah Arendt: tolerance will not tolerate intolerance.

Table 1. (cont.)

Dimension of democracy	Democratic attribute	Definition	How to operationalise the attribute
	Altruism	This is the capacity, in particular in decision-making, to relinquish some personal or collective welfare for the welfare of others that are more needful. It is a strong form of solidarity.	Mitchell (2006) coined the term “environmental altruism”, defined by people's degree of selflessness with respect to the environment. In the present analysis, I prefer to use the broader term, to allow for consideration of social as well as ecological factors.
Negative Dimension	Rights of Nature	The rights of Nature can be considered a negative right when seen as the "freedom from destruction" of natural organisms.	The first four principles of Shiva's (2005) Earth Democracy in essence refer to the negative right of all beings to be free from harm and allowed to thrive: 1. All species, peoples, and cultures have intrinsic worth; 2. The earth community is a democracy of all life; 3. We must defend biological and cultural diversity; 4. All beings have a natural right to sustenance.
	Restriction of elite control	This principle, inspired by Machiavelli, asks decision makers to restrict the control over majority (or public) interests by a minority interest group. It also aims to counter-balance the influence of socioeconomic and political elites on decision-making in the public interest, with some form of citizen control.	Machiavelli proposed a model of republicanism based on the one hand on tribunates that excluded wealthy citizens, and on the other hand on popular assemblies where the influence of the prominent is equally limited. Inspired by Machiavelli’s proposals for reconciling the idea of economic class with political accountability and popular empowerment, McCormick (2011) proposes to create a citizen body that excludes socioeconomic and political elites from decision-making in the public interest, while appointing "common people" by random selection, to oversee and censure government and state authorities. Several ecological democrats warn of the dangers of the concentration of resources and capital in elite hands, and propose restricting their power as a condition for ecological democracy. Thus, Dietz et al. (2001) speak of combating the excessive power of capital, military, religious, or other interests that do not embrace sustainability. Sklair (2001) has called this elite the Transnational Capitalist Class. This notion also takes a cue from Rawls (1999a), who avowed that concentrations of wealth would allow "a small part of society [to] control the economy and indirectly political life itself".

A global food polity

Part 2

Democratic analysis of the global food polity

A global food polity

Introduction to the democratic analysis

Democracy as compared with other ways of life is the sole way of living which believes wholeheartedly in the process of experience as end and as means; as that which is capable of generating the science which is the sole dependable authority for the direction of further experience and which releases emotions, needs and desires so as to call into being the things that have not existed in the past. For every way of life that fails in its democracy limits the contacts, the exchanges, the communications, the interactions by which experience is steadied while it is also enlarged and enriched. The task of this release and enrichment is one that has to be carried on day by day. Since it is one that can have no end till experience itself comes to an end, the task of democracy is forever that of creation of a freer and more humane experience in which all share and to which all contribute.

—John Dewey, *Creative Democracy: The Task before Us*, essay, 1939.

In order to test the exploratory model for ecological-democratic quality that I have developed, and to be able to derive some conclusions as to which democratic attributes are the stronger candidates for comparing models of decision- and policy-making according to their ecological and democratic quality, I have chosen a grounded theory approach. Strauss and Corbin (1994) define this as a methodology where researchers either derive their theory from the data, or improve existing theories in confrontation with the data. The data collection and analysis, as well as the development of theory, are all considered parts of the same process. Grounded theory is an appropriate methodology when the research data consist of interviews, field observations, and documentation, as is the case in my research. Even though the entirety of my research constitutes a critical analysis of the social, economic, and political arrangements that characterise what I consider to be a core human activity—food production—I chose to divide the analysis in two parts. In the first part of my research I critically examined both the documented history and the main schools of thought in the political economy of our industrialised and globalised world, zooming in on the modern food system whenever possible, extracting the main factors that mediate the relations of power in the global food system and the attributes that facilitate or hinder the realisation of a substantive food democracy.

In the second and present part, I wish to test my critical theory-in-progress on two forms of empirical data: documentary and discourse. In order to strengthen the internal validity of my research I have used, whenever possible, multiple sources. The main focus of my empirical research is on the critical / comparative analysis of food policy discourses (more specifically, critical discourse analysis or CDA). The documentary analysis serves both as a context and as

a check for the nine discourses from key food actors that I will assess according to their ecological and democratic quality. Whereas a carefully constructed CDA can be a reliable and valid tool, the documentary analysis of a system as large and complex as the modern food system will unavoidably be rudimentary. Yet the enormous amount of information available on the food system represents both a limiting *and* a facilitating factor: since several key data have been confirmed by multiple sources, they may permit less equivocal conclusions.

Ideally, in order to complete my observations, I wished to include first person testimonies of the food actors that I chose to study. Unfortunately, FAO—a crucial food actor—adopted a new policy that prohibits its staff from giving interviews to researchers. Unable to interview all the food actors, I decided to direct my grounded and comparative analysis exclusively to their written discourses.

The documentary data will be presented in biographical form in Chapter 4, guided by the democratic model presented in Chapter 3, but without yet bringing its full weight to bear on the data. Similarly, the critical discourse analysis is informed by the conditions for substantive food democracy that I have teased out in previous chapters, but will focus firstly and foremost on the themes, key assumptions, narrative strategies, and contradictions that can be found in the texts. Only after having completed the two analyses, will I test the exploratory model for ecological and democratic quality that I presented in Table 1, using questions that I have developed for each the attributes. The questions are presented at the end of this introduction. In this manner, I will compare the ecological-democratic characteristics of the global food system and those of the discourses of nine key food actors. The theoretical model so far has purposefully been left relatively broad and open, to allow for a selection and further study of the more robust variables for the confrontation of different policy options and/or sociopolitical arrangements.

Before presenting the research in the next two chapters, I wish to sketch the context in which many of the documents for the documentary research, and most of the texts that I selected for discourse analysis, have been written. The context will help interpret the texts, even though at the same time, in a first iteration, I will attempt to suspend all pre-existing categories to allow the texts to speak for themselves as much as possible, registering the themes as they appear. Often, important information is left out of policy texts, as Drummond (2012), one of the

inspirations for my CDA, discovered in the two case studies on food actors that she conducted. Drummond advises to look for omissions since they help legitimise arguments in the narrative as much as truth claims will. The texts need to be combed to reveal the structure of the argumentation as well as inconsistencies, contradictions, and paradoxes. Providing a context will therefore assist in detecting what is missing.

With some justifiable exceptions, the majority of documents that helped uncover the structure of the global food system are not older than six or seven years (2009), with many not older than four or five years (2011-2012). Taking into consideration the complex socio-ecological dynamics of the modern food system, this is as recent as global data will get in this field. The nine reports selected for CDA—of which a list can be found in Appendix A—are, with one exception, all less than two years old. The same applies to the supporting documents for the CDA (additional reports that were used to cross-check statements). The timing is relevant because the year 2015 was particularly important for global environmental decision-making. Only the future will tell if it was a historical year, but nevertheless the promises that were made by governments from all over the world on social and environmental matters were the most ambitious so far in the history of environmental governing. This was the year the G7 committed to ending extreme poverty and undernutrition by 2030, as well as to moving to a zero carbon economy by 2100. It was the year the UN General Assembly adopted 17 Sustainable Development Goals (SDGs)¹—representing 169 specific targets—to replace the Millennium Development Goals (MDGs), the framework of which expired in this same year. The SDGs form the broadest sustainable policy agenda yet and include bold statements such as eradicating (rather than simply combatting) poverty and hunger, and defending full equality for women and men. This new Agenda for Sustainable Development became even more convincing with the inclusion of the Addis Ababa Action Agenda², adopted in the same year by 150 countries to finance critical public services that may help tackle social, economic, and environmental challenges across the developing world. Finally, at the end of 2015, the 195 countries represented at the UN Climate Conference in Paris (COP21)³ agreed to keep global

1 Resolution adopted by the General Assembly on 25 September 2015, available: http://www.un.org/ga/search/view_doc.asp?symbol=A/69/L.85&Lang=E (accessed 10 September 2016).

2 Final text of the Addis Ababa Action Agenda, “Financing for Development”, available: http://www.un.org/esa/ffd/wp-content/uploads/2015/08/AAAA_Outcome.pdf (accessed 16 September 2016).

3 Final text of the so-called Paris Agreement, available:

warming below 2 degrees Celsius (above pre-industrial levels); to increase ambition in combatting climate change by setting a higher floor from which to create national climate action plans (by taking the 188 national plans that had so far been submitted as the minimum floor); to assume national—and not just common—responsibility; and to report regularly on progress. The same month, the Food and Agriculture Organisation (FAO) launched a G20 coordinated—and Rockefeller Foundation financed—technical platform to measure and help reduce food loss and waste,⁴ while developed countries finally agreed at a World Trade Organisation (WTO) meeting in Nairobi to end their subsidies of farm exports with immediate effect⁵.

The increasing substantiveness of promises for social and ecological well-being, coupled with a growth in detail of action agendas, denote a gradual change in the attitude of “globalising” bureaucrats, who appear to become more willing to sacrifice some national wealth in return for a more equitable and ecologically more sustainable world. The adoption of the SDGs comes at the heels of a long process of reflection and discussion on the relative failures of the MDGs. Some developments that are specific to the food system have been:

- The reform of the Committee on World Food Security in 2009, as a reaction to the 2007 and 2008 food crises (now allowing input from any interested parties, instead of only a selection of “experts”);
- The proposal of key frameworks to tackle the social and ecological challenges of the global food system, such as the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries, and Forests⁶ in 2012, and the Principles for Responsible Investment in Agriculture and Food Systems⁷ in 2014;

http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf (accessed 17 September 2016).

4 More information available: <http://www.fao.org/platform-food-loss-waste/en/> (accessed 18 November 2016).

5 The text of the so-called “Nairobi Package” is available: https://www.wto.org/english/thewto_e/minist_e/mc10_e/mindecision_e.htm (accessed 20 November 2016).

6 Available: <http://www.fao.org/docrep/016/i2801e/i2801e.pdf> (accessed 20 November 2016).

7 Available: <http://www.fao.org/3/a-ml291e.pdf> (accessed 20 November 2016).

- The strengthening and politicisation of the concept of food security, originally coined in the 1970s, when it referred almost exclusively to food supply⁸, whereas since 2000 its social and political dimensions have been recognised⁹;
- The gradual operationalisation of the moral and legal concept of the “Right to Food”—currently written into the constitutions of over 40 countries (FAO 2006, Policy Brief).
- The adoption of the right to food as a social right also resulted in the year 2000 in the appointment of a Special Rapporteur on the Right to Food by the UN Commission on Human Rights (now called Human Rights Council).
- Finally, in 2014, the UN Human Rights Council passed what has been considered a landmark resolution to establish a working group to develop a legally binding instrument on transnational corporations (TNCs)¹⁰ and other businesses with respect to human rights.¹¹ The treaty, promoted mostly by countries from the Global South and opposed by wealthier countries such as the USA and those of the EU, aims “to regulate TNC behavior so that states implement their human rights obligations to protect people against harm from TNC activities” (Right to Food and Nutrition Watch 2015, 41).

Despite these positive developments and the recent, largely unprecedented agreements among governments, not much has actually been put in motion as I write in the Summer of 2016. Only 22 percent of countries have ratified the Paris agreement, when a minimum of 55 percent is necessary to start the plan¹². The “Nairobi package” (ending farm export subsidies

8 World Food Conference 1974.

9 In FAO’s 2002 publication *The State of Food Insecurity in the World*, the idea of social access is added to the definition of food security, which now reads: “Food security [is] a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”.

10 UNCTAD definition: “[...] an enterprise comprising entities in more than one country which operate under a system of decision-making that permits coherent policies and a common strategy”. Available: <http://unctad.org/en/Pages/DIAE/Transnational-Corporations-Statistics.aspx> (accessed 20 September 2015).

11 The text of the resolution is available: <https://www.ihrb.org/pdf/G1408252.pdf> (accessed 2 December 2016).

12 The threshold for entry into force was achieved on 5 October 2016, but 60 countries have yet to ratify, while the president-elect of one of the two largest polluting countries (the USA, the other being China), has already threatened to take no steps to live up to the agreement.

by wealthy countries) has not been put in motion, to the despair of the least developed countries who cannot compete with the subsidised products that flood their markets. Meanwhile, the USA and the EU are rushing through bilateral and multi-lateral trade agreements that may seriously weaken the sovereignty of weaker and/or poorer nation-states. Agreements such as the Transatlantic Trade and Investment Partnership (TTIP), to be celebrated between the USA and Europe, and similar agreements all over the world—the largest of these being the Trans-Pacific Partnership or TPP involving the USA, Canada, Japan, Australia and four other countries—are being negotiated behind closed doors, with only lobbyists from corporations able to influence the discussions, while civil society is kept out. Leaked documents have nevertheless made the intentions of the negotiators clear: many food safety regulations are to be weakened or eliminated, governments will cease to have discretionary powers over their food systems, and businesses will be able to sue governments that hamper their profit margin outside of the legal system, using arbitration (Right to Food and Nutrition Watch 2015, 50). The trade primacy that I uncovered when analysing the political economy of the modern food system in Chapter 1, receives its confirmation in what I have called “caveat” clauses in the latest global environmental agreement: these reveal that the SDGs will not place any specific demands on industry or on powerful countries to restrain themselves—all action is voluntary and will not harm trade. In fact, the SDG agenda pushes for a new WTO agreement—which has been hampered because of serious complaints from countries from the Global South about the restrictions that the 1994 WTO convention places on public procurement of food by national governments¹³—by implying that the Doha Development Agenda should be wrapped up quickly (Target 17.10 in the SDG agenda). It also asks for the WTO to be the regulating institution in matters of global trade (Target 68), despite the fact, as I will further demonstrate in Chapter 4, that the WTO is not an independent institution. According to the WTO itself (cited in Oxford Farming Conference 2012), the USA and the original 15 EU countries contribute to over 50 percent of the WTO’s budget, while they also lodge over 40 percent of the trade-related complaints. There is even specific mention

13 The so-called Uruguay Round of negotiations (the predecessor of the current Doha Round) culminated in over 60 agreements, of which one of the most contested ones is the Agreement on Agriculture mentioned previously. Among other restrictions this agreement does not allow governments to subsidise food for their own people by directly or indirectly favouring local producers, since this is considered a “trade distortion”. Read more about the WTO and how it harms the food security interests of countries in the Global South in the 2015 Right to Food and Nutrition Watch report.

of trade liberalisation in the SDG agenda, which could mean a continuation of the controversial approach called the Washington Consensus (Ibid., Target 68). Finally, one of the “5 P's” touted as the motto of the agreement (the idea of *P's* itself is inspired by business practice rather than politics or ethics), represents partnership, a term that implies an equal standing that many of the actors in the food system do not have¹⁴, whereas a term such as solidarity or cooperation would have been more embracing of justice and equity. As discussed in previous chapters, partnerships are the new buzzword since its first use at the Earth Summit in Johannesburg in 2002, and no international agreement or report is now complete without it. I will discuss the concept in more detail when I look at the different discourses in Chapter 5.

The aforementioned former Special Rapporteur on the Right to Food, Olivier De Schutter, observes in his concluding report (De Schutter 2014, 4):

Most stakeholders agree, in general terms, on the urgent need for reform. Measured against the requirement that they should contribute to the realization of the right to food, the food systems we have inherited from the twentieth century have failed. Of course, significant progress has been achieved in boosting agricultural production over the past fifty years. But this has hardly reduced the number of hungry people, and the nutritional outcomes remain poor.

He notes, with concern, how trade continues to trump food, people, and equity (Ibid., 19):

The ninth Ministerial Conference of WTO, held in Bali, Indonesia, from 3 to 7 December 2013, which failed to place food security above trade concerns, provides a textbook illustration of the need to improve coherence of global governance for the realization of the right to food: no area, not even trade, should be left aside from discussions concerning this paramount objective.

The negotiations in Bali resulted in an extremely watered-down so-called “peace clause” to provide relief for the food security programs of less wealthy countries. This clause, on the one hand, was clothed in ambiguous language, raising doubts as to its validity, and on the other hand, was only conceded by the richer countries after poorer countries agreed to sign the first multilateral agreement foreseen by the Doha Development Round—the Trade Facilitation agreement¹⁵ (Right to Food and Nutrition Watch 2015, 47). The negotiations were resumed in 2015 in Nairobi, with the Doha Round’s conclusion being announced with much fanfare,

14 Under target 17.16 we can read: “Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries”. Available: <http://unstats.un.org/sdgs/metadata/> (accessed 8 December 2016).

15 Trade Facilitation is an aspect of trade liberalisation, establishing provisions for “expediting the movement, release and clearance of goods, including goods in transit”, WTO definition available: https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm (accessed 15 September 2016).

albeit completely prematurely, by the promoters of global trade (such as the business association World Economic Forum (WEF), representatives from the US government, and the World Trade Organisation itself). This prompted the new Special Rapporteur on the Right to Food, Hilal Elver, to intervene and remind national and international bureaucrats that “development” has been a missing link in the Doha Development Round and that WTO rules have systematically undermined the right to food.¹⁶

In the 2015 report on the impact of business operations on people’s livelihoods (in particular nutrition), organised by the Right to Food and Nutrition Watch initiative, one contributor gives the following example of the extreme injustice of global food politics:

To understand the level of inequity involved, consider this: the US spends approximately US \$75 billion on just one of its food subsidy programs—Supplementary Nutrition Assistance Program (SNAP), popularly known as the food stamps—for 47 million beneficiaries. This translates to US \$1,608 annually per person. Contrast this with the US \$20 billion dollars that India is proposing to spend to cover 867 million entitlement holders under its National Food Security Act (2013). This is less than US \$25 per person each year. The US thus provides roughly 64 times more food aid compared to what India intends to provide per person per year. While the WTO considers the US SNAP program as non ‘trade-distorting’, it regards India’s National Food Security Act as ‘trade-distorting’ since it is providing price support to food producers by purchasing produce above the ERP. (Patnaik, in Right to Food and Nutrition Watch 2015, 45)

Similarly, Guimarães and Fontoura (2012), when analysing discourses at the 2012 RIO+20 Earth Summit, found that, despite a stable, and in some cases growing use of the ecological- and social-inspired discourses of “food security”, “non-GDP (Gross Domestic Product) measures of wealth”, and “sustainability”, their effectiveness is largely annulled. In part, this is due to the lack of concrete definitions and operationalisations of these concepts, while additionally the use of equally strong discourses such as “scientific credibility”, “green economy”, “natural capital”, and “public-private partnerships” helps to overshadow alternative solutions. The term “food sovereignty”, which encloses strong notions of justice and equity, was actively resisted at the Earth Summit by businesses and governments of wealthier countries. Guimarães and Fontoura conclude that the Rio+20 summit resulted in the reaffirmation of the power of the private sector and of wealthier countries in setting the global environmental agenda (Ibid., 47). They offer this as proof of the capacity of the overarching discourse of green capitalism (now rephrased as “green economy”) to co-opt the concerns of

16 United Nations Human Rights Office of the High Commissioner, “UN expert urges trade ministers to focus concrete outcomes on food security,” 15 December 2015, available: <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=16888&LangID=E> (accessed 12 September 2016).

the public, environmental NGOs, and social movements, thereby robbing concepts such as sustainability and equity of their militancy. In their view, the idea of what they call “green reformism” is the most prominent discourse of our time, pervading the actions of national and supranational governing institutions alike, while openly aligned with the interests of large businesses.

Other, equally hegemonic¹⁷ narratives that are common in the texts of institutional food actors are that of "technological change" and "economic growth", used to justify an approach to agriculture that combines a reliance on science and technology with increasing production for export markets and the attainment of economies of scale (Friedmann 2000, cited in the case study by Drummond 2012). Johnston (2008) identifies a meta-discourse among business food actors that she terms "conservation through consumption", and which she saw in action at the organic supermarket chain Whole Foods Market. She deems it to be business' response to the discrediting of the older "liberal capitalist productivism" discourse, by co-opting ecological concerns into the culture-ideology of consumerism.

I find the world in 2016 both substantially different and the same as the world in 1996, when heads of state present at the World Food Summit reaffirmed “the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger”¹⁸. It is different because the social struggle for equity in the food system has been globally recognised and important advances have been made in identifying the factors that underlie persistent hunger and poverty. The right to food has been inscribed in several national constitutions and is an integral part of international agreements. The Committee on World Food Security was drastically reformed in 2009 to allow inputs from all sectors of society—with an emphasis on people directly impacted by food policies—and has granted a more prominent role to civil society groups. But it is the same because, while food production continues hitting all-time highs, and while drug, chemical, and biotech behemoths continue to merge in multi-billion dollar deals¹⁹, 795

17 I use hegemony in the Gramscian sense, as power created culturally, through ideas and knowledge, by consent rather than force.

18 Rome Declaration on World Food Security 1996, available: <http://www.fao.org/WorldFoodSummit/sideevents/papers/Y6959e.htm> (accessed 10 October 2016).

19 The drug and chemical company Bayer announced in the beginning of 2016 that it was looking to acquire agri-chemical company Monsanto for US\$ 62 billion. Meanwhile the Chinese chemical company

million people still go hungry while many more suffer from some form of malnutrition (including obesity), and at least a third of the world is still achingly poor²⁰. These are some of the facts that I will bring to light in a short biography of the food system in the next chapter. The final chapter will then take a look at how different food actors deal with the food system's paradoxes in their discourses.

Questions to guide the assessment of ecological-democratic quality

For each attribute of each dimension of ecological-democratic quality, I have prepared one or two questions that will help assess whether the practice, decision-making process, or policy—whether proposed or effective—can be deemed ecological-democratic in the sense that I have gradually developed in my research.

Basic Democratic Dimension

Political equality: Are all affected parties to the decisions given the opportunity to influence decision-making and to have their interests considered? Is the decision-making process free of domination by one or more interest groups or discrimination of any kind?

Political freedom: Are the basic freedoms for democratic decision-making recognised—freedom of speech, of movement, of religion, of petition, and of association? Are all parties to the decision-making free from coercion?

Accountability: Are decisions made with full disclosure of the information supporting the decision? Are decision-makers held responsible for the consequences of their decisions?

ChemChina is taking over Monsanto's rival Syngenta.

20 World Hunger Education Service, available <http://www.worldhunger.org/2015-world-hunger-and-poverty-facts-and-statistics/> : 2.1 billion people in the developing world lived on less than US\$ 3.10 a day in 2012. The World Bank now insists on measuring only extreme poverty—less than US\$ 1.90 a day—which they say dropped from 35 percent of the world population to 10.7 percent, available: <http://www.worldbank.org/en/topic/poverty/overview> (accessed 21 October 2016).

Responsiveness: Will the decisions and proposed policies correspond to the wishes and needs of the targeted and/or impacted beneficiaries?²¹

Dimension of Popular Control

Active inclusion: Are all interested and affected parties contacted and included in the decision-making process?

Equitable distribution of common resources: Will both benefits and costs of the use of common resources be equitably distributed among the users of those resources, according to both their usage and their needs?

Deliberative decision-making process: Are decisions taken cooperatively by the affected parties under conditions of equality and the employment of reasonable arguments? Does the decision-making process reflect the willingness of all parties to reach decisions in the interest of the common good?

Cognitive justice: Is the knowledge that under-builds the decision-making ecologically literate, socially just, and relevant to context?²²

Social legitimacy: Are those who bear the consequences of the decision-making, the final decision-makers? Does the burden of proof rest with those who seek less rather than more inclusive arrangements?²³

Political participation: Are all the publics who are potentially affected by decision-making involved in all the phases of the decision-making process, including its implementation and evaluation? Is decision-making understood as the common management of the affairs of a group, community, or wider polity?

21 This question in a more comprehensive survey would be stated as follows: Do the decisions and resulting policies correspond to the wishes and needs of the decision-makers' constituents?

22 This question is derived from Michel Pimbert's (2006) conception of cognitive justice.

23 This question is derived from Dewey's principle for social legitimacy (1925-27/ 2012, 22)

Dimension of Autonomy

Contestation: Are decisions the result of a comprehensive agreement among all interested and affected parties, after consideration of all conflicts of interests and ideas? Can affected parties overturn decisions when these harm more inclusive interests?

Reflexivity: Do decision-makers subject their decisions and policies to tests of collective self-awareness, self-inquiry, and self-confrontation? Are there indications of social learning, i.e. have decision-makers changed their attitudes as a consequence of the re-evaluation of decisions?

Social control over common resources: Are primary users of common resources also the primary decision-makers in matters pertaining to these resources?

Diversity: Does decision-making take into account the right to self-determination of culturally or socially divergent groups, as long as the latter are equally respectful of this right?

Altruism: Are decision-makers willing to relinquish personal or collective welfare in the interest of others that are more needful?

Negative Dimension

Rights of Nature: Are natural organisms, including ecosystems, protected from harm and allowed to thrive?

Restriction of elite control: Are socioeconomic and political elites barred from deciding on issues of the common good? Are the interests of those who seek more inclusive arrangements given precedence over the interests of those who seek less inclusive arrangements?

IV

The ecological-democratic quality of the food system

The documentary data that I will present in this chapter to support my democratic analysis comes from three secondary sources (where possible, these sources are combined): supranational agencies of “rule making” from among the United Nations and the Bretton Woods institutions, several of which will be also be the subjects of my CDA; civil society organisations and scientists that conduct independent research on the food system; and multi-actor, multi-country, multi-disciplinary assessment teams, such as the one that delivered the 2009 IAASTD²⁴ report. Most of the documents are the result of research or meta-research presented as reports, and rely on statistical indicators that are most often provided by the same sources—FAO and World Bank—who have the resources to regularly collect statistical data on the food system. Following Scott’s (1990) guidelines for documentary research, the selected sources are authentic, credible (when not internationally known, at least recognised in their field of expertise), and representative of the knowledge pertaining to the global food system. Given the wealth of statistical and anecdotal information available on the food system, I had to proceed with what is called “data reduction”. In this stage, inevitably a lot of information gets left out while it may be unclear what the priorities are for keeping some information and losing other. I tried to minimise this bias by, on the one hand, focusing on data that is representative of the political economy of the food system—i.e. illustrates the dynamics of the economic and political relations—and on the other hand, carefully listing the sources for verification purposes. Additionally, as I mentioned before, I cross-checked the facts whenever possible.

The biography of the modern food system will be presented in four parts: the first will discuss new powerful food actors who act globally, the second will examine how these food actors operate and to what consequences, the third will look at the main losers in the

24 Report resulting from the International Assessment of Agricultural Knowledge, Science and Technology for Development conducted between 2005 and 2007, available: <http://www.unep.org/dewa/Assessments/Ecosystems/IAASTD/tabid/105853/Defa> (accessed 18 June 2012).

modern food system, while the fourth and last will examine the role of technoscience²⁵ in legitimising the modern food system.

The modern food system and the new food actors

My main object of study, the global food system, is typified by complex socio-ecological dynamics, interwoven into many, if not all areas of human existence. The definition adopted by the Committee on World Food Security for the field of “agriculture and food systems” is useful to clarify what policy-makers are referring to:

Agriculture and food systems encompass the entire range of activities involved in the production, processing, marketing, retail, consumption, and disposal of goods that originate from agriculture, including food and non-food products, livestock, pastoralism, fisheries including aquaculture, and forestry; and the inputs needed and the outputs generated at each of these steps. Food systems also involve a wide range of stakeholders, people and institutions, as well as the sociopolitical, economic, technological and natural environment in which these activities take place. (Committee on World Food Security, *Principles for Responsible Investment in Agriculture and Food Systems*, 2014).

This characterisation of the activities surrounding agriculture and food illustrates clearly how central these activities are to human existence and how they impact on our global socio-ecological systems.

While it is still correct to speak of food *systems* in the plural, since locally organised food production persists in most parts of the world and is estimated to contribute between more than 50 to more than 70 percent of the world’s food consumption with a fraction of the land that industrial agriculture uses²⁶, it is also possible to identify a globalised food system that impacts on food production, distribution, and consumption all over the world. Two important indicators are the growth in international trade in agricultural and food products, and the

25 As discussed in Chapter 3, for those that use this term negatively, it is a rejection of the idea of science as a pure and value-free practice, instead placing it at the heart of politics and economics, which it is deemed to serve.

26 Graeub et al. conducted a meta-study in 2015 to correct the grave imprecisions in food production statistics. Until then it was widely assumed, based on unclear sources, that 90 percent of farmers are smallholder farmers and that collectively they produce between 70 and 80 percent of the world’s food. Graeub et al., widening the sample and using best available data, find that 98 percent of farmers are so-called “family farmers” (the exact definition varies from country to country and was maintained by the authors, but it is important to distinguish the family farm from the smallholder), who own at least 53 percent of agricultural land and produce an equal share of the world’s food. This is an average since in many countries the contribution is higher, for example in Brazil the family farm sector is estimated to produce 70 percent of national food consumption.

increasing concentration of this trade in the hands of very large transnational corporations. Clapp and Fuchs (2009) add the volatility in food prices, felt especially poignantly in 2007 and 2008, as another strong indicator of the global nature of the modern food system. Senauer and Venturini (2005), while examining the indicators for a globalised food system, offer several key insights:

- Processed foods are taking over from traditional agricultural commodities in relative importance in global trade;
- in turn, these foods are increasingly produced in a different country (or countries) from those where they are sold, presenting one of the highest degrees of transnationality;
- large companies dominate global agricultural trade (in 1999, the food industry had the fourth largest number of entries in the list of the largest 100 TNCs); and
- there has been a marked shift from national to global retailing.

A very recent study in Spain, conducted by Brunori et al. (2016), and which included the systems theorist Mario Giampietro, challenges the oft-cited dichotomy between “local” and “global” food systems. The results from their case studies indicate that “differences between ‘local’ and ‘global’ are dispersed along a local–global continuum, and that in real life local and global do not always belong to separate settings or domains”, and that “[fo]od chain actors, adapting continuously to a changing environment, establish relations with a multiplicity of other actors for a variety of reasons and animate multiple chain configurations”. Despite this high interconnectedness, the researchers were able to rank food supply chains according to their relative sustainability, using aspects relating to geography, product identity, distance between input and production as well as producer and consumer, smaller sizes, the level and quality of chain coordination, and use (and type) of technology.

Transnational corporations are a relatively new player in the modern food system, but they were highly instrumental in shaping its latest version, which Holt-Giménez and Peabody (2008, 4) call the "agri-foods industrial complex", and which comes into existence during the 1970s. The authors claim that the agri-foods industrial complex was largely built with public funds, including for research, and based on the collection of valuable peasant germ plasm

from Asia and Latin America. Even though agri-businesses are private enterprises, they have enjoyed the support of the governments where they originated and their activities have been legitimised by the supranational agencies that these governments sponsor (Ibid., 2). In Chapter 1, I presented arguments by Garcia (2006) and Pierce (2012), among others, on how the capitalist reproductive model that some call biocapitalism has been financed by a fusion of public and private funding, and has been actively protected by prominent political, economic, and scientific leaders, who defend that research should be useful to the economy and who have no qualms about privatising public knowledge or resources.

Since the corporation has become a major food actor, it is important to understand what corporations are exactly, and how they are different from other enterprises. Corporations have been a form of organising business for about 300 years, but it was only in the twentieth century that "corporate capitalism" became, and now remains, the norm (Bakan 2005, 13). For a while it was banned in England—until 1825—but after that their number grew quickly on both sides of the North Atlantic. The investigative writer Joel Bakan (2005) ascribes the ascent of the modern corporate era to the railroad barons of the nineteenth century in the USA and in England. Railroads were "mammoth undertakings requiring huge amounts of capital investment", favouring the corporate or joint form of financing (Ibid., 10). The concept of limited liability made publicly traded corporations possible, removing an important obstacle to their growth by eliminating the risk that investors incurred. And grow they did. According to a ranking by Global Justice Now, based on 2015 data from the CIA World Factbook and Fortune Global 500, 69 percent of the top 100 largest economic entities in the world are corporations and not countries.²⁷ Three of them, Apple, Shell, and the food corporation Walmart stores—which is the richest corporation in the world and the tenth largest economic entity—are richer than Russia, Belgium, and Sweden combined. The top 10 largest corporations, including the previously named three, have a combined revenue that exceeds the combined income of the world's 180 "poorest" countries. The numbers become even greater when the sample is broadened to 200 economic entities. The corporations' share then jumps to over 75 percent.

²⁷ Global Justice Now, "10 biggest corporations make more money than most countries in the world combined", 12 September 2016, available: <http://www.globaljustice.org.uk/news/2016/sep/12/10-biggest-corporations-make-more-money-most-countries-world-combined> (accessed 25 October 2016).

Although there are currently millions of corporations around the world, a Swiss study found that in reality a mere 147 corporations are at the centre of the global economy, controlling 40 percent of the world's wealth (Vitali, Glattfelder and Battiston 2011). The study looked at all transnational corporations, which at the time totalled 43,060, and managed to create the first map of the "worldwide structure of corporate control" (Ibid., 2).

Matching the rise of the transnational corporation, the first supranational institutions came into existence in the twentieth century and are now just as much an integral part of our political and economic landscape. Supranational institutions are forms of governance or rule-making "whereby sovereign states agree to abide by norms which are adopted at a higher level of organization" (Best 2005, 2). Their ascension has been most successful in economic policy-making (as opposed to environmental or social governance attempts). Best explains that the first supranational institution in the European Union was created to regulate two industries—coal and steel—in 1951. The European Court of Justice was initially established to regulate the resulting European Coal and Steel Community, and later helped advance the integration of European policies in other areas (Ibid.). The Bretton Woods institutions (i.e. the International Monetary Fund and the World Bank) were likewise born from a desire of the victors of the Second World War (in particular the USA) to be in control of the global economy, and their functioning and legitimacy has been tied to the functioning and legitimacy of what continues to be the world's dominant economic power (Köchler, 2006). Köchler claims that the supranational organisations of the United Nations continue to suffer from a built-in bias towards the world's most powerful countries, which are also the five permanent members of the Security Council.

It is important to remember that neither of these two powerful economic and political food actors, the corporation and the supranational organisation—which have direct access to democratic governments all over the world, is in itself a democratically run institution. In the book *The Common Good*, Noam Chomsky famously stated in relation to corporations:

[...] it's ridiculous to talk about freedom in a society dominated by huge corporations. What kind of freedom is there inside a corporation? They're totalitarian institutions—you take orders from above and maybe give them to people below you. There's about as much freedom as under Stalinism. (Chomsky et al. 1998, 19)

In relation to supranational institutions, Bonanno (2004) warns that these are very effectively shielded from input by citizens, reducing their need for legitimation. Bonanno denounces how “their functioning is largely based on the executive actions of elite bureaucracies with only remote—and in some cases non-existent—links with the constituencies they are supposed to represent” (Ibid., 42). And Habermas predicted, even before the European Common Market came into being:

The fact that states of the European Community are gradually growing together, especially with the caesura that will be created when a common market is introduced in 1993, sheds light on the relation between the nation-state and democracy: the democratic processes constituted at the level of the nation-state lag hopelessly behind the economic integration taking place at a supranational level. (Habermas 1992, first published in 1990)

Even the successor to the Common Market, the European Union, despite its directly elected European Parliament, still concedes little more than advisory status to its elected bodies, whereas its legislative and executive powers are discretionary (Bonanno 2004, 42). In this way, nation-states are burdened with the task of legitimising decisions that were not taken by democratic institutions nor via democratic processes, decisions that additionally are often beyond the nation-state’s control (Ibid.).

In order to illustrate the extent of the “transnationalisation of social relations” (Bonanno 2004, 44) and the characteristics of what Sklair (2001) calls the “transnational capitalist class”, in the next sections I will present a selection of lesser-known facts about the functioning of the food system, supported by infographics.

Food: a trillion dollar business, but not for everyone

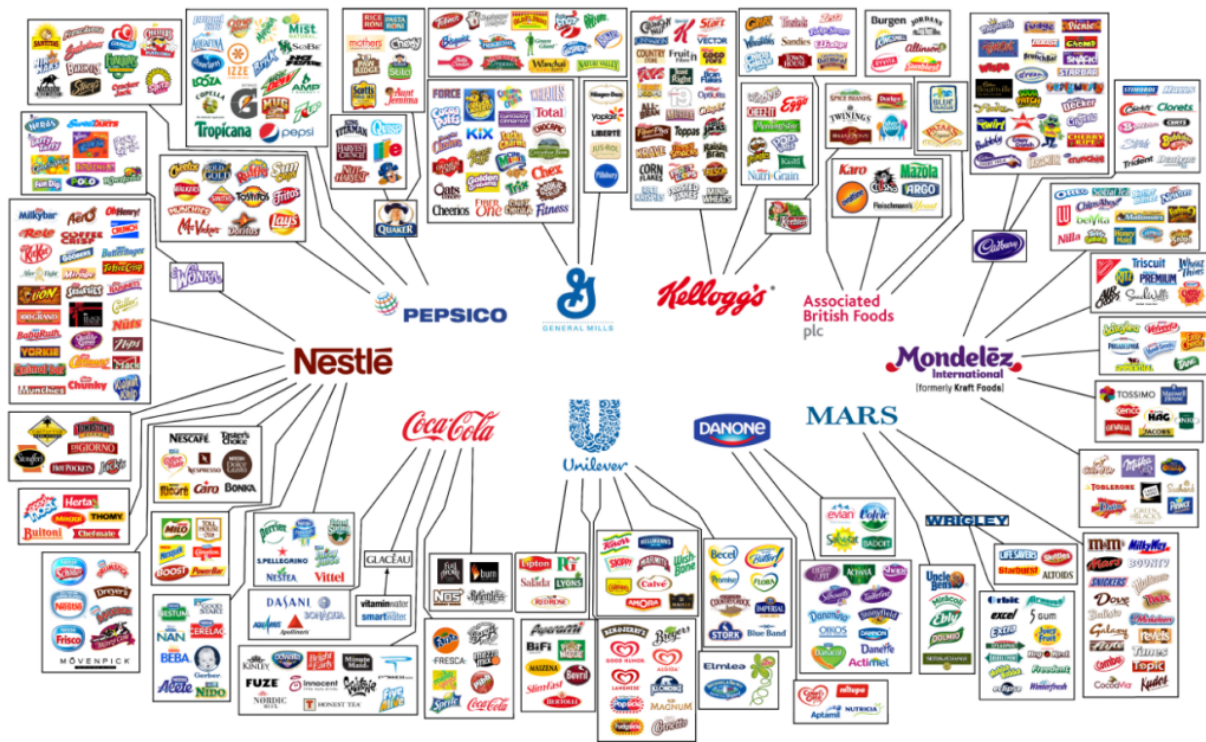
At present time, the global food and agricultural market, from “seed to shelf”, is estimated to bring in around US\$ 7 trillion in annual sales²⁸, possibly making this the biggest market in the

28 Plunkett Research’s estimate for 2015 was US\$ 7.8 trillion, which in turn is based on the World Bank’s estimate that food and agriculture make up 10 percent of the world’s GDP. Plunkett Research, “Food, Beverage and Grocery Overview”, available: <https://www.plunkettresearch.com/industries/food-beverage-grocery-market-research/> (accessed 2 September 2016).

FAO reported in 2014 that the contribution of agriculture alone came down from 4.3% of global GDP to 3.3% between 1970 and 2014, which would translate to approximately US\$ 2 trillion. In contrast, the contribution of food processing has increased significantly and in wealthier countries surpasses that of agriculture. Available: <http://www.fao.org/economic/ess/ess-economic/en/> (accessed 12 December 2016).

world, taking over the lead from the energy market (for which a global value is surprisingly hard to find, but the most mentioned number has been US\$ 6 trillion for 2010²⁹).

The characteristic that stands out most when looking at the numbers for food and agriculture, is the degree of concentration in each of the sectors. The illustration in Figure 2, created by Oxfam International, brings this fact to light quite dramatically. It is based on 2012 data and reveals the 10 most powerful (processed) food and beverage companies, which together control almost all of the brands that are available at retail chains in most countries in the world.



Source: Oxfam International, 2013, Behind the Brands campaign³⁰

Figure 2. Corporate control of the food supply

29 Amongst other informal sources, Daniel Yergin mentions this number in his 2011 book *The Quest: Energy, Security, and the Remaking of the Modern World*. Most energy reports only present quantities, not value.

30 Oxfam International, “Behind the brands”, available: <https://www.behindthebrands.org/> (accessed 16 September 2016).

Figure 3 shows the so-called *hourglass* shape of the agrifood market: communication between the two large groups of farmers and consumers—respectively bottom and top—is mediated by small groups of very large traders, processors, and retailers. Oligopolies or partial oligopolies (markets that are dominated by several large firms) are present in all fundamental markets for industrial food production: whether seeds, chemicals, trading, processing, or retailing (Holt-Giménez and Patel 2009, Chapter 2; Oxford Farming Conference 2012). The existence of oligopolies is exemplified in Figure 3 for four industries: grain trade, retail, agrochemicals, and commercial seeds.



Sources: IAASTD 2009 (Synthesis Report) / Ketill Berger and UNEP / GRID-Arendal (hourglass graph); Oxford Farming Conference 2012 (sectorial data)

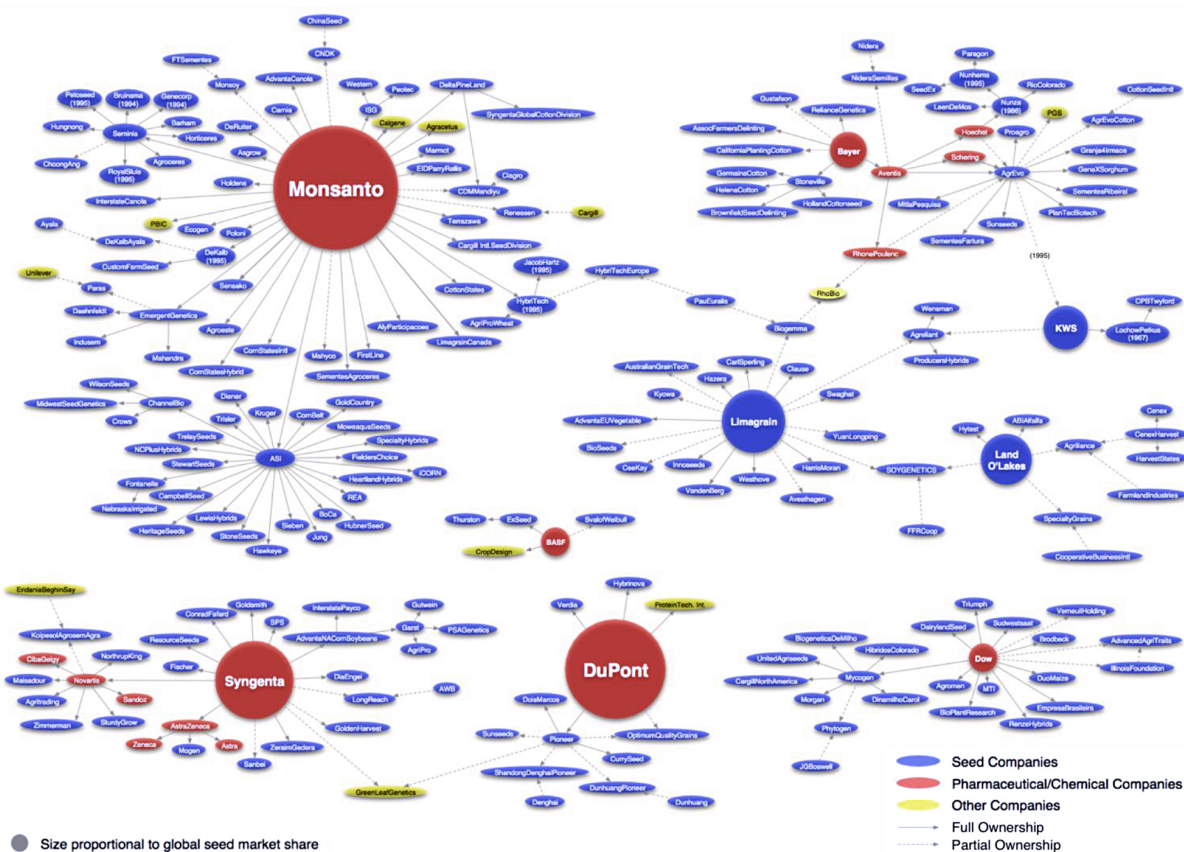
Figure 3. Concentration in food and agricultural markets

Generally, when the average four-firm concentration ratio in a particular market exceeds 50 percent, that market is considered to be controlled by a cartel. In 2011, the threshold for the definition of a cartel was exceeded in all food-related industries except for fertilisers (ETC Group 2013; European Commission 2015). In some countries, the concentration is extreme: in Australia, just three companies control over 75 percent of the retail market for food and in the USA, three firms are in control of more than 80 percent of maize exports (FAO 2003).

Philip Howard (2009) was one of the first scholars to empirically demonstrate the extreme consolidation in the commercial seed industry, which has largely been taken over by pharmaceutical and/or chemical companies. Howard claims the seed industry has become a

market where competition is no longer based on price, with the top four seed firms, which control 56 percent of the global proprietary seed market, able to command price premiums for their products, as long as these continue investing in research and in advertising (Ibid., 1270). Howard finds that “[o]ne motivation for continuing competition in these arenas is that they serve as barriers to entry to other firms, thus protecting an oligopoly’s high rate of profit” (Ibid.).

Howard’s well-known information graph depicting the concentrated seed market is presented in Figure 4. It shows how pharmaceutical and chemical companies have been merging over the past two decades while they penetrated the agricultural markets, and how they now control the seed industry. Howard found that the largest firms were the result of buy-outs, mergers, or joint ventures involving more than two hundred firms (Ibid., 1273).



Source: Howard 2009

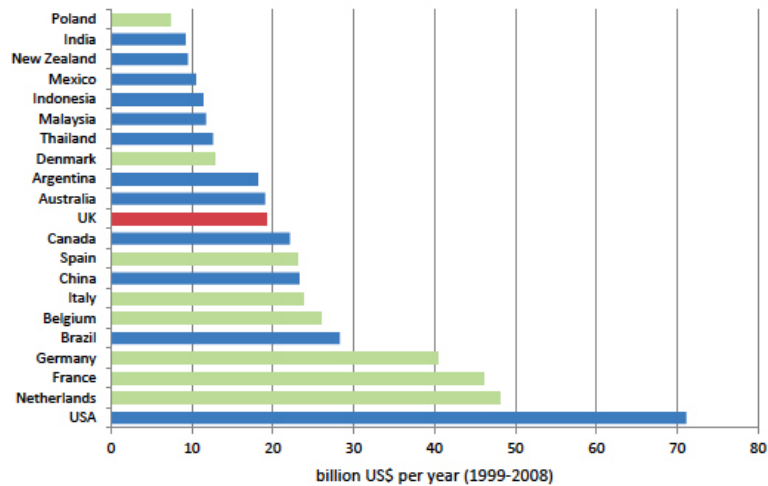
Figure 4. Diagram of the “Life Sciences” corporations

The concept of “food chain clusters”, a form of concentration, was coined almost twenty years ago and exemplified most poignantly by the research of Hendrickson and Heffernan (2002). The authors identify several strategies that food and agriculture firms follow as they develop: they can integrate horizontally by growing in the same sector; they can integrate vertically by moving “upstream or downstream in the agriculture and food commodity chains” (Ibid., 350); and they can globalise using the two previous strategies in new countries. Hendrickson and Heffernan (Ibid.) comment: “Each of these different strategies—all of them increasing the concentration of ownership and control in the food system—are highly dependent on the formation and sustaining of relationships and networks”. The researchers present the example of ConAgra: this giant corporation produces its own livestock feed and the agrochemicals and seeds that supply this market (it teams up with Dupont to control the latter two sectors), besides raising its own cattle, slaughtering it, processing, and broiling it. Additionally, it is one of the largest millers in the USA, trades its own grain, and processes and retails food. Hendrickson and Heffernan warn that in a food chain cluster, “the food product is passed along from stage to stage, but ownership never changes and neither does the location of the decision-making”.

The extreme integration in food and agricultural markets is not limited to corporations, but stretches to countries as well. The richest countries in the world command a disproportionate share of world agricultural trade. As discussed earlier, whereas in the 1960s the countries of the Global South had a yearly positive trade balance in food exceeding US\$ 7 billion, four decades later their surplus had been transformed into a food deficit of US\$ 11 billion a year (Holt-Giménez and Peabody 2008). A handful of countries in the South have been able to maintain their earlier advantage (in particular Brazil and India), and are part of the top twenty countries that dominate food and agricultural trade (see Figure 5), which collectively account for approximately 70 to 78 percent of global exports and 65 to 70 percent of global imports in 2014 (based on numbers by Oxford Farming Conference 2012 and the research company Knoema³¹).

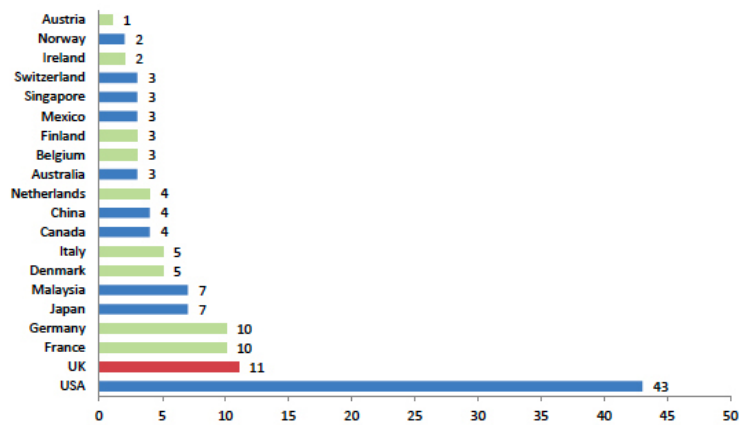
31 Knoema, “Major exporters and importers of food and agricultural products”, 2014, available: <http://pt.knoema.com/cduhihd/world-exports-and-imports-of-agricultural-products> (accessed 20 September 2015).

A global food polity



Source: Oxford Farming Conference 2012, based on data from FAO Statistical Yearbook, 2010

Figure 5. Top exporting countries in agriculture

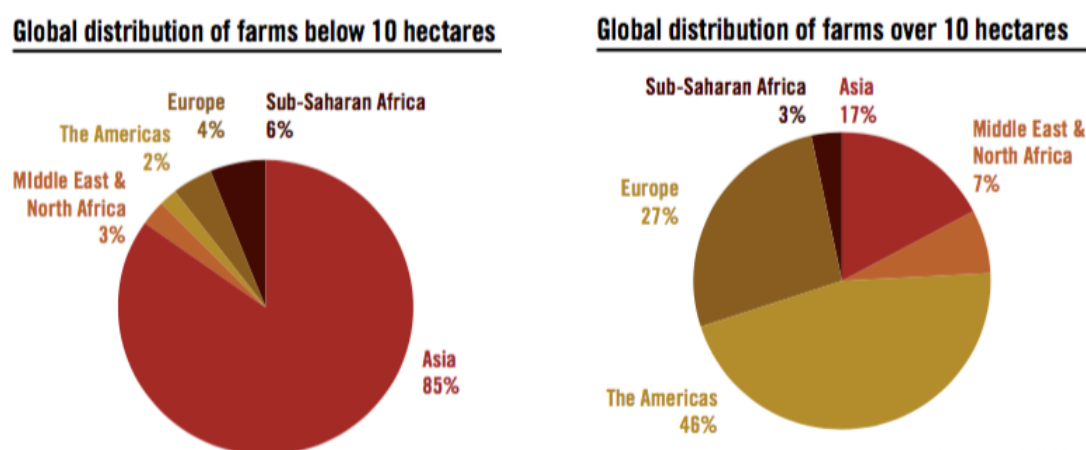


Source: Oxford Farming Conference 2012, based on data from UNCTAD 2009

Figure 6. Home economies of the world's top agribusiness TNCs

Likewise, as illustrated in Figure 6, 89 percent of the transnational corporations that currently dominate trade come from only 20 countries, with the majority originating either from the EU or North America (Oxford Farming Conference 2012, 14). In a similar manner, agricultural land is concentrated in only 25 countries (75 percent of land), with only five countries (China, USA, Brazil, Australia, and Russia) possessing one third of the world's agricultural area (Ibid.,

34). This land, in turn, is concentrated mostly in the hands of large-scale farmers and food corporations, which operate predominantly in North- and Latin America and Western Europe (Figure 7a).

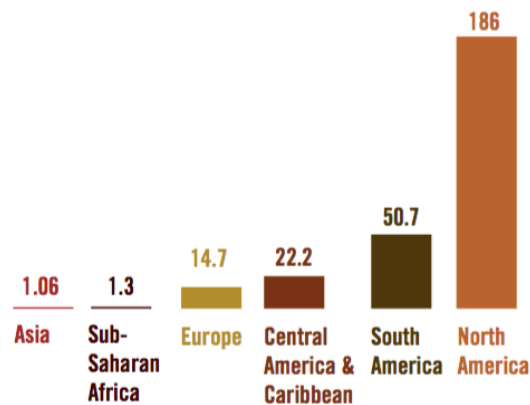


Source: IAASTD 2016, based on statistical data from FAO, 2014

Figure 7a. Global distribution of farms

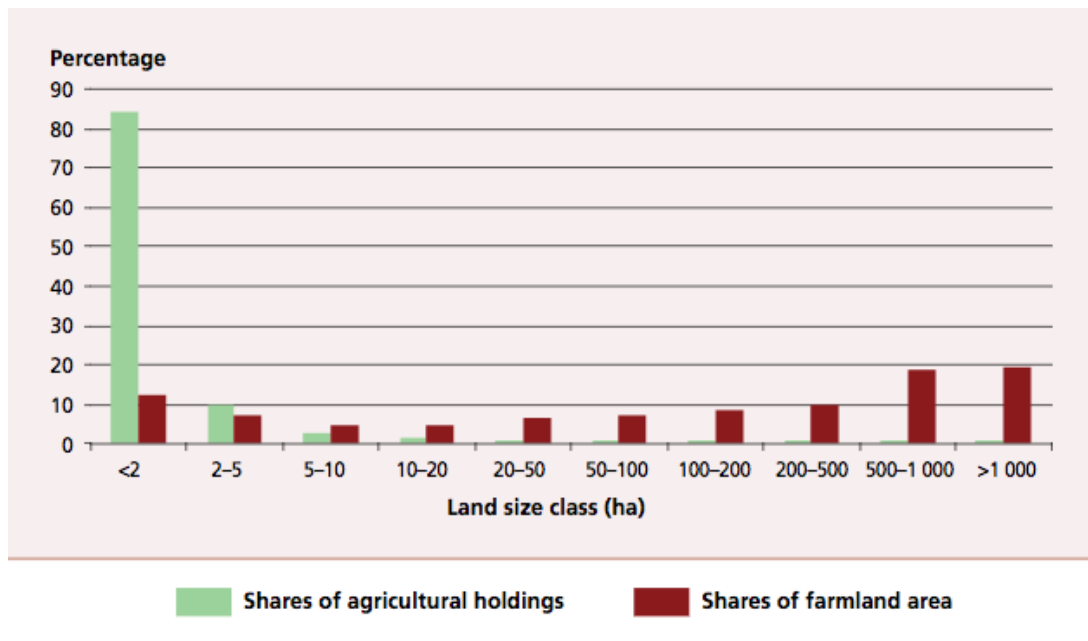
The most recent comprehensive meta-study to estimate the number, size and distribution of farms worldwide, conducted for FAO by Lowder, Scoet, and Raney (2016), calculated that there are over 570 million farms in the world, of which the majority are small (84 percent of farms are less than 2 hectares in size) and family-run. The average farm size varies greatly between regions (Figure 7b). On the whole, the study found small farms (under 2 hectares) to control only 12 percent of agricultural land worldwide. This means that only 16 percent of farms occupy 88 percent of all farmland, as exemplified in Figure 8. But, whereas in most of Africa, Asia, and the Pacific (excluding China), the majority of farms are smaller than 2 hectares and the control over the land is more evenly distributed among the classes of farms (with few very large farms), in Latin America and the Caribbean, farms are on average larger and very large farms (over 1,000 hectares) control practically half of all agricultural land. The authors conclude there is a trend for the concentration of land in the hands of large-scale farms in higher-income countries, while simultaneously, average farm size is decreasing in most lower-income countries. They did not manage to corroborate the oft-cited claim that “small farms feed the world”. This does not mean the claim should be rejected, but more

studies are needed to prove the importance of small farms in the provision of domestic food needs. Most importantly, it is urgent to distinguish between the production of cash-crops (which is usually, although not exclusively, concentrated in large-scale farms) and the production of food for local consumption, while also distinguishing between larger and smaller family farms. A study in Brazil indicated that family farms (operated by an individual or household and under 80 hectares in size) could be contributing as much as 70 percent of domestic food consumption (de França et al 2009, cited in Graeub et al. 2016). Using a conservative approach to the definition of family farms, Graeub et al. (2016) estimate they may be responsible on average for at least 53 percent of the world's agricultural production, but that regionally their contribution to domestic caloric requirements varies between 36 (South America) and 114 percent (Asia and Europe).



Source: IAASTD 2016, based on data from IFAD 2010

Figure 7b. Average farm size per region



Note: Based on a sample of 106 countries.

Source: FAO 2014

Figure 8. Distribution of agricultural land per land size class

GRAIN asks how, if small farms are getting smaller in all lower- to upper-middle income countries, big farms are getting bigger. The answer, they feel, lies in the fast increasing appropriation of farmland in countries in the Global South by foreign countries and corporations, a phenomenon called “land-grabbing”. A report by the High Level Panel of Experts on Food Security and Nutrition (HLPE 2011, 8) placed the average estimate of land under international negotiation in 2010-2011 at between 50 and 80 million hectares. The Land Matrix, an independent land monitoring initiative that started in 2009, managed to record 1,204 concluded land acquisition deals covering over 42 million hectares of land up to the launch of their latest report (Nolte et al., October 2016). They find that Africa is the most targeted continent, with 42 percent of concluded deals, followed by Eastern Europe, while the top individual target countries are Indonesia, Ukraine, Russia, Papua New Guinea, and Brazil —these five countries represent 46 percent of the total area sold. Rather than giving use to abandoned agricultural land, the land deals actually target some of the best croplands, often in highly populated areas, which creates an unfair competition for land between foreign

governments and corporations and local, poor communities. The UNCTAD report on agriculture (2013, 238-243) presents cases in Africa where farmers were removed from land that was leased to foreign investors, often at ridiculously low prices or even for free (in the most flagrant case, in Ethiopia, 700,000 indigenous people were being forced into villages to free up land for investors). The Land Matrix finds land acquisitions by foreign investors favour capital-intensive, low labour-intensive production methods: where crops have already been planted on acquired land, they are most often so-called cash crops: oil seeds (with oil palm being highly popular), corn, wheat, and sugar crops. The Land Matrix initiative warns most of these crops can also be used for energy purposes. The private sector is overwhelmingly the beneficiary of these land acquisitions (70 percent of buyers). GRAIN warns that the main investors in land are now from the financial sector, rather than countries or agri-business corporations. In particular, there has been a significant rise in farmland investments by pension funds, while another major player is the development finance institution, a less than transparent international actor that provides assistance in development, based on aid funds from wealthy countries that it invests for a profit (GRAIN 2016).

Figure 9 shows the evolution of farms in a developed country, in this case the USA, between 1945 and 2002. While the rural population and the farm share of population decreased, average farm size more than doubled and off-farm labour rose from 27 to 93 percent.

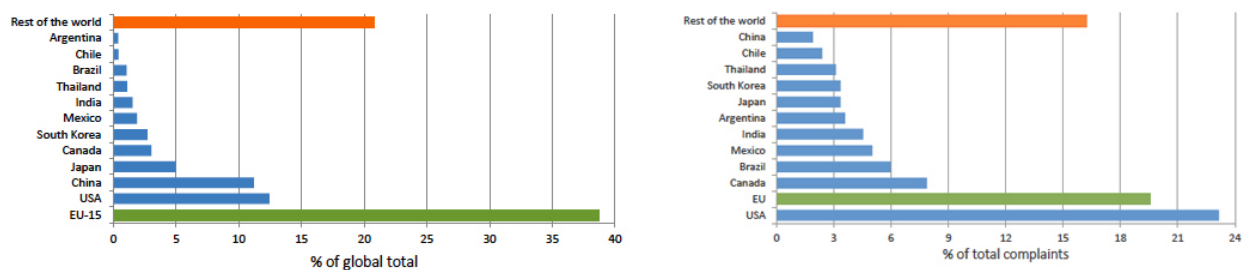
	1945	1970	2000/02
Number of farms (millions)	5.9	2.9	2.1
Average farm size (acres)	195	376	441
Average number of commodities produced per farm	4.6	2.7	1.3
Farm share of population (percent)	17	5	1
Rural share of population (percent)	36 (1950)	26	21
Off-farm labor* (percent)	27	54	93

*1945, percent of farmers working off-farm; 1970 and 2000/02, percent of households with off-farm income.

Source: Dimitri, Effland, and Conklin 2005

Figure 9. Evolution of the structure of US agriculture

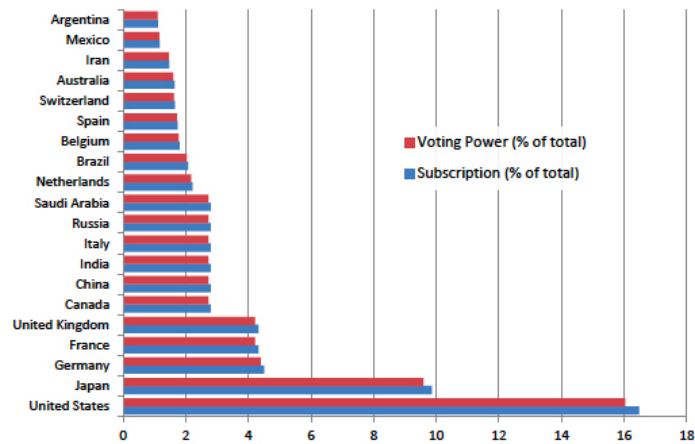
The extreme concentration of market power in food and agriculture in the hands of a limited number of corporations from a limited number of countries that have historically wielded an economic as well as a political advantage, has repercussions not only at many different levels of the “food chain”, but at different levels of the sociopolitical arrangements as well. Owing to the peculiar circumstances of the Second World War, which changed the balance of power in favour of the USA, many supranational institutions have a decision bias towards the main victors as well as the main vanquished, who were allowed into the club as a way to motivate and gear their countries towards (liberal) democracy. The 2012 report by the Oxford Farming Conference concluded, after reviewing the indices of economic and political concentration of wealth generation in food and agriculture, that economic power continues to reside in North America and Europe, despite the growth of some other large exporters such as Brazil and New Zealand. They also find indications that major EU and North American economies are controlling trade in exporting countries from the Global South through their transnational agribusiness corporations (Ibid., 24). Given that these economies have privileged access to the international institutions of political power, their economic power translates into political power, enabling these countries to impose their will on other countries. This is exemplified in Figures 10 and 11, which demonstrate the balance of powers at two crucial supranational organisations of trade, respectively the World Trade Organisation and the World Bank.



Source: Oxford Farming Conference 2012, based on data from WTO 2011

Figure 10. Who controls the WTO?

A global food polity



Source: Oxford Farming Conference 2012, based on data from World Bank 2011

Figure 11. Who has the votes at the World Bank?

ETC Group, a longtime corporate watch group in the global agro-industrial sector from Canada, documented the indices of a corporate-controlled bioeconomy— which they define as the commercial exploitation of the Earth’s reserves of terrestrial and aquatic biomass—in preparation for the 2012 Earth Summit. They found largely invisible clusters of corporate giants from different sectors of the life sciences industries, working together in joint ventures and other forms of partnerships. In this way they linked the chemical giant Dupont to the oil giant BP, who are working together to make seaweed fuels and bioplastics. Moreover, they also found the chemical corporation Dow Chemical working with the energy company Chevron, the food company Unilever, the agribusiness company Bunge, and the US military to develop synthetic biology. Their findings, coupled with the previously mentioned Swiss study on corporate concentration, help to uncover an “entangled web of corporate control” (ETC group 2011, iii). ETC Group warns that:

The world’s largest companies are converging around biomass in anticipation of a post-petrochemical future. That doesn’t mean they’re simply grabbing land and natural resources; they’re also investing in new technology platforms to transform plant-derived sugars (from food and fibre crops, algae, all kinds of plant matter) into industrial products. The gravitational pull of biomass is creating new constellations of corporate convergence across diverse industry sectors. (ETC group 2011, ii)

The business of agriculture seems less and less about providing food and other essentials, and more about facilitating the industry of food. Value in the so-called food chains is captured mostly beyond the farm gates, as I will show next. World Bank data for 2013³² tells us that the raw products from agriculture only account on average for 3.1 percent of world GDP—although the less developed the country, the higher the dependence on agricultural income: in poorer countries agriculture contributes on average 24.5 percent of GDP, while employing 70 percent of the labour force (WTO 2014). We can find more support for the idea of an industry-driven food system in UNCTAD's 2009 report on agricultural investment: the authors find that retail, trader, and processor TNCs are about 12 times larger than purely agricultural TNCs (UNCTAD 2009, 28).

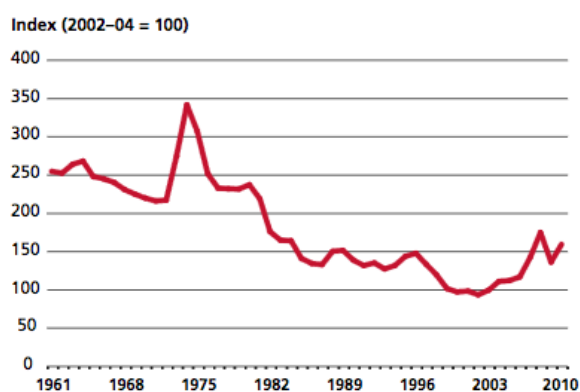
Life at the edges of the hourglass model

Having shown the degree of concentration of economic and political power that has occurred in food and agriculture, I will now look at the two principal victims of this imbalance: farmers and consumers, the two largest interest groups or agents in the food system.

Even though staple and processed food in the modern system initially became significantly cheaper, this trend was halted in the 1980s and after 2000 actually inverted with dramatic results (Figure 12). High food prices can have dire consequences for the poor, especially in countries in the Global South, where the poorest quintile of the population may spend up to 80 percent of income on food (FAO, WFP, and IFAD 2011).

32 World Bank indicators for agriculture and rural development, available: <http://data.worldbank.org/indicator?display=graph> (accessed 12 September 2015).

A global food polity



Source: FAO, WFP, IFAD 2011, 11: FAO Food Price Index, adjusted for inflation

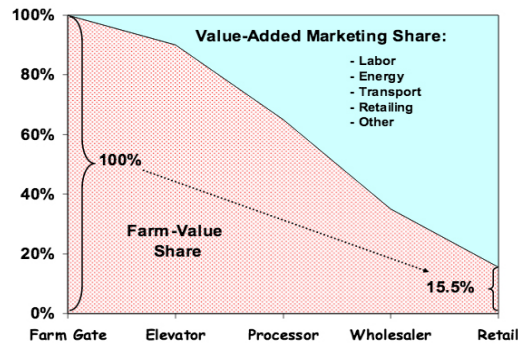
Figure 12. Trend in world food prices

At the same time, the farm value of food has dropped: in the USA, for example, it has come down by more than one third, despite the fact that food processors and retailers have had decreasing real costs all-round (Testimony on market concentration by Professor C. Robert Taylor to the US Senate Agriculture Committee in 1999³³). Another report (Schnepf 2013), prepared for US Congress in 2013, found that the average farm share in the final price of food has fallen from about 41 percent in 1950 to 15.5 percent in 2011 in the USA alone (Figure 13). Even after the commodity-driven price hikes of 2008³⁴, farm prices returned to their previous levels, whereas retail prices levelled off (Figure 14). What's more, farm share does not yet refer to the portion that stays with the farmer, this is even less: about half of the farm share or 7.9 percent. The remainder of the farm share goes to agribusiness and other industry groups that provide the inputs for farm production (Schnepf 2013, 4). Outside of the USA, especially in the Global South, the proportion is much worse: based on research by Oxfam in 2002, Patel (2008) calculates that a coffee grower in Uganda receives US\$ 0.14 for a kilo of coffee beans. By the time this coffee is served somewhere in the Global North, it will cost US\$ 26.40 per kilo, almost 200 times the value retained in Uganda, placing the proportional farm share of coffee at about half a percent (Ibid., 9-10).

33 Testimony to the United States Senate Committee on Agriculture, Nutrition and Forestry, available: http://s3.amazonaws.com/zanran_storage/www.auburn.edu/ContentPages/50250976.pdf (accessed 18 November 2015).

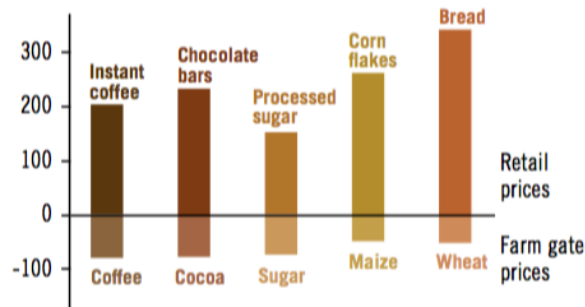
34 World Bank report on the price hikes, available: <https://openknowledge.worldbank.org/bitstream/handle/10986/6820/WP4682.pdf?sequence=1> (accessed 5 November 2015).

A global food polity



Source: Schnepf 2013, based on data from the USDA

Figure 13. The farm's share of food value



Source: IAASTD 2016

Figure 14. Percentage change in the prices of retail foodstuffs v. farm gate prices between 1980 and 2000

Meanwhile, a 2013 report by the consultancy KPMG shows the agrochemical (which provide the input for conventional farming: seeds and agrochemicals) and food companies have the highest profit levels in the food production and distribution chain (on average pulling in around 15 percent before income tax), whereas traders and retailers make their earnings through bulk sales, compensating for lower margins by selling in huge quantities. The report also indicates that agribusiness corporations have been improving their earnings by integrating vertically: both traders and retailers have moved into the food processing sector, the most profitable of all food and agriculture sectors, while in all sectors joint ventures are taking place. These joint ventures also include public sector initiatives, such as fair trade and other certification schemes, and even food aid organisations, giving large corporations questionable access to decision-making in the public interest. Within the agribusiness value chain calculated by KPMG, farmers, even though they are the largest group by a factor of

hundreds, retain approximately 22 percent of the value share, with which they still need to pay the input (agrochemical and insurance) industry.

One of the major paradoxes in food and agriculture, highly illustrative of a system that is focused on trade, is that those who produce food are the ones that go the hungriest. It is generally estimated that approximately 2.5 billion people live directly from small-scale agricultural production, either as farmers or partial farmers, or as part of farming households (FAO 2012b). Unfortunately, they also comprise the majority of the world's undernourished population and most of those living in abject poverty—living on less than US\$ 1.25 a day (IFAD/UNEP 2013).³⁵ They are often forced to work on the most infertile soils, while their plot sizes are ever decreasing (Ibid.). Even though they have the least resources of all actors in the globalised food system, they are expected to invest in productivity improvements, under penalty of being left out of the market. When disaster strikes in the form of drought or pests, smallholders, who are generally cash-poor, are unable to purchase expensive imported foods.

A study by the International Labour Office showed that nearly eight out of ten working poor who subsist on less than US\$1.25/day live in rural areas. This means that most jobs in rural areas do not ensure sufficient levels of income for workers to afford adequate food for themselves and their families (ILO, 2012).

The widespread underinvestment in small-scale farming may have been a big mistake: more and more studies are showing that small farms are more productive and more efficient per unit area than larger farms (Rosset 2000 and FAO 2014 estimate they can be more productive by a factor of between two and ten). The so-called “inverse farm size-productivity relationship” has been systematically observed in Russia, India, Africa, Asia, Europe, and Latin America (Barrett, Bellemare, and Hou 2010). Rejecting the mostly economic explanations that have been offered, the well-known agroecologist Miguel Altieri, who has been researching the relative productivity of small-scale farming for many years, states with some confidence that small farms in regimes of polyculture (multiple crops) outperform farms that operate in regimes of monoculture (one single crop), which is the dominant regime used in industrial agriculture. Altieri measures the outputs in harvestable products per unit area, because when measured crop for crop, large monocultures will at first glance have larger yields (although

35 The World Resources Institute (2005) estimated the proportion of poor in rural areas to be 75 percent.

not under all circumstances as I will discuss next). He advances that the reason that diverse small farms do better is because “polycultures reduce losses due to weeds (by occupying space that weeds might otherwise occupy), insects, and diseases (because of the presence of multiple species), and make more efficient use of the available resources of water, light, and nutrients” (Altieri 2009, 105). Small farms are also more likely to use non-chemical farming techniques (using on-farm resources and natural pesticides). As one example of many, a 2003 study in the USA (Lotter, Seidel, and Liebhardt) found that organic farming of maize significantly outperformed its non-organic counter-version in four out of five drought years.

In the previously mentioned joint report on smallholders by the UN agencies IFAD and UNEP (2013), it is argued, based on recent studies, that growth in agriculture is the best solution for poverty reduction, superior to manufacturing or services (in one of the studies a one percent increase in agricultural per capita GDP was found to reduce poverty five times more than a one percent increase in any other sector). The report also concluded that smallholders are key agents of nutrition, potentially able to provide a nutritionally adequate diet for their households. Finally, seeing as a large share of the working poor are involved in agriculture, developments in this sector have a major impact on welfare throughout much of the world (ILO, 2012).

Consumers, or to use a more sociological term, people, notwithstanding the fact that most of the products are meant for their consumption, are another victim of the highly concentrated, highly globalised, modern food system. Even though agricultural production has been growing for decades and is currently—technically—able to satisfy the caloric needs of the world’s population almost twice over³⁶, hunger persists, while other nutrition-related disorders—such as obesity and diabetes—are on the rise. FAO’s 2015 report on the state of food insecurity in the world (FAO, IFAD, WFP 2015) estimates 795 million people going hungry, while a little under 800 million are considered extremely poor (World Bank 2016), and almost half the world’s population lived on less than US\$2.50 a day in 2005³⁷. The former UN

36 In FAO’s 2012 Statistical Yearbook (FAO 2012d) we can read that the world produced the equivalent of over 13 quadrillion calories in 2010, in other words 5359 kcal on a per capita daily basis, when average daily requirements are between 2100 and 2300 kcal in poorer countries, according to the sixth world food survey conducted by FAO in 1996. De Schutter (2014) believes that the requirements are higher, but they are still largely inferior to world production. What happens is that both production and distribution are unequally divided across the world.

37 The concept of “extreme poverty” may be hiding the fact that poverty is more generalised than supranational

Rapporteur on the Right to Food, Olivier De Schutter, warns in his final report (2014) that malnutrition is being underreported because current tallies exclude short-term undernourishment and do not take into account higher daily energy requirements for those that perform physically demanding activities (which is the case of the majority of the poor). The Special Rapporteur estimates two billion people globally “lack vitamins and minerals essential for good health”. At the same time, the World Health Organization (WHO) reports 1.9 billion adults were overweight in 2014, of which 600 million were considered obese³⁸. WHO claims worldwide obesity has more than doubled since 1980 and that obesity and overweight is killing more people than hunger. Obesity and hunger are two sides of the same coin of malnutrition that can be increasingly be found in low- and middle-income countries. WHO calls this the “double burden” of disease, and warns that it is now not uncommon to find undernutrition and obesity co-existing in communities and households.

The term “food deserts” is relatively new (although Beaulac, Kristjansson, and Cummins place its genesis in the early 1990s) but its implications are dramatic. Beaulac et al. (2009) define them as “areas characterized by poor access to healthy and affordable food”, and find enough indications to affirm that they exist, at least in the United States (more evidence is needed to confirm food deserts in Europe and other regions). In general, Americans who are both poor and from minority cultural groups, will have poor access to healthy food, either because it is not on offer in their communities (convenience stores and small grocery stores are the dominant feature in low-income and African American communities, while White and affluent neighbourhoods will have a wider variety of stores), or because healthier food baskets command higher prices. The consequences of a poor diet have been well-studied and I will not repeat them here, but what is relatively under-studied is how diet-related diseases discriminate against race and socioeconomic class. Ford and Dzewaltowski (2008) are but one example of researchers making the association between food deserts in disadvantaged areas

organisations would like to admit. The World Bank has stopped presenting world averages for poverty lines above the newly defined US\$ 1.90 cut-off point, whether in their reports or on the <data.worldbank.org> repository. All statistics are presented in such a way that it is near impossible to sketch a global picture of poverty. Nevertheless, based on older data, from 2005, almost half of the world population (close to 3 billion) lives on less than US\$ 2.50 a day (UNDESA 2009). When the poverty line is screwed up to US\$ 10 a day (roughly US\$ 300 a month, below the minimum wage of any OECD country), it is found that 95 percent of people in the Global South live below this line (Ravallion, Chen, Sangraula 2008).

38 WHO, “Obesity and overweight”, Fact sheet, June 2016, available: <http://www.who.int/mediacentre/factsheets/fs311/en/> (accessed 15 December 2016).

and an increased risk of obesity. The link can be observed in many more regions in the world: an Indian study (Misra et al. 2001) found what they called an “appreciable prevalence” of several diet-related diseases (obesity, dyslipidaemia, and diabetes) in migrants settled in urban slums. Strikingly, one study warned that “by 2015 noncommunicable diseases partially caused by overnutrition in both children and adults, such as type 2 diabetes, hypertension, and coronary vascular disease, will overtake undernutrition as the leading cause of death in low-income countries” (Tanumihardjo et al. 2007). The authors explain: “Poverty results in food insecurity and often hunger, which can lead to malnutrition. Furthermore, the absence of a diversified, nutrient-dense diet can lead to overnutrition, subsequent obesity, and failure to meet micronutrient requirements”. They call attention to the problems of hidden hunger (chronic undernutrition in terms of nutrients) and of obesity among the poor, who often rely on less expensive, energy-dense foods as opposed to more expensive, nutrient-rich foods. Monsivais and Drewnowski (2007) proved in the same year that energy-rich food is considerably cheaper than nutrient-rich food: nutrient-rich food can be more than 10 times as expensive per 1,000 kcal as energy-dense food, whereas the latter are also more resistant to food price volatility. The authors claim that this may help explain why lower income groups suffer higher rates of obesity.

A new model of science and policy-making

The rise of concentrated markets where economic and political power are equally concentrated, is matched by a significant change in how science is conducted, and in how it informs policy-making. Steven Druker recalls in his groundbreaking 2015 book on the technoscience and business of genetically modified organisms, *Altered Genes, Twisted Truth*, how, in his farewell address in 1961, an American president who had also been a military man launched a strong caution to the people of his country and of the world against the strengthening alliance between government and what he called the “military-industrial complex”. Noting how scientific research had been transformed into a well-funded, large-scale, commercial enterprise, and how interconnected scientists and government officials were becoming, Dwight Eisenhower warned:

[...] in holding scientific research and discovery in respect, as we should, we must also be alert to the equal and opposite danger that public policy could itself become the captive of a scientific technological elite. (cited in Druker 2015, 59)

Druker extensively documented the cover-up of the risks posed to humans, animals, plants, and ecosystems from the use of genetically modified organisms (GMOs) in agriculture and food. After he had to sue the US Food and Drug Administration (FDA) to release its files on the approval process of genetically engineered foods, Druker discovered how the FDA, protected by successive governments (including the Obama administration), and in collusion with the biotech industry (in particular its quasi-monopolist leader, Monsanto), not only helped usher GMOs into the food chain, but deliberately deluded the public into thinking that genetically modified food is equivalent to, and as safe as, natural food, needing no special regulation or precaution whatsoever (Druker 2015, Introduction).

Reviewing the facts on GMOs, Druker feels confident in affirming that these foods present unacceptable risks, as demonstrated by the lack of consensus on their safety—with wildly disparate reports—and their rejection by most consumers. Enough convincing studies have come out that point to the high toxicity of the most widely sold GMOs and of the herbicides that are part of the package offered by the agrochemical corporations. The update to the IAASTD report (2016, 47) shows that GMO cultivation is mostly limited to large-scale monocultures of maize, soybeans, cotton, and rapeseed that are either herbicide-tolerant, produce their own insecticide, or both. These cash-crops are destined for the food-processing and animal feed industry, and are not meant nor appropriate for satisfying domestic food requirements. All the claims of the biotech industry as to the benefits of GMOs have been refuted in the past decade: claims of higher yields, claims of decreased pesticide use, claims of safety to humans, animals, and the environment, and even claims of benefits to farmers.³⁹

39 I present some examples of studies overturning the biotech industry's claims, for a complete overview please consult Druker 2015:

1. A meta-study by The Organic Center (Benbrook 2009) shows that crops from genetic engineering (GE) have been responsible for an increase of 383 million pounds of herbicide use in the USA alone. When he repeated his analysis three years later (Benbrook 2012), the number had increased to 527 million pounds.
2. The meta-analysis of 25 years of research on agricultural pesticide chemical groups conducted on behalf of the International Agency for Research on Cancer resulted in their changing the classification of glyphosate, the main GMO herbicide, to *probably carcinogenic to humans*. The announcement is available here: <http://www.iarc.fr/en/media-centre/iarcnews/pdf/MonographVolume112.pdf> (accessed 13 September 2015).
3. An analysis of the performance v. the documented risks of the biotech company Monsanto's flagship herbicide Roundup presents strong proof for the immediate withdrawal of this product (Antonioni et al. 2011).
4. As to the benefits v. harm to farmers of adopting the technology, reports are starkly divided between those

Any one of the previous conclusions should have sufficed to halt the commercialisation of GMOs. It can only be said with certainty that GMOs make good money to their proprietors, who sell them as a package with compatible pesticides and herbicides made by the same corporations (ETC Group in its 2011 Communiqué documented the stellar growth in revenue and increasing concentration in the combined agribusiness markets: The biotech sector as a whole made US\$ 8 billion in profits in 2009, with only 13 companies accounting for 89 percent). But added to this is another shocking fact: the studies that are intended to prove that GMOs are safe are shown to be, in Druker's words, "remarkably shoddy" (Ibid., 263). The studies are mostly conducted by the biotech industry, unchallenged by the FDA and its European counterpart EFSA (European Food Safety Authority), and in fact very often corroborated without any further study by these two agencies that supposedly represent the public interest. Systematically, the industry's studies downplay or misrepresent the risks of GMOs while inflating their benefits, and in some cases outright hide negative results associated with the use of GMOs. The fact that GMOs are still on the market, actively supported by successive US governments, while their circulation in the European Union persists despite widespread resistance by civil society as well as attempts to ban them by numerous governments, is due not to any identifiable benefit of these products (besides the potential high profits), but entirely to the incredibly strong lobby of the biotech industry and the willingness of some scientists, together with scientific and governmental institutions, to suppress evidence and distort the truth about the impact of these organisms (Druker 2015, Executive Summary⁴⁰). Druker goes so far as to say that:

[...] the manifold problems caused by GE [genetic engineering] foods have been obfuscated; and if they had instead been openly and accurately reported, the agricultural bioengineering enterprise would have collapsed. (Druker 2015, Executive Summary)

Giampietro, observing the arbitrariness with which the commonly agreed-upon precautionary principle is effectively applied in technoscience fields such as that of bio-engineering, reveals a deeper epistemological problem, confronting conceptions of risk, preferred by industry, with

triumphalising GMOs' successes and those uncovering their failures. An analysis by the anthropologist Stone (2012) attempts to untangle the controversies in the case of Bt cotton (a GMO adopted for production in India in the late 1990s). Among other inconsistencies in the triumphalist data, he finds that most (94 percent) of the rise in cotton yields are prior to large-scale adoption of the technology.

40 Steven Druker, Executive Summary of *Altered Genes, Twisted Truth*, available: <http://alteredgenestwistedtruth.com/additional-content/executive-summary/> (accessed 12 September 2015).

those of uncertainty or ignorance, defended by post-normal scientists. Moreover, he considers that conventional risk analysis, which is predominantly applied, is powerless when dealing with evolutionary processes (genetics), from whence uncertainty and ignorance can not be banned. He recommends (2002, 466) moving from “the paradigm of ‘substantive rationality’ (trying to indicate to society optimal solutions) to that of ‘procedural rationality’ (trying to help society in finding ‘satisficing’ solutions)”.

Considering that the biotech industry satisfies the criteria for the existence of a cartel, it is unsurprising that farmers who have signed contracts with these companies are facing escalating costs. Benbrook (2012) shows that farmers are coping with increases in several areas: the price of GE seeds is between 50 to 100 percent higher than that of conventional seeds, while the need to manage chemical-resistant weeds (an increasingly common problem in the case of herbicide-resistant GMOs) has increased herbicide costs almost three-fold since 1996. On the escalating use of chemical control in agriculture, the editors of the peer-reviewed collaborative assessment on knowledge, science, and technology in agriculture, IAASTD (2009) state:

The history of chemical control illustrates a phenomenon in agricultural science and technology development, in which early success of a technical innovation (often measured by a single agronomic metric such as productivity gains), when accompanied by significant private sector investment in advertising and public relations and by direct and indirect policy supports from dominant institutional arrangements, translates into narrowing of organisational research and extension objectives, widespread if uncritical grower adoption and delayed recognition of the constraints and adverse effects of the technology (e.g., resistance, health hazards, etc.). (IAASTD 2009, Global Report, 99)

On an anecdotal yet relevant note, the association of agricultural biotechnology companies, CropLife, withdrew from the IAASTD process in protest against the project team’s alleged “ideological stance on GMOs, pesticides and global trade” (IAASTD 2016, 47), while three pro-GMO countries (USA, Canada, and Australia) refused to formally sign the report.

I have shown how the new actors of the modern food system—the corporations and their allies at national and supranational institutions of policy-making—have subjected agriculture to industrial concerns and standards, creating concentrated and highly verticalised markets where oligopolies can dictate not only the rules of trade, but also those of production, distribution, consumption, and knowledge creation. The capitalist incursion into the field of food and agriculture would, however, not be complete without the strong Intellectual Property

Rights regimes that are the result of long-term lobbying by TNCs and their supporting governments, and which have been consecrated in international agreements such as the Agreement on Agriculture of the WTO and the UPOV convention⁴¹. These agreements effectively legitimise the privatisation of Nature, despite contradicting other conventions, such as the European Patent Convention⁴², which explicitly excludes animal and plant varieties, as well as the biological processes for the production thereof, from patentability. In 1980, a court decision in the USA on genetically modified bacteria essentially paved the way for a proliferation of patents on plants and animals.⁴³ The authorisation to patent life was upheld in Europe in 1998—after a long period of lobbying by the US government and biotech industry—with the adoption of the biotechnology Directive⁴⁴, and introduced as an obligation for WTO members, by means of the TRIPS agreement⁴⁵.

The editors of the IAASTD report sum up their concern for the impacts of widespread patents on food on the (free) availability of genetic resources, in particular in more vulnerable countries, as follows:

Genetic resource management over the past 150 years has been marked by an institutional narrowing [...] This narrowing is illustrated in history by four major trends: (1) a movement from public to private ownership of germplasm; (2) unprecedented concentration of agrochemical, seed corporations, and commodity traders; (3) tensions between civil society, seed corporations, breeders and farmers in the drafting of IPR; (4) stagnation in funding for common goods germplasm. These trends have reduced options for using germplasm to respond to the uncertainties of the future. They have also increased asymmetries in access to germplasm and benefit sharing and increases vulnerabilities of the poor. [...]. New ownership and IPR regimes have restricted movement and made development of non-commercial (public) good constructs more expensive. These changes have limited those actors that do not have legal, commercial and financial power. (IAASTD 2009, Global Report, 87-88)

41 The International Convention for the Protection of New Varieties of Plants

42 Article 53 of the European Patent Convention excludes plant varieties and animal species. Available: <http://www.epo.org/law-practice/legal-texts/html/epc/2013/e/ar53.html> (accessed 10 September 2015).

43 Read the ruling in the so-named “Diamond v. Chakrabarty case” here: <https://supreme.justia.com/cases/federal/us/447/303/case.html> (accessed 10 October 2015).

44 Text of Directive 98/44/EC on the legal protection of biological inventions, available: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31998L0044> (accessed 10 October 2015).

45 Article 27.3(b) of the TRIPS agreement forces countries to provide patent or similar protection over plant varieties. A short analysis is available at: <http://www.iprsonline.org/ictsd/docs/GRAIN.pdf> (accessed 10 September 2015).

Support for a new paradigm

Despite the largely pessimistic view of the modern food system—in terms of its capacity to realise basic democratic criteria—which I presented here, support for systemic changes has been increasing in the last decade, in particular since the publication of the comprehensive assessment on agriculture by the IAASTD initiative. Later reports have corroborated IAASTD's diagnosis, which in turn is largely in tune with the one I have attempted to demonstrate in this chapter. Neither do the editors of the UNCTAD report on agriculture (2013, i) mince their words when they say:

The world needs a paradigm shift in agricultural development: from a "green revolution" to a "truly ecological intensification" approach. This implies a rapid and significant shift from conventional, monoculture-based and high external-input-dependent industrial production towards mosaics of sustainable, regenerative production systems that also considerably improve the productivity of small-scale farmers. We need to see a move from a linear to a holistic approach in agricultural management, which recognizes that a farmer is not only a producer of agricultural goods, but also a manager of an agro-ecological system that provides quite a number of public goods and services (e.g. water, soil, landscape, energy, biodiversity, and recreation)

More recently, the former Rapporteur on the Right to Food for the United Nations, Olivier De Schutter, speaks of a "critical governance gap" that occurs when supranational organisations do not have the rights of people at heart, while multinational corporations are given rights that are not balanced by obligations, and which take primacy over basic human rights. As he was taking his leave, De Schutter called for "the world's food systems to be radically and democratically redesigned to ensure the human right to adequate food and freedom from hunger".⁴⁶ He confirms that "[t]he eradication of hunger and malnutrition is an achievable goal. However, it will not be enough to refine the logic of our food systems – it must instead be reversed."

De Schutter, as well as the multi-disciplinary, multi-country expert team at IAASTD, and the researchers of UNCTAD's latest agriculture report "Wake up before it's too late" are agreed on a number of fundamental insights:

46 Democracy and diversity can mend broken food systems - final diagnosis from UN right to food expert, available: <http://www.srfood.org/en/democracy-and-diversity-can-mend-broken-food-systems-final-diagnosis-from-un-right-to-food-expert> (accessed 1 October 2015).

- The focus on a “supply-side productivity problem” (UNCTAD 2013) is questionable and distracting from the real problems: hunger is the result of a lack of purchasing power and/or food self-sufficiency.
- The world does not need another Green Revolution, but instead a new focus on equitable and regenerative sustainability in farming, with the farmer recognised not only as a producer, but as the caretaker of agro-ecosystems. Agriculture is a unique activity because it sits at the intersection of economic, ecological, social, and cultural needs. It is the one sector that can potentially achieve food security for all and pull rural people out of poverty and hunger.
- Given the scale of the negative impacts of industrial agriculture, there is no avoiding the imperative of a profound transformation of the global food system and its markets, which will pose serious issues of governance and power. Unfortunately, governments and corporations from the top agricultural trade countries are not moving beyond weak reforms of industrialised agriculture. Meanwhile, a worrying integration of food, energy, and financial markets is taking place (UNCTAD 2013, 7).
- Any approach will have to be two-track, which is one “that drastically reduces the environmental impact of conventional agriculture, on the one hand, and broadens the scope for agroecological production methods, on the other” (UNCTAD 2013, i).

They have also embraced the key idea that agriculture is as much at the heart of major challenges that humans are facing in the twenty-first century—hunger, poverty, climate change, biodiversity and ecosystem loss—as it is a major leverage factor to face these challenges. To conclude the biography of the modern food system, in Table 2 I present a comprehensive account of both the negative and positive leverage effects of agriculture.

Table 2. Agriculture as both source and solution for major challenges

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>1a) Persistent hunger</p> <p>FAO (FAO, IFAD, WFP 2015) reports that 795 million people are still going hungry. These numbers are not consensual, since FAO changed its methodology before concluding what was a 25-year longitudinal study of hunger⁴⁷—this changed its estimate for 2012 from 925 million to 868 million (FAO, WFP, IFAD 2012). De Schutter (2014, 4) believes malnourishment is being under-reported. He says that “these figures do not capture short-term undernourishment, because of their focus on year-long averages; they neglect inequalities in intra-household distribution of food; and the calculations are based on a low threshold of daily energy requirements that assume a sedentary lifestyle, whereas many of the poor perform physically demanding activities”. Neither do they capture the regional differences, with almost a quarter of people in Sub-Saharan Africa suffering from hunger, while South-East Asia made tremendous progress (FAO, WFP, IFAD 2015). The numbers also fail to reveal the irreversible impact of hunger on, for example, pregnant women and children. De Schutter (2014, 4) warns calorie intake is not a sufficient indicator for nutrition. He notes with particular concern the fact that 165 million children are considered stunted in 2014, calling attention to the fact that these children are “so malnourished that they do not reach their full physical and cognitive potential”.</p> <p>When broadening the criteria, we find that chronic malnourishment affects almost a third of the world population: FAO estimates approximately 2 billion people suffer from so-called micronutrient deficiencies (FAO, WFP, IFAD 2012).</p>	<p>1b) Food production is more than sufficient</p> <p>Current food production is more than enough to feed the world. Food availability rose from about 2,220 kcal/person/day in the early 1960s to 2,790 kcal/person/day in 2006-08 (FAO 2012d), while 2016 FAOSTAT⁴⁸ data already speaks of 2,870 kcal/person/day. Similarly, the supply of fat and protein has risen from respectively 66.95 and 70.08 g/capita/day in 1992 to 82.56 and 80.49 g/capita/day in 2011 (FAOSTAT). Based on a rough average minimum dietary requirement for the world population (1,850 kcal/person/day, based on data for 2006-2008⁴⁹) there is enough food produced currently to reasonably feed over 10 billion people. If we consider the full agricultural production (i.e. cereals that would go to animal feed or biofuels), there is even enough to feed over two and a half times the current world population: the world produced over 13 quadrillion calories in 2010, equivalent to 5,359 kcal on a per capita daily basis (FAO 2012d).</p> <p>A comprehensive review of dietary energy supply from different sources and in different regions in the world is available at the WHO website.⁵⁰ It shows how average food production is both sufficient <i>and</i> adequate in terms of nutrition, but that it does not get to everyone who needs it, either in quantity or in quality.</p>

47 FAO’s Food Security methodology, available: <http://www.fao.org/economic/ess/ess-fs/fs-methods/fs-methods1/en/> (accessed 5 November 2016).

48 FAO STAT, available: http://faostat3.fao.org/browse/FB/*/E (last accessed 10 December 2016).

49 FAO Statistics division, Minimum Dietary Energy Requirements, available: <http://tinyurl.com/h3brbjf>

50 World Health Organization, Global and regional food consumption patterns and trends, available: http://www.who.int/nutrition/topics/3_foodconsumption/en/ (accessed 15 December 2016).

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>1a) Persistent hunger (cont.)</p> <p>If we then add WHO's numbers for overweight, we realise that the majority of people in the world suffer from some form of malnutrition. In fact, obesity, which was once rampant in wealthier countries but is now rising rapidly in low- to middle-income countries, having more than doubled since 1980, has been shown to be a form of malnutrition in several studies, due to higher consumption of processed foods with high energy and fat content and the parallel decrease in the nutrient content of industrially farmed food (see the WHO site for more details). Obesity shares hunger's main cause: poverty, because energy-rich food is considerably cheaper than nutrient-rich food (Monsivais and Drewnowski, 2007). The World Health Organization estimates that in 2014, 1.9 billion adults were overweight, or 39% of the world's adult population. Of these, 600 million were considered obese.⁵¹ According to WHO, obesity and overweight currently kill more people than underweight.</p> <p>It is nevertheless generally recognised that food production is currently more than sufficient. Recent FAOSTAT data estimates that the average dietary energy supply in 2015 was close to 2,900 kcal per person per day. It is now a well-recognised fact that poverty precludes many people from accessing the food they need.⁵² Although poverty is currently being under-reported, numbers from 2005 tell us that almost half the world's population is possibly still living on less than US\$2.50 a day (UNDESA 2009) and that, at the poverty lines of industrialised countries (at least US\$ 10 a day), 95% of the Global South should be considered poor (Ravallion, Chen, Sangraula 2008). Finally, most of the poor, between 70 and 75%, live in rural areas (IFAD 2010).</p>	
<p>2a) Unequal distribution of costs and benefits</p> <p>Food prices, after decades of decrease, have been rising since 2007 (FAO, WFP, and IFAD 2011). Price volatility is high: despite occasional decreases, FAO's Food Price Index shows a rising trend</p>	<p>2b) Investment in small-scale agriculture can pull people out of hunger and poverty</p> <p>Research by FAO shows that investment in agriculture is five times more effective in reducing poverty and hunger than investment in any other sector (FAO, WFP, and IFAD 2012). According to</p>

51 WHO, "Obesity and overweight", Fact sheet, June 2016, available: <http://www.who.int/mediacentre/factsheets/fs311/en/> (accessed 15 December 2016).

52 World Food Programme, "What causes hunger?", available: <http://www.wfp.org/hunger/causes> (last accessed 10 December 2016).

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>2a) Unequal distribution of costs and benefits (cont.)</p> <p>for the past decade.⁵³ At the same time, healthy food is more expensive than "junk" food, placing a heavier burden on lower economic groups to access more nutritious food, which explains why obesity is more prevalent in these groups (Monsivais and Drewnowski 2007).</p> <p>Whereas agrifood corporations continue to register record profits, even during food crises, such as those experienced in 2007/2008 (Holt-Gimenez and Patel 2009), farmers need second jobs to make ends meet: 93% of farming households in the USA in 2002 had off-farm employment, compared to 27% in 1945 (Dimitri, Efland and Conklin 2005, 3). Farmland is highly inequitably distributed, as much between countries (25 countries hold 75% of land (Oxford Farming Conference 2012), as between farm size types: the 16% largest farms control 88% of agricultural land worldwide (Lowder, Skoet, and Raney 2016).</p> <p>Land-grabbing is aggravating this imbalance: The Land Matrix, an independent land monitoring initiative, registered 1,204 concluded land acquisition deals covering over 42 million hectares of land up to the launch of its latest report (Nolte et al., October 2016). It found that Africa is the most targeted continent, with 42% of concluded deals, followed by Eastern Europe, while the top individual target countries are Indonesia, Ukraine, Russia, Papua New Guinea, and Brazil— (representing 46% of the total area sold). The top five investor countries are Malaysia, the USA, the UK, Singapore and Saudi Arabia. Together, these account for 45% of the land under contract and 37% of all deals. Western European investors (the top five being the UK, the Netherlands, France, Jersey and Cyprus) are involved in 315 concluded deals, covering nearly 7.3 million hectares, which makes this the biggest investor region, followed by South-East Asia. The land acquisitions favour capital-intensive, low labour-intensive production methods, focusing on high-</p>	<p>2b) Investment in small-scale agriculture can pull people out of hunger and poverty (cont.)</p> <p>the World Bank, 1% growth in GDP from agriculture increases the expenditures of the three poorest deciles by at least 2.5 times as much as 1% growth from the rest of the economy (World Bank 2007, 30). Cited in the same report, a 2005 study by Bravo-Ortega and Lederman finds that an increase in overall GDP coming from agricultural labor productivity is on average 2.9 times more effective in raising the incomes of the poorest quintile in developing countries and 2.5 times more effective for countries in Latin America than an equivalent increase in GDP coming from nonagricultural labor productivity. Agriculture can also provide an important haven against global economic and financial turmoil, often more effectively than other sectors (FAO 2013).</p> <p>In 2007 almost half of the world population or approximately 3 billion people still lived in rural areas and of these, nearly 1.5 billion are considered economically active in agriculture (World Bank 2007), while a total of 2.5 billion people are estimated to depend on agriculture for all or part of their subsistence (IFAD and UNEP 2013). Most of these people live in developing countries, where agriculture can contribute as much as 34% to GDP (World Bank 2007, 27). Although on average 20% of the global workforce is employed in agriculture, this percentage rises in lower-middle income (around 40%) and low-income countries (around 60%) (Ibid.).</p>

53 FAO, World food situation, 2016, available: <http://www.fao.org/worldfoodsituation/foodpricesindex/en/> (accessed 15 December 2016).

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>value crops, which can be used for food as much as for energy purposes. UNCTAD (2013) presents proof that land deals in Africa displace local communities, involve ridiculously low</p>	
<p>2a) Unequal distribution of costs and benefits (cont.)</p> <p>prices per hectare, and aim at producing cash-crops, especially biofuels, while speculating with land prices. The investors in Africa are not only China and the Gulf states, but increasingly Western firms and rich individuals, backed by investment funds with ties to Goldman Sachs and JP Morgan, and even universities such as Harvard (UNCTAD 2013, 239).</p> <p>In Western Europe, employment in agriculture is negligible: on average, no more than 5.2% of the population works in farming, according to 2010 World Development Indicators from the World Bank⁵⁴. In the Global South, a very different picture emerges with between a third to over half of the population active in agriculture depending on the level of industrial development (World Bank 2007). In lower-income countries, agriculture represents up to 40 percent of domestic revenues (Ibid.). The 48 poorest countries in the world, apart from minerals, have only agricultural commodities to offer for export, and have neglected domestic production in favour of cash-crop production, becoming net-importers of food (IAASTD 2016, 13).</p> <p>The industrial paradigm in farming does not fit nor benefit all: farmers usually have to scale up to benefit from hybrid or GMO high-yield and high-input varieties that are increasingly overtaking farmers seeds in their countries. The UNCTAD meta-study offers an example of how Argentinian soy farmers have to attain a minimum farm size of 500 ha to be profitable, while the researchers estimate that in the future this minimum will rise to 5,000 ha (UNCTAD 2013, 270).</p>	

54 World DataBank, World development indicators, available: <http://databank.worldbank.org/data/home.aspx> (accessed 15 September 2015).

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>Finally, income inequality is rising even in the richest countries: an OECD (2011) study shows that the household incomes of the richest 10% grew faster than those of the poorest 10% from 1970-2000. The inequalities are especially pronounced in export giants—USA, UK, Israel, Brazil, Argentina, Mexico—but even in traditionally low-inequality countries: Germany and Denmark. Even more troubling is that inequalities have risen in times of economic growth (OECD 2015).</p>	
<p>3a) Contribution to global warming</p> <p>A meta-study on the contribution of agriculture to climate change, which supranational institutions have been taking into account, attributes between 19 to 29% of greenhouse gas emissions (GHG) to activities in food systems (Vermeulen, Campbell, Ingram 2012). The upper bracket includes not only agricultural production—the predominant contributor—but also transport and packaging for food, processing, retail, waste disposal, and fertiliser manufacture. This makes agriculture the main source of man-made GHG emissions after energy production (IAASTD 2016).</p> <p>Industrial farming is responsible for the larger footprint, because it is highly dependent on fossil fuels, not only for transport but for oil-based fertilisers. IAASTD (2016, 32-33) laments the loss of the “art of locally adapted soil conservation and land use”, in favour of synthetic mineral fertilisers. As an example, farmers use more than 110 million tons of synthetic nitrogen fertiliser per year (Ibid.). Although providing a temporary boost in nutrients, in the long run this practice depletes and acidifies the soil.</p>	<p>3b) Halting and mitigating global warming</p> <p>Proper management of plants and soil can reduce global warming and heal agro-ecosystems. Most farms are small, under 2 ha in size, and, although more research is necessary, it is estimated that in developing countries, small and/or family farms can contribute to up to 70% of total production (Lowder, Scoet, and Raney 2016; Graeub et al. 2016). Small farms have been consistently shown to be more productive and more efficient per unit area than larger farms (Rosset 2000; Barrett, Bellemare, and Hou 2010; FAO 2014).</p> <p>Considering the undeniable negative impacts of industrial agriculture on agro-ecosystems, policy-makers have taken to promoting small or family farms as a way for countries not only to feed themselves but to mitigate climate change. The use of agroecology, a low-tech or "adequate tech" science and practice, is pointed out as a viable alternative to continued industrialisation, contributing to raising productivity, reducing rural poverty, improving nutrition and adapting to climate change (De Schutter 2011, 6). De Schutter points out that agroecology uses on-farm resources and knowledge rather than external inputs, improving productivity at a fraction of the cost of conventional methods, while employing more people.</p>
<p>4a) Those producing food are among the poorest and hungriest</p> <p>Hunger and poverty are paradoxically rampant among people that live closer to the means of food</p>	<p>4b) Small farms can provide most of our food</p> <p>Exactly how much small farms contribute to food production is currently being contested. Recent</p>

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>production: half of the world's hungry are smallholder farmers and an additional 22% are landless rural families (Windfuhr and Jonsén 2005). Rural areas hold at least 70% of the world's poor, making this a predominantly rural phenomenon, with key areas for concern being Sub-Saharan Africa and South Asia (IFAD 2010).</p> <p>FAO (2015) observes how in rural households, in particular small farms, production and consumption decisions are intimately linked. Changes in either production or consumption standards and/or needs can have a disproportionately large impact, and small-scale farmers are</p>	<p>studies conservatively placed the share at a minimum of 53% (Graeub et al. 2016). But local studies, such as that by de França et al. (2009, cited in Graeub et al. 2016), show that the contribution of family and/or small farms can be much higher—in Brazil it was found to be at least 70% of domestic food consumption. FAO calculated that in low- and middle-income countries farms up to 2 ha correspond to 40% of farm land, whereas farms up to 5 ha cover about 70%, indicating these are crucial for these countries' food security (FAO 2014).</p> <p>More studies are needed to calculate the exact contribution of small farms to domestic food needs.</p>
<p>4a) Those producing food are among the poorest and hungriest (cont.)</p> <p>easily marginalised, even when the rest of the country is developing. In a reasonably developed agricultural country with a large number of rural poor, India, the rural poverty threshold actually decreased from 54% of average per capita income in 1973-1974 to only 16% in 2004-2005 (UNDESA 2009). In comparison, in the wealthier European countries, the poverty threshold is set at 50% of average per capita income.</p>	<p>4b) Small farms can provide most of our food (cont.)</p> <p>The High Level Panel of Experts of the Committee on World Food Security (HLPE 2013, 46) recommends taking action in this field, because “the fact that smallholder agriculture is able in some cases to outperform large-scale agriculture in terms of yield should be reason enough to concentrate on the question of overcoming the problem of limited or restricted access to factors and inputs to production, rather than to focus on the change of model/scale.”</p> <p>As mentioned in the previous section, smallholder farmers are important for development for many different reasons: their contribution to the subsistence of their families and communities and for lifting these out of poverty, their potential contribution to healing ecosystems, their contribution to employment, among others.</p>
<p>5a) The modern food system threatens agro-biodiversity</p> <p>Industrialised farming relies on a limited number of species of animals and plants: modern plant varieties have supplanted traditional ones over the past 60 years, and there are concerns about the loss of genetic diversity and about the diminishing results from modern and genetically modified varieties that have spurred pesticide use and depleted nutrients in the soil (IAASTD 2009, Global</p>	<p>5b) Traditional plant varieties still dominate production in the Global South</p> <p>It is not too late to save the dwindling traditional varieties, which have been associated with yield stability, resistance to biotic and abiotic stress, and resilience, as well as compatible with low-input agriculture (Altieri and Merrick, 1997; WRI, 2005) .</p> <p>Small farmers often opt to maintain traditional varieties to minimise their risks for disease, pests,</p>

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>Report, 157-170). The modern food system favours cereals that can be cultivated in monocultures, are easily stored and just as easily processed in factories. Thus, while there are 10 to 50,000 edible plant species, only about 150 to 200 are currently cultivated, and out of these, rice, maize, and wheat constitute almost 60% of humans' calorie- and protein-intake from plants (FAO 2004). Animal breeds are faring even worse: only 770 livestock breeds remain (half of those in existence at the beginning of the 20th century), and 20% of these are at risk of extinction (Ibid.). Hybrid plant varieties, created in laboratories, are preferred in industrial farming for their potentially higher yields, over traditional ones, eroding the plant gene pool. One example, out of many, is that of the Philippines, where thousands of rice landraces have been replaced by just two modern varieties (IAASTD 2009, Global Report, 186).</p>	<p>and extreme weather conditions. Traditional varieties have the advantage of being ideally adapted to local conditions and of needing little or no external inputs (i.e. synthetic fertilisers, pesticides, increased irrigation). IAASTD (2016) reminds policy-makers that small-scale farmers depend, for their livelihoods, on indigenous plants and animals, and that they are, for the most part, unable to bear the cost or the burden of industrial quality and hygiene standards, or monitoring systems. They are either marginalised or forced to cultivate cash crops for export (coffee, tea, tobacco). IAASTD (2016) thus advocates supporting traditional knowledge and practices, while updating them with concepts from the evolving science and practice of agroecology.</p>
<p>5a) The modern food system threatens agro-biodiversity (cont.)</p> <p>The IAASTD (2016⁵⁵) speaks of an “agricultural treadmill”, which is</p> <p>[...] based on technological advances achieved through mechanization, plant breeding for high-yielding varieties, the use of agrochemicals and genetic engineering, etc. With increasing external inputs, the unit costs of production are declining and the productivity per worker is increasing. Production is growing and producer prices are falling. The only businesses that can survive on the market are those that remain one step ahead of their competitors by investing in rationalization and expansion, or those with locational advantages. If others catch up with them, another round begins.</p> <p>The erosion of agro-biodiversity can assume unbelievable proportions: IAASTD (2016, 47) shows how, in Argentina, genetically modified (GM) soybeans are grown on an area of 21 million hectares, mostly destined for export to China and Europe. To “aid” these crops, in 2012, 335 million litres of pesticides were sprayed on the fields, a nine-fold increase since 1990. The most popular agrochemical in Argentina is glyphosate, a herbicide commercialised by the biotech leader Monsanto. IAASTD (Ibid.) warns that:</p>	<p>5b) Traditional plant varieties still dominate production in the Global South (cont.)</p> <p>Forests should be earmarked as an important contributor to preserving agro-biodiversity. On its webpages dedicated to biodiversity⁵⁶, FAO states that “[f]orests are among the most important repositories of terrestrial biological diversity”. Forests provide cover and shade for many animals and plants, contribute to soil and water conservation, and are sources not only of food and wood, but also fibres and medicines. Finally, forests take carbon dioxide out of the air, helping control global warming.</p>

55 Commentary available on the site of the 2016 publication: <http://www.globalagriculture.org/report-topics/about-the-iaastd-report.html> (accessed 12 December 2016).

56 FAO, “Biodiversity”, available: <http://www.fao.org/biodiversity/en/> (accessed 8 December 2016).

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>While the average amount of glyphosate applied per hectare was three liters in 1996, this figure is now closer to an average of 12 liters per year; in some areas an even greater amount is used. Due to the constant spraying, more and more weeds are becoming resistant.</p>	
<p>6a) Industrial agriculture degrades ecosystems</p> <p>Agriculture and forestry use more than 60% of the land surface of the Earth (IAASTD 2016, 18). The IAASTD report (2009, Global report) warned that, in all likelihood, at least 23% of all used land is already degraded to some degree. The report’s editors inform that “key soil degradation processes include: erosion, salinization and water logging, compaction and hard setting, acidification, loss of soil organic matter, soil nutrient depletion, biological degradation, and soil</p>	<p>6b) Small-scale farming based on agroecological principles can heal ecosystems</p> <p>The former UN Rapporteur on the Right to Food, Olivier De Schutter (2014, 6) said in his farewell report:</p> <p>As a way to improve the resilience and sustainability of food systems, agroecology is now supported by an increasingly wide range of experts within the scientific community, and by international agencies and organizations, such as [FAO], UNEP and Biodiversity International.</p>
<p>6a) Industrial agriculture degrades ecosystems (cont.)</p> <p>pollution” (Ibid., 39). They estimate that each year, around 24 billion tons of fertile soil are lost because of erosion (IAASTD 2016, 32).</p> <p>The Comprehensive Assessment of Water management in Agriculture, conducted in 2007, warns that the food system is the biggest water drawer: it is currently using 70% of the world's available and non-renewable fresh water (from rivers and groundwater), most of this for irrigation purposes. If nothing is done, they say, humankind will face “acute freshwater challenges” over the next 50 years (2007, 2). River and groundwater provide so-called “blue water”, whereas rainfall provides “green water”. IAASTD (2016, 27) warns that industrial agriculture is too dependent on irrigation: in South-East Asia, yields were increased exclusively thanks to enormous investments in new irrigation systems between five and three decades ago. But this irrigation dependence means that “by 2030, half the world population will be living in areas with high water stress” (Ibid., 31).</p> <p>Intensive agriculture contributes to changes in land use, which is quick becoming a global problem. Foley et al. (2005, 570) warn:</p>	<p>6b) Small-scale farming based on agroecological principles can heal ecosystems (cont.)</p> <p>Both De Schutter and scientist Altieri are confident that agroecological practices can be scaled up, with the advantage of simultaneously increasing farm productivity <i>and</i> food and income security, while also halting genetic erosion (Altieri et al. 2012; De Schutter 2014). Altieri et al. assert that agroecology can play a key role in supporting small farming systems and boosting their productivity. They claim it respects, but also refreshes, peasant practices and techniques, while involving the farmers and their families, and adapting technology and solutions to each different site. It also avoids the multi-million dollar dependence on large donors that promote synthetic fertilisers and pesticides, coupled with commercial hybrid plants, which need to be purchased each year (Altieri et al. 2012, 5). Instead, agroecology “takes greater advantage of natural processes and beneficial on-farm interactions in order to reduce off-farm input use and to improve the efficiency of farming systems” (Ibid. 6). Examples are the optimisation of organic matter and nutrient cycling, the use of natural enemies in pest control, enhancing nutrient-content of the soil, planting diversity rather than monocultures, and creating synergies between the elements of the agro-ecosystem (Ibid., 7).</p>

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>As Global croplands, pastures, plantations, and urban areas have expanded in recent decades, accompanied by large increases in energy, water, and fertilizer consumption, along with considerable losses of biodiversity. Such changes in land use have enabled humans to appropriate an increasing share of the planet’s resources, but they also potentially undermine the capacity of ecosystems to sustain food production, maintain freshwater and forest resources, regulate climate and air quality, and ameliorate infectious diseases. We face the challenge of managing trade-offs between immediate human needs and maintaining the capacity of the biosphere to provide goods and services in the long term.</p> <p>Loss of forest, on which at least two billion people depend directly, is estimated at about one third of the total area since the start of agriculture (FAO 2012c, State of World's Forests).</p> <p>Meanwhile, meat production is on a steep climb, with unpleasant side-effects: over one third of the world’s cereals are already being used as animal feed, and if current trends continue, this will</p>	<p>Combining diverse and resilient food production with the recovery or creation of forest land, agroforestry is increasingly being experimented with (IAASTD 2016, 29).</p>
<p>6a) Industrial agriculture degrades ecosystems (cont.)</p> <p>rise to 50% by 2050 (De Schutter 2014, 5-6). According to an FAO report on “livestock’s long shadow”, livestock production accounts for 70% of all agricultural land and 30% of the land surface of the planet, while the expansion of pastures and feed crops is a major source of deforestation, especially in Latin America (Steinfeld et al. 2006). They also indicate that overgrazing has already degraded at least 20% of the world's pastures and rangelands.</p>	
<p>7a) The efficiency of the modern food system leaves much to be desired</p> <p>A 2011 study estimated that around one third of total food produced for human consumption is lost or wasted (FAO 2011). A study by UNEP placed the estimate even higher: at 56% of the average 4,600 kcal produced per capita in the world in 2008-2009 (Nelleman et al. 2009).</p> <p>UNCTAD (2013) reports that on top of the wastage, subsidies for farmers and agribusiness in the Global North have distorted markets and created inequalities between the North and South, and between agribusiness and the large food retailers and the farmers at the base of the food system. These subsidies reward large-scale, carbon-intensive and polluting agriculture. Ironically,</p>	<p>7b) Local food systems can provide both sustainability and security</p> <p>The advantages of supporting small-scale and family farming have been shown by study after study (see the work of Altieri and the references of reports such as IAASTD 2009 and UNCTAD 2013) and have currently been taken to heart by supranational organisations with an interest in food systems, such as FAO, UNEP, and UNCTAD. Among the factors that favour small-scale farming we find the “inverse farm size-productivity relationship”, which has been systematically observed in Russia, India, Africa, Asia, Europa, and Latin America (Barrett, Bellemare, and Hou 2010). An analysis of the relationship between farm size and total output for fifteen countries in the Global</p>

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>countries that wish to trade with the USA or Europe, have to abolish their own subsidies or indeed any kind of domestic support for their farmers, while the Global North continues to finance their exporting companies. The case of Ghana in UNCTAD 2013, 255 illustrates how domestic food self-sufficiency was destroyed when Ghana liberalised its agricultural market. The same case highlights that many of the US companies exporting to Ghana would not have covered costs, were it not for the subsidies they received. UNCTAD shows what happened in several vulnerable countries where cheaper imports flooded the markets: the percentage drop in local domestic production of what was previously a flagship product of the country has been as much as 68% (Ibid., 254). The agricultural policies of developed countries are representing a loss of US\$ 17 billion per year for developing countries—not yet including the indirect subsidies for energy that agricultural companies also enjoy. Subsidies for farm producers in OECD countries is estimated</p>	<p>South found small farms to be two to ten times more productive and efficient per unit area than larger farms (Rosset, 2000).</p> <p>Small farms and family-run farms also tend to benefit poorer and vulnerable populations. They can be a key to local community development. FAO (2014) stated: “[b]eyond increasing local food availability, family farmers play a vital role in creating jobs, generating income and stimulating and diversifying local economies”. In the same report, FAO reminds us that family-run farms are in a better position to safeguard the preservation of traditional crops, which are important for local food security but have been displaced by commodified cash-crops.</p> <p>UNCTAD (2013) claims well-managed small farms, under a regime of agroecology, require none or almost no external inputs and minimise their risks through the use of diversity in crops. The use of locally produced inputs is a major game-changer, since it removes farmers from the “agricultural</p>
<p>7a) The efficiency of the modern food system leaves much to be desired (cont.)</p> <p>to have been US\$ 252 billion in 2009, or 22% of gross farm receipts (UNCTAD 2013, 256).</p> <p>Management of ecosystems and non-renewable resources in agriculture also leaves much room for improvement. Not only is there a large potential for reducing water use under the current system, but agricultural growth can be achieved without intensifying water use. This means drastically reducing water resources degradation from erosion, pollution, salinisation, nutrient depletion and the intrusion of seawater. It also means reviewing diets, since producing meat, in particular bovine meat and pig, and raising dairy cattle, has a large water and greenhouse gas footprint (Mekonnen and Hoekstra 2010).</p> <p>Animal production accounts for 29% of the total water footprint of agriculture. Producing animals is a lot less efficient, when measured against its nutritional value, than producing what the authors call “wisely chosen crop product” (Ibid., 39).</p> <p>World meat production has increased by more than 50% since 1970 in developed countries and by</p>	<p>7b) Local food systems can provide both sustainability and security (cont.)</p> <p>treadmill”, which requires them to keep using synthetic inputs to maintain productivity (Ibid., 36).</p> <p>Under agroecology, farmers are both producers and guardians of agro-biodiversity and agro-ecosystems. UNCTAD also states that agroecology is both efficient and effective in achieving the joint goals of improving livelihoods and sustainability. Since it is knowledge-intensive rather than external input-intensive, it can be spread at little cost. UNCTAD (2013) presents several studies that prove agroecology’s potential. A 2006 study (Pretty et al., cited in UNCTAD 2013, 36) looked at 12.6 million farms in 57 countries, and found agroecological interventions improved crop productivity by an average of 79%, while also improving agro-ecosystems’ contribution to environmental services.</p>

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>a factor of more than four in developing countries (Steinfeld et al. 2006). In 2002, consumption per capita in the Global North (80 kg/person/year) was still almost triple that of the Global South, but this is rapidly changing. Meat production is causing serious environmental and social problems. The global assessment on the impact of livestock (LEAD initiative, Steinfeld et al. 2006) demonstrated that this sector is the largest user of land when we combine the land used for feed with that used for grazing, having displaced wildlife and forests. Meat production also has a high greenhouse gas footprint, estimated at 18% of global GHG emissions and 37% of methane alone. It additionally causes systemic pollution from the run-off from manure (one third of nitrogen and phosphorus used globally are seeping into freshwater resources), pesticides (37% of pesticide use goes to livestock production), and the over-use of antibiotics.</p> <p>The report also points out that meat already makes up 40% of global agricultural gross domestic product (GDP), employing 1.3 billion people, while it is a sector that is expected to double</p>	
<p>7a) The efficiency of the modern food system leaves much to be desired (cont.)</p> <p>between the time of the report and 2050, with the growing of middle class in developing countries.</p> <p>The world's fisheries, and the fish populations they depend on, do not fare any better. The United Nations report that in 2006 human consumption of fish reached a record of 16.7 kg / capita.⁵⁷ The same report concludes that 80% of the world's documented fish stocks are either fully exploited or overexploited. Larger, predatory fish fare worse than their smaller and vegetarian cousins (over 80% of tuna stocks are either fully exploited or overexploited or depleted, while 60% of targeted shark populations are either overexploited or depleted). Meanwhile, the report continues, fishing subsidies have continued to fuel overfishing, amounting to US\$ 10 billion in 2000. Additionally, illegal or unreported and unregulated fishing and "by-catch" of fisheries (unwanted sea-animals)</p>	

57 UN, "Resumed Review Conference on the Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks", 2010, available: http://www.un.org/depts/los/convention_agreements/reviewconf/FishStocks_EN_A.pdf (accessed 18 September 2015).

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>represent over 40% of the annual official catch.</p> <p>Finally, the rising demand for biofuels has created competition between the use of crops for food or feed and the use of the same crops (like maize) for biofuels. If this trend continues, an increase in biofuel production will raise agricultural prices (IAASTD 2009, Global Report, 291). As of the date of print of the IAASTD report, biofuels were not yet cost-effective without significant public subsidies. More specific reports, produced by the International Institute for Sustainable Development, show that biofuels are an excessively expensive way to combat climate change: subsidies for biofuels were US\$ 11 billion a year in OECD countries in 2006, almost one dollar per litre produced.⁵⁸ The Institute (see for instance Steenblik 2007) warns of the hidden costs that must be added to the spending of public money, namely the risk of rising food prices and the environmental pressure caused by crops for biofuel (these crops are more prone to erosion and</p>	
<p>7a) The efficiency of the modern food system leaves much to be desired (cont.)</p> <p>also require higher chemical inputs and water). In its updated report, the IAASTD (2016, 36) warns that “[t]he share of the US maize harvest used to make fuel has increased sixfold since 2000”. Its editors warn that OECD and FAO estimates foresee a triplication of the production of biofuel for the period of 2006 to 2024. FAO (2016c) confirms that out of 2.5 billion tons of cereal produced annually, only 43% goes to food, the rest is used for feed (46%) and other uses, which prominently include biofuels.</p> <p>UNCTAD (2013) also calls attention to the fact that industrial agriculture is much too dependent on fossil fuels, which have not only been extremely cheap in the past, but subject to large subsidies, without which many of the agribusiness sectors would not have been profitable. With the new volatility of oil prices and the need to curb carbon emissions, industrial and globalised agriculture needs to review its modus operandi.</p>	

58 International Institute for Sustainable Development, Global Subsidies Initiative, available: <https://www.iisd.org/gsi/biofuel-subsidies/biofuels-what-cost> (accessed 12 September 2015).

Table 2. (cont.)

The negative leverage effects of agriculture	The positive leverage effects of agriculture
<p>Finally, IAASTD (2016) warns that the financialisation of agriculture poses serious risk for food security. The USA deregulated commodity futures trading in the 1990s, and investors have reacted positively. IAASTD (Ibid., 14) says: “[s]ubsequently, the percentage of commercial traders has decreased remarkably while the number of speculative traders has exploded on the world’s most important futures exchange CBOT in Chicago. In 2002, eleven times the actual amount of wheat available was traded on the CBOT; in 2011, 73 times the actual US wheat harvest was traded.”</p> <p>The speculation with essential food products may have been a factor in the food crises of 2007 and 2008, and continues to contribute to food price volatility.</p>	

A global food polity

V

The ecological-democratic quality of food politics

In my final chapter, I will be analysing reports from a variety of institutional or otherwise organised food actors where they convey their views on food system challenges and the policies to be adopted in the twenty-first century. These publicly available reports may be considered representative and revealing of the discourse to which the different actors adhere. A discourse is understood here as a particular way of representing aspects of social life, including aspects that are desired or possible worlds (Fairclough 2001). Fairclough points out that discourses reveal the social practices (more or less stable and durable forms of social activity) and thus the social structures to which the discursants adhere, revealing relations of power and dominance in society. Discourses also come with conventions that, when known to both discursants and their audiences, organise and constrain the behaviour of all involved (Fairclough 2001, 39). The conventions help to reproduce the power relations at play in the field of the discourse at hand. Fairclough believes that “in terms of 'power in discourse', discourse is the site of power struggles, and, in terms of 'power behind discourse', it is the stake in power struggles—for control over orders of discourse is a powerful mechanism for sustaining power” (Ibid., 61).

I will conduct an exploratory critical discourse analysis (CDA) based not only on Fairclough's (2001) recommendations, but also on the classification of environmental discourses by Dryzek (2005), and on the methodologies used in two case studies: one of them about the paradox of industrialised sustainability (the case of Whole Foods Market by Josée Johnston 2008); the other a comparison of food security discourses, involving two of the food actors whom I will include in my own analysis (Drummond 2012). Since the texts in question can be considered political discourses, each of them aiming to defend the merits of one or other policy option, I also rely on Teun Van Dijk's (1993) recommendations for CDA, which ask to focus on argumentation—a big part of political discourse—and to tease out within the arguments their local meaning and coherence, the discourse style, and the rhetoric.

I am especially interested in how discourse analysis on the one hand may reveal the ideological tensions and contradictions that are thought to underly discourses of equity and

sustainability from a capitalist perspective (as patent in Johnston 2008), and on the other hand can "illuminate how the cultural hegemony of dominant groups in society is secured and contested" (Fraser 1997, in Johnston 2008, 234). I hope to be able to dissect the democratic practices of the food actors under analysis, even though Farrelly (2015, 1) warns that "the very language of 'democracy', as employed by some in positions of influence, insulates governments from the effects of democracy". He was referring to governments, but the same can be said of the practices of supranational agencies or powerful interest groups.

Nevertheless, the fact that language can be used to legitimise political decisions and to maintain a questionable social-economic order, adds to rather than detracts from the usefulness of CDA to lay bare the worldview behind large-scale discourses such as those of "food security", "food sovereignty", "green economy", and "climate-smart solutions".

Another reason discourse analysis is appropriate for this thesis is because an important part of the struggle over who runs the world's food systems, and how they should be run, can be attributed to on-going discursive contests over the framing of policy issues and the construction of rules, norms, story lines and actor identities, which may lend food actors a veil of legitimacy to influence policy outcomes (based on Fuchs 2005, who analysed the limits of the discursive power of business).

Fairclough recommends employing three stages of discourse analysis, starting with the text itself (use of vocabulary and grammar), moving to the relationship between the text and the interaction at hand (the producer of the text versus his or her audience), and finalising with an explanation of the relationship between the interaction and the broader social context (Ibid., 91). Johnston applies this three-dimensional approach to her study of the green consumer discourse by the corporation Whole Foods Market. Conversely, Drummond first dissects and then reconstructs the narrative from each of the food actors, teasing out the main themes, the preferred arguments and versions of truth, the social relations that are implied, and finally, possible paradoxes and omissions. Finally, from Dryzek I borrow some important tips on how to distinguish between discourses that tend to be quite similar—all purporting to solve socio-ecological problems—but that nevertheless present important differences in their details. Dryzek looks at: 1. basic entities recognised or constructed; 2. assumptions about natural

relationships; 3. agents and their motives; and 4. key metaphors and other rhetorical devices (2005, 19).

Selecting the discourses in food politics

I have chosen nine food actors, seven of them global, one representing the global recommendations of a powerful country (United Kingdom), and one national organisation (Portuguese). The Food and Agriculture Organisation (FAO) was a logical choice, considering its unequivocal involvement in the management (or perhaps mitigation) of the global food production system. The World Bank was chosen because it lies outside of the United Nations but commands enormous influence in practically every sector of human activity, prescribing its own model for governing. The World Economic Forum is a well-recognised (and considered moderate in capitalist terms) voice for the world's largest businesses, with the clout and capacity to negotiate directly with governments. The G20 are the most powerful and wealthiest countries in the world and there is no question that their opinion carries weight. The UK's Government Office for Science prepared a report that represented not only the views of the conservative government in office at the time, but of the international "stakeholders" that were allowed to steer the conclusions. The United Nations Special Rapporteur on the Right to Food for the period of 2008-2014 represents a unique perspective that blends institutional concerns with the long-standing demands of social movements in food and farming. La Via Campesina is one of these social movements, the largest in the world, representing around 200 million small farmers, and has conquered a place, if not always a vote, at the supranational negotiating tables. Their views are supported by thousands of local and national organisations active in food and farming issues for small-scale farming. These organisations joined in a declaration at the International Forum for agroecology, at Nyéléni, Mali, in 2015, that I have also included in the CDA. And finally, the Portuguese Confederation of Farmers (CAP), known to represent the larger and more entrepreneurial farming businesses, was added as a check of the influence of global discourses on local strategies.

The reports were chosen for their recency (almost all reports are from 2014-2016, the exception being the UK report), for their capacity to convey the view on food production and food policy by the food actor in question, and for their relevance to decision-making in food production. When necessary for clarification purposes or for additional proof, the reports were complemented with texts either from the actors' websites or from other reports published by them or by related actors. These additional sources are identified whenever they are mentioned. The discourse analysis, due to the diversity of actors and written reports, aims at comparing food actors' vision for agriculture and identifying common, opposing, and contradictory narratives, rather than providing an in-depth view of each discourse.

Below follows a short description of each of the food actors. A full list of the reports and other texts consulted for the CDA is available in Appendix A.

Food and Agriculture Organisation (FAO) of the United Nations (UN): This supranational organisation, an agency from the UN, was founded in the same year as the United Nations itself, 1945, in the aftermath of World War II. As self-stated on its website, the "goal was to free humanity from hunger and malnutrition, and to effectively manage the global food system"¹. Initially only 42 countries were party to FAO, but this number quickly grew to the current figure of 194 Member-Nations, and FAO now has offices in over 130 countries. FAO has worked on food standards, hunger and undernutrition campaigns, voluntary guidelines to manage sensitive industries such as forestry and fisheries, phytosanitary plant protection, the annual collecting and publishing of agriculture and food related statistics, the establishment of a global gene pool for food security, the implementation of the right to food, and the struggle against climate change. FAO's emphasis gradually shifted from hunger to nutrition, ensuring that all people have access to physiologically and culturally adequate food, by "transforming food systems to make nutritious diets available to all"². FAO publishes a large number of reports annually on all imaginable areas related to food production. For this analysis, I chose their most recent strategic report, laying out the challenges and FAO's approach to meeting the new Sustainable Development Goals as adopted by the UN General Assembly in September of 2015.

1 A more complete description of FAO and the work of FAO is available here: <http://www.fao.org/about/en/> (accessed 12 July 2016).

2 FAO's Strategic Objective 1: Help eliminate hunger, food insecurity and malnutrition, available: <http://www.fao.org/3/a-au829e.pdf> (accessed 18 July 2016).

The World Bank (WB): This financial institution, currently with 189 member-countries, was created in 1944 as the International Bank for Reconstruction and Development at the famous Bretton Woods Monetary Conference designed to help rebuild European countries, of which the production systems and infrastructures were severely damaged by the war. With the USA as its biggest funder—and consequently the country with the most votes in the WB, a situation that persists to this day—the WB shifted its attention to developing countries when Europe started recovering its autonomy. To these countries the WB started lending money for large infrastructure projects in the 1950s and 60s, switching its focus to more socially and economically engaged development projects in the 1970s. According to Goldman (2006), the World Bank helped to make a very lucrative business out of development aid by imposing, as early as the 1980s, its neoliberal model of socioeconomic organisation on countries in need of aid or loans. Goldman (Ibid., 12) believes the World Bank is an enormously powerful actor in the global political economy that is helping to reproduce "a set of elite power networks". Its neoliberal orthodoxy is thought to have created "a series of colossal disasters around the world" (Ibid., 16). Because of its broad interpretation of development, the WB is involved in every conceivable area of social and economic organisation, including food production. I chose the WB's report on the future of food, *Shaping a Climate-Smart Global Food System*, as an example of this organisation's view on the management of the global food system.

World Economic Forum (WEF): This is essentially a major business interest group, but prefers to present itself as "the International Organization for Public-Private Cooperation"³. Well-known for its annual meetings of business leaders in Davos, and for the anti-globalisation and anti-capitalist protests that are simultaneously staged there, the WEF was founded in 1971 as the European Management Forum. Its members are the "1,000 leading companies of the world"⁴. Based on the "stakeholder" theory, the WEF aims to reconcile entrepreneurship with high standards of "governance" in a global world (I place the terms between quotes because they are clearly used as instruments and not as ends in themselves). The WEF publishes policy documents that are the result of its independent research and projects "committed to improving the state of the world" all over the world. The organisation

3 World Economic Forum website, available: <https://www.weforum.org/> (accessed 10 August 2016).

4 History of the World Economic Forum, available: <https://www.weforum.org/about/history> (accessed 10 August 2016).

and its members, by virtue of their economic power, have easy access to politicians and scientists, in addition to ample funds to run their independent projects or to sponsor state and university initiatives. One of the areas the WEF has focused on in recent years, with the help of corporations such as Monsanto, Unilever, and Nestlé, is agriculture and food, having launched its own programme entitled "a new vision for agriculture"⁵. It is their take on agriculture that interests me for the present CDA.

The G20⁶: This is an economic forum of 19 countries plus the European Union, of which the finance ministers and Central Bank governors endeavour to meet at least once a year. In contrast with the G7 (formerly G8 until Russia was asked to leave in 2014), the G20 tends to reflect wider interests than only those of the member-countries. The G20 has no permanent secretariat, but may rely on the resources of the International Monetary Fund and the World Bank. In 2015, under Turkish mandate, the G20 published a strategic document to promote food security which I will consider for the CDA.

UK Government Office for Science (UK Science Office): This is the research department of the government of the United Kingdom, which provides science-based policy advice to government, in particular the Prime Minister and members of the Cabinet. They publish a wide number of reports destined to support decision-making by policy makers and other professionals and researchers. In 2011, the Office for Science published their comprehensive strategic vision for the future of food and farming, based on the testimony of several hundred experts and interested parties from across the world and more than 100 peer-reviewed what they call "evidence" papers. The project was sponsored by the Department for Environment, Food and Rural Affairs (Defra) and Department for International Development (DFID). Its stakeholders, influential in terms of strategic direction and the shaping of conclusions⁷, included representatives from the UK government, from a range of supranational

5 World Economic Forum, New Vision for Agriculture, available: <https://www.weforum.org/projects/new-vision-for-agriculture/> (accessed 12 July 2016).

6 Description of the G20 on the European Commission website, available: http://ec.europa.eu/economy_finance/international/forums/g7_g8_g20/index_en.htm (accessed 10 August 2016).

7 High Level Stakeholder Group of the Foresight project, available: <http://webarchive.nationalarchives.gov.uk/20140108135805/http://www.bis.gov.uk/foresight/our-work/projects/published-projects/global-food-and-farming-futures/high-level-stakeholder-group> (accessed 23 August 2016).

organisations (including trade-oriented organisations such as OECD, WTO, and World Bank), from large corporations, such as Unilever and Cargill, and influential philanthropists, such as the Gates foundation, which is doubly represented through the Alliance for a Green Revolution in Africa. Only three representatives for farmers were invited, but none of them came from small-scale farmers, while for most of the project there was no representative from civil society. One of the lead scientists had previously been head of R&D at the biotech and chemicals corporation Syngenta. Taking into account this kind of member profile, it would have been difficult to avoid conflicts of interest, but since this was a publicly funded project, the project leaders would nevertheless have had to make an effort to balance the information, which is why this report is an interesting addition to the CDA.

UN Special Rapporteur on the Right to Food 2008-2014, Olivier de Schutter (UN Special Rapporteur): Prof. Dr. Olivier de Schutter was probably the first UN bureaucrat to openly embrace the concept of agroecology, and to have no qualms as to criticise the corporatisation and industrialisation of agriculture, as well as to denounce the damaging consequences of an increase in intellectual property rights on food-related resources. On account of his position, de Schutter had to provide strong evidence for his view on the excesses of the modern food system and for the alternatives he was proposing. His position demanded that he defend the right to food as objectively and independently as possible. I therefore consider him to be an excellent intermediate voice (to call him neutral would be fallacious), capable of reasoning without the burden of certain alliances (whether with industry or with social movements). I included his final report to the Human Rights Council: *The Transformative Potential of the Right to Food*.

La Via Campesina (LVC): This international movement comprises 164 local and national organisations in 73 countries, representing over 200 million small-scale farmers⁸. Founded in 1993, La Via Campesina has already managed recognition as a food actor by, inter alia, the EU, FAO, and the UN Human Rights Council. The movement proclaims food sovereignty—a term coined by them in 1996 and which I first presented in Chapter 2—as its main goal, and has managed to get other interest groups, several institutions, and several governments, to

8 La Via Campesina, description of the organisation, available: <https://viacampesina.org/en/index.php/organisation-mainmenu-44> (accessed 8 August 2016).

adopt the term in lieu of, or complementary to, the less proactive concept of food security⁹. The movement denounces a corporate-led political economy, in particular in agriculture and food, which it aims to show harms people and Nature. Conversely, its members defend "small-scale sustainable agriculture as a way to promote social justice and dignity"¹⁰. La Via Campesina regularly publishes a variety of newsletters, policy briefings, and reports. I chose their 2014 report of Via Campesina's Sixth International Conference, in which they sum up their concerns and their view of the way forward in helping transform the world's food systems.

International Forum for agroecology, Nyéléni 2015: The international movements and alliances of "small-scale food producers and consumers, including peasants, indigenous peoples, communities, hunters and gatherers, family farmers, rural workers, herders and pastoralists, fisherfolk and urban people" (Nyéléni 2015 declaration) that gathered at this international meeting issued a joint declaration that sums up their opinion of the modern food system and its challenges, and presents their vision for healthy and fair food systems. With a larger constituency than LVC, their declaration is a useful complement to understanding the discourse of the peoples organised to oppose the large institutional food actors (in particular the trade-oriented ones, such as WB, WEF, and G20).

CAP - Portuguese Farmers Confederacy: This confederation of approximately 250 farmers organisations from different sectors was founded in 1975. CAP is generally considered to lean to the political Right as well as towards larger and more business-focused farm organisations, whereas its counterpart, CNA (National Farmers Confederacy), publicly claims to defend small and family farmers and represents the social movement La Via Campesina in Portugal. CAP recently published a summarised policy document with their vision for agriculture, called Vision 2020.

9 At the World Food Summit in 1996 food security was defined as follows: "Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life."

10 La Via Campesina, description of the organisation, available:

<https://viacampesina.org/en/index.php/organisation-mainmenu-44> (accessed 8 August 2016).

Designing a Critical Discourse Analysis of prominent food actors

The methodology that I employed, as I mentioned before, is inspired by three discourse specialists (Fairclough, Van Dijk, and Dryzek) as well as two case studies in the same field as I am analysing (Johnston and Drummond). The steps I took are the following:

1. A reading and re-reading of the texts to familiarise myself with the themes, language style, and narrative strategies.
2. Highlighting excerpts of text (statements) that exemplify different themes or narratives, looking in particular at the arguments for these themes, narratives or discourses, contradictions, paradoxes, apparent omissions, specific narrative styles that aid in argumentation, and the repetition of certain terms.
3. Classifying statements according to the themes identified, relating or contrasting statements from the same themes, identifying key assumptions and common narrative strategies, asking how the food actor is validating his or her "version of truth", identifying the social relations and/or social order that are implied by the discourse, identifying when possible the performance mode and intentions behind the discourse.
4. Situating the texts in their larger context and comparing the themes encountered with the narratives previously identified in the chapter on political economy, as well as the analysis of the food system and the review of similar case studies, so as to tease out the world view and social perspective that is inspiring the discourse. Comparing the themes from the different actors and if necessary relating them to supporting texts.
5. Associating the results of the discourse analysis with the attributes for democratic quality compiled in Chapter 3. For this final part, I directed the ecological-democratic assessment questions that I presented in the introduction to Part 2 at the summarised results from the discourse analysis.

The preliminary analysis revealed approximately 200 words that were either used frequently, used in key arguments, and/or used in very different ways by different actors. I then grouped these words in clusters of themes or categories, to be able to obtain a meaningful comparative analysis. The main clusters were:

1. What makes up the food system? The elements of the food system that are either recognised or constructed by the food actors and key assumptions they hold about these;
2. Who are the agents of the food system? The entities or groups that each of the food actors recognises in the food system, the motives they attribute to them, and the social order they construct from the agents and their motives.
3. What are the threats? The threats, challenges, and difficulties recognised by each of the food actors and the arguments behind their choices.
4. What are the solutions? Key solutions championed by each of the food actors and respective argumentation.
5. The key narrative strategies and versions of truth. A recapitulation of the core narratives in each of the discourses and an analysis of their argumentation, paying specific attention to omissions, paradoxes, and contradictions.
6. The democratic implications of the different discourses in food politics. What are the democratic assumptions that each food actor is operating under and how do these contribute to or detract from the possibility of a food democracy?

As much as possible, excerpts from the texts or other proof will be provided alongside the analytical judgments. At the end of the chapter, Table 3 summarises how the global food polity as a whole as well as each of the food actors was found to score on the four dimensions of democratic attributes.

Results of the Critical Discourse Analysis

What makes up the food system? The entities recognised in the food system and key assumptions about them.

While there appears to be agreement among all the food actors on some of the main elements and characteristics of the food system, in particular the existence of an environment that merits conservation and of an agricultural production system that needs to become

sustainable; the importance of healthy soil, water, biodiversity, and climate; and the existence of a global food system as well as global food actors, there are some striking differences upon closer inspection. The food actors from the social movements and those that defend the right to food, La Via Campesina (LVC), the organisations united in the Nyéléni declaration, and the UN Special Rapporteur for the Right to Food (UN Rapporteur), refer to living elements such as plants and seeds, in particular traditional plants and landraces, as entities in their own right, whereas the other actors, besides mentioning them very infrequently (the World Economic Forum (WEF) and G20 reports have no mention of plants), include them mostly as elements, or as ingredients of the agricultural production and trade packages, in which they also include soil, water, and ecosystems. Thus the Nyéléni organisations speak of "building life in the soil, recycling nutrients, the dynamic management of biodiversity and energy conservation at all scales", whereas FAO (2016a, 22) says "(w)e develop effective science-based standards for food safety and plant health and develop national capacities for implementing these standards and animal health requirements", and the WEF (2016, 29) sees seeds merely as "yield-enhancing products". The social movements and the UN Rapporteur are also the only food actors that speak of "commons" in the food system, not only in the old English sense of "land held in common", but in the sense of common property of finite resources. The organisations behind Nyéléni (Nyéléni 2015 Declaration) claim that "(c)ollective rights and access to the Commons are fundamental pillars of agro-ecology", whereas the UN Rapporteur (2014, 21) asks to "(r)espect the rights of special groups, such as indigenous peoples, fisherfolk, herders and pastoralists, for whom the protection of commons is vital". The supranational agencies have interiorised the idea of improving land-holding by smallholder farmers, especially women, but the way they wish to go about this still fits in with the dominant view of private property. They have no proposals or language for commonly held land or resources. They agree with more access to essential resources, but not with the management of these resources by the people that need them the most, nor with the exclusion of the more powerful agents from these resources. The idea is to improve the status quo, as patent in FAO's statement:

We support the empowerment of smallholders (farmers, fishers, indigenous peoples, foresters) and family farmers for improved access to and sustainable management of natural resources, better access to markets, technologies and services to increase their productivity and income generation. (FAO 2016a, 23)

Resilience as a desired characteristic of food systems has clearly entered the lexicon of supranational agencies, used most profusely by the World Bank (38 mentions), but also to a considerable extent by FAO and to a lesser extent by the UN rapporteur. FAO extends the meaning of the term to all manner of aspects of the food system: resilience to natural disasters, resilience of livelihoods, people, and ecosystems, or in general "resilience to threats and crises" (2016a, 15). Even though resilience is one of the three strategic pillars of the World Bank's proposal for a Climate-Smart system—i.e. "ensure the food system is productive, resilient, and contributes to tackling climate change" (WB 2015, 4)—no definition is offered and it is not clear how it will be measured. Likewise, the UK Government Office for Science (2011, 9) uses the term very generically, speaking of "resilience to shocks and future uncertainties". The social movements do not appear to share the institutional food actors' fondness for the concept of resilience. The characteristics that they would like to see in a food system are more sociopolitical than technical in nature: ensuring basic rights (such as to food and resources), the freedom to choose food policies and production systems, and an end to the commodification and privatisation of agricultural resources. That's why in LVC's report (2014, 8) we can find the following cry for freedom:

Freedom! Even though most nations have gained independence, the people, especially peasants, have not enjoyed their independence or their basic rights. They and the earth are suffering because of the greed of neoliberalism. I hope that those who fight in their villages, who have joined the progressive peasant movements under La Via Campesina, will bring the real independence for all and people peasants in the world. (H.S. Dillon, Special Envoy for Poverty Alleviation to the President of the Republic of Indonesia)

Similarly, the UN Rapporteur (2014, 3) asks to ensure "a fuller realization of the right to adequate food" and "that the freedom of choice of small-scale food producers is truly respected" (Ibid., 12). Elements that are given prominent places in the more technocratic approaches of supranational agencies and the UK Science Office—such as ecosystems, biodiversity, emissions, and the generic objective of sustainability—are absent or attributed less importance in the versions of the representatives of the social movements and the UN Rapporteur, to whom the manner in which resources are steered and distributed are paramount. Conversely, matters of rights and power imbalances in the food system are largely ignored in the reconstruction of the challenges for food systems by the supranational and UK agencies, although the latter do recognise issues of equity, especially hunger and rural poverty. But their discourse is very pragmatic. Thus the WB (2015, 11) worries that "(w)e

cannot achieve food security without preserving the ecosystem services that forests provide" and the G20 (2015, 3) believe that a "key element in any long-term, sustainable solution is investment in increasing the productivity and resilience of developing country agriculture". The UN Rapporteur presents a unique version in that he adopts the lexicons of both the supranational agencies and the social movements.

Nature as an element or entity is ignored by all supranational agencies including the Special Rapporteur, as well as by the UK Science Office. Instead, they have embraced a more prosaic concept: that of ecosystems, which has become popular with the rise of systems theory and environmental modelling. FAO (2016a, 11) places ecosystems at par with people and communities: "(e)nhancing the resilience of people, communities and ecosystems". The trade-oriented food actors use the term more sparingly, whereas the UK Science Office, the report of which was based on hundreds of peer-reviewed articles, uses the term abundantly but exclusively in the context of what these ecosystems can provide humans or the food system with: "(u)nderstanding the economics of ecosystem services is a very active area of current research and incorporating the true costs (or benefits) of different productions systems on ecosystem services is a powerful way to incentivise sustainability" (UK Science Office 2011, 35). LVC and the organisations behind the Nyéléni declaration prefer to speak of Nature, to whom they attribute proper status and rights, naming her as a victim of the threats that face the food system: "(t)he current development model that prioritizes benefits to corporations over the lives of people and respect for Nature is leading us to the destruction of the planet" (LVC 2014, 25). Interestingly the term Earth as an entity is used by two very different food actors, LVC and the organisations gathered in the Nyéléni declaration, and the UK Science Office. But the latter's use is closer to how earth scientists and environmental engineers describe the object of their research ("(h)uman activities have now become a dominant driver of the Earth system" (UK Science Office 2011, 13), whereas the social movements elevate the Earth to more than a system or combination of systems, transforming it into an entity in her own right, more specifically a feminine entity, deserving not only of care or of respect, but of legal status. To defend this important entity, social movements ask that the United Nations adopt a Universal Declaration of the Rights of Mother Earth (LVC 2014, 14).

Nutrition as a desired outcome of the global food system has now been fully recognised by governments and supranational agencies, and has been enshrined in the 2014 Rome Declaration on Nutrition¹¹. It is therefore not surprising that nutrition is mentioned at par with food security in most of the documents of these organisations. It appears as an extension of food security, a recognition that food systems must not only supply food for all, but, as FAO (2016a, 29) reminds world leaders, must be able to provide nutritious diets available to all people. Nutrition has gradually been attributed the same weight as environmental and economic needs. However, the commitment to improving nutrient content in food varies across actors, as do the policies they recommend to achieve nutrition. The social movements embed nutrition within a demand for food sovereignty—i.e. the right to decide their own nutrition—and the UN Rapporteur takes care to detail the causes of malnutrition—among them the emphasis on high yields of a narrow choice of cash crops, which provide calories but not necessarily nutrients (2014, 6)—and proposes to focus on peasant-based strategies to invert the situation, because, he says "(d)iverse farming systems contribute to more diverse diets for the communities that produce their own food, thus improving nutrition" (2014, 9). In contrast, FAO avoids committing to any particular strategy, and what I will call the "trade hegemonic bloc"—the WB, G20, the UK Science Office and the WEF—appear to have simply extended the term food security to "food security and nutrition", without any specific strategy for improving the nutritional aspect of food. There is some indication that the latter believe improving food security will automatically improve nutrition: "(b)etter nutrition resulting from improved food security in turn strengthens the human resource base and human capital and also improves productivity, growth, and employment generation" (G20 2015, 5). The WB uses nutrition haphazardly, sometimes referring to animal feed, sometimes to human food, and sometimes to fertilisers (plant nutrition). Besides the UN Rapporteur, who offers very detailed strategies, FAO is the only supranational agency to discuss the nutritional content of food security initiatives.

11 We can read on the FAO website: "The Rome Declaration on Nutrition enshrines the right of everyone to have access to safe, sufficient and nutritious food, and commits governments to prevent malnutrition in all its forms. The Framework of Action recognizes that governments have the primary role and responsibility for addressing nutrition issues and challenges." Available: <http://www.fao.org/about/en/> (accessed 9 September 2016).

There is also a marked difference between food actors in how agricultural produce or food is referred to. It has become common among institutional food actors to speak of "commodities", which is a typical trade term. In fact, agriculture has been—as good as possible in light of its multifunctional and, as seen in earlier chapters, "recalcitrant" nature—integrated into global markets, explaining why the UK Science Office (2011, 23-24) has no qualms about equating agricultural produce with merchandise or commodities, i.e. something that only has value when sold:

Improving the functioning of commodity markets can reduce the element of volatility that does not reflect underlying market fundamentals. Well-functioning markets require access to accurate information – information on international production and the size of commodity stocks is generally poor and in some cases deliberately withheld. The incorporation of commodities in more complex markets and over-the-counter traded derivatives, and the effect of automatic computer trades need to be explored further. Also, the effects of these issues, if any, on excess volatility should be explored to determine if action is needed by policy-makers.

The definition of agricultural raw produce as commodities is part of a high-value trade-inspired lexicon that also groups the more lucrative agricultural activities (so-called cash crops such as wheat, maize, rice, cotton, sunflower seeds, and tomatoes) into "value chains", one of the WEF's favourite words—repeated 42 times, an equivalent of once per page, while never actually defined. Value chains (besides systems, whether ecosystems, food systems, or financial systems) appear to be the preferred form of organising agriculture, with WEF (2016, 7) convinced that "stakeholders can develop stronger value chains and systems that lead to improved outcomes at each stage of food production and consumption" and the WB (2015, 22) claiming that growth in their three pillars of climate-smart agriculture can be achieved by a "focus on sustainable intensification across systems and value chains, underpinned by strategic investment in agricultural science and technology". On the contrary, the social movements and the UN Rapporteur reject this compartmentalisation of food and agriculture. They are keen on reclaiming the essential resources needed for farming—including reproductive resources such as seeds—as part of local and global commons, instead of as products put up for trade in global, extremely competitive markets. When they use the term "commodification" it is to express their disagreement with a mercantilist view of farming and food. Thus we can read in the Nyéléni Declaration:

The corporate model over-produces food that poisons us, destroys soil fertility, is responsible for the deforestation of rural areas, the contamination of water and the acidification of oceans and killing of fisheries. Essential natural resources have been commodified, and rising production costs are driving us off

the land. Farmers' seeds are being stolen and sold back to us at exorbitant prices, bred as varieties that depend on costly, contaminating agrochemicals. The industrial food system is a key driver of the multiple crises of climate, food, environmental, public health and others.

The use of synthetic chemicals in agriculture is another disputed characteristic of the modern food system that pits the supranational agencies and the food industry against the social movements and the UN Rapporteur. Whereas the former two types of food actors largely avoid referring to chemicals, or even to the milder terms fertilisers and pesticides (with the exception of the UK Science Office, of which the more technical report delves into agronomic details), the social movements and the UN Rapporteur denounce the use of synthetic chemicals in agriculture, even coining their own words for them: “agro-chemicals” and “agro-toxins”, making sure to associate their use with larger-scale agriculture.

Risk appears to be an important characteristic of the food system that is recognised by all the supranational agencies and by the UK Science Office and WEF. The G20, FAO, and the WB repeatedly refer to risks of climate change, natural disasters, and disease, with the G20 additionally referring to risks for investment, and price risks. Risks are generally assumed to be quantifiable and manageable through risk monitoring and financing. Following this reasoning, the WB (2015, 20) states :

Modern parametric approaches to risk quantification and monitoring have led to the development of insurance type products that have the ability to manage risk more efficiently, especially at the aggregated (for example, banks) level, and that can be used to reduce the cost of finance for farmers. Increasingly, countries are introducing risk financing approaches and products that will enable the catastrophic layer of loss from events such as floods and droughts to be managed by government and enable compensation to flow to farmers—for example, the Africa Risk Capacity initiative.

Likewise, the UK Science Office (2011, 11) reduces decision-making about new technologies to a decision about competing risks :

Decisions about the acceptability of new technologies need to be made in the context of competing risks (rather than by simplistic versions of the precautionary principle); the potential cost of not utilising new technology must be taken into account.

This organisation assumes even future risks can be managed or hedged against: “[c]areful assessment of the implications of these drivers is essential if major pressures are to be anticipated, and future risks managed” (Ibid., 13). Even though the UK Science Office admits to “shocks and future uncertainties” (Ibid., 9), at the same time it advances the idea that these can be controlled, that it is a question of using “futures techniques to embrace the many

uncertainties inherent in the future, and to identify choices that are resilient to a range of outcomes" (Ibid., 11). In contrast, the UN Rapporteur (2014, 8) criticises what he calls "a narrow focus on improved productivity risks ignoring the wide range of other variables that foresight exercises should take into account" and introduces under-discussed risks such as those of falling into poverty and those associated with international trade (Ibid., 17 and 26). In a similar vein, LVC's (2014, 11) version of risk is linked to the choices of the agro-industry and their financiers: "[t]he financial crisis was led by unregulated private banks that engaged in risky financial choices and destabilized entire economies resulting in massive debts" . Contrary to the trend in ecological science, as well as to a certain degree in ecological economics, to move beyond the concept of risk to the recognition of uncertainties or even gaps of ignorance in our knowledge—which would encourage a more holistic, ethics- and peoples-based approach to decision-making in critical areas of human activity—the international food actors under study here, with the exception of the UN Rapporteur and the social movements, continue to uphold a riskmanagement-based approach.

Finally, the concept of markets in the food system is a recurrent theme and recognised by all the food actors. However, the role they attribute to this element and to the trade activities conducted within it varies significantly. Thus, the more trade-oriented food actors—i.e. the WB, UK Science Office, the G20, and the WEF—view markets as more than elements, as quasi-organisms that are essential to the global food system and that self-organise to generally positive effects, needing but a few corrections occasionally to ensure that their functioning also benefits more vulnerable groups. Thus, the WEF (2016, 4) states: "(m)arket-based approaches, while not the only answer, will be an important tool in the “toolbox” to drive change – providing the efficiency, scalability and marketbased incentives to power a large-scale effort". The UK Science Office (2011, 19) professes its faith in the ultimate equitability of a global system of trade, claiming "(f)ood security is best served by fair and fully functioning markets and not by policies to promote self-sufficiency" and warns that "allowing sustainability to be reflected in trade rules may lead to environmental protectionism" (Ibid., 20). Even FAO (2016a, 23), despite its openness to more equitable solutions, continues convinced of the merits of global trade, offering their assistance in the following manner: "[w]e help countries to participate more fully in global and regional markets through enhanced trade". The UN Rapporteur (2014, 11) disagrees, stating instead that "the expansion

of trade also has resulted in the luxury tastes of the richest parts of the world being allowed to compete against the satisfaction of the basic needs of the poor". Meanwhile, FAO is helping to run the Agricultural Market Information System (AMIS), launched by the G20 in 2011 as a way of monitoring agricultural commodity markets. This system, although helpful as a warning tool for rising food prices, does not look beyond commodities. LVC (2014, 24) will have none of what they consider false market-based solutions such as the green economy¹² or carbon markets, demanding that "the WTO, FTAs and the World Bank are removed from agriculture". Essentially they are asking exactly the opposite of what the UK Science Office wants: to promote local trade and self-sufficiency in food production for countries in the Global South, rather than a focus on global trade that will have countries specialise in a narrow range of cash crops.

Who are the agents of the food system? Recognition of key agents, their motives and relationships.

Statistically speaking, after consumers, farmers and other food providers such as pastoralists or fishers, are the largest interest group in the food system. It is estimated by FAO (2012b) that there are around 570 million farms worldwide, of which the majority (90 percent) are family farms, and that there are approximately 1.5 billion smallholders (including forest keepers and fishers) in the Global South, while a total of about 2.5 billion people live directly from food-providing and agricultural sectors. Nearly half of the agricultural work force is made up of women. Depending on the region, smallholder farmers may provide up to 70 percent of domestic food needs. They are an important part of rural and/or indigenous communities that are still an important form of social and economic organisation in the Global South.

12 The United Nations Environment Programme (UNEP) defines the green economy as "one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities". Available: <http://web.unep.org/greeneconomy/what-inclusive-green-economy>

To this LVC responds that "(t)he green economy does not seek to put an end to climate change or environmental degradation. Instead, it looks to generalize the principle that those who have money can continue to pollute". Available: <https://viacampesina.org/en/index.php/actions-and-events-mainmenu-26/-climate-change-and-agrofuels-mainmenu-75/1707-environmental-and-climate-justice-now-position-paper-of-la-via-campesina> (both sites accessed 23 September 2016).

These facts are not reflected in the same manner in the discourses from the nine food actors. Whereas the social movements, the UN Rapporteur, and to a considerable extent FAO, give the agents *farmers, women, (local) communities, and indigenous communities* the appropriate weight according to their place in the food systems, the WB and the WEF grant a prominent place to farmers but almost completely neglect women, whereas the G20 and FAO give more attention to women than to farmers in general (which in this case may be considered positive discrimination). The UK Science Office prefers to refer to the broader group of *food producers* and finally, CAP (the Portuguese farmers' association) speaks of *producers* as much as *consumers*, while only mentioning farmers twice, and also ignoring women. The UK Science Office (2011, 9) appears to attribute agency to the food system itself, as patent in their statement: "[t]he global food system will experience an unprecedented confluence of pressures over the next 40 years". They explain that they see the food system as "a partially self-organised collection of interacting parts" (Ibid., 10). In their view it is the food system, and not necessarily any specific groups or people, that needs to adapt to climate change and continuing globalisation. The advantage of conceiving of an agent that is independent from all the interest groups in the food system is that all manner of "one-size-fits-all" solutions can be applied to it, while it is possible to ignore the conflicts of interest or deeper causalities.

Other agents that are mentioned in some or all of the reports in very different degrees are partner(ship)s, leaders, stakeholders, business, companies, youth, civil society, peasants, migrants, and gender. I will next go into detail for some of these agents, highlighting how their presence subtly illustrates the different ways that the different food actors understand the social and economic order.

The only actors to refer specifically to peasants, rather than farmers or food producers, thereby deliberately creating a class—the peasant class, which includes subsistence farmers, family farmers and rural workers—are the social movements and the UN Special Rapporteur. This overtly political word is non-existent in the lexicon of the other food actors. Additionally, the social movements and the UN rapporteur provide a picture of diversity when speaking of the smallholder producer, who is the main beneficiary of their demands. They speak not only of peasants, but of artisanal fishers, pastoralists, indigenous peoples, and even urban farmers. They take care to exclude agricultural businesses, which they see as either drivers (in the case

of large corporations) of the global, mechanised, and *chemicalised* food system, or as having been co-opted into the industrial food system. Farming for livelihood, in their view, has not only been neglected but also directly threatened by the push for industrialisation, for privatisation—of natural resources but also of knowledge as seen in the previous chapter—and by the cutting off of access of peasants to land and other resources for their livelihoods. Farmers are, however, not only victims, but rightful and important food actors who can be self-reliant and help feed the world, if given the chance. This view of the farmer is not corroborated by the supranational agencies and the trade-oriented food actors. The WB, the G20, and the UK Science Office, and to a lesser extent FAO (with a direct mission to help smallholders and the rural poor), conceive of the smallholder farmer as a failed entrepreneur who needs help, in the form of science- and technology-based knowledge, capital, and access to markets, and who must learn to manage his or her "investments" and "risks" to become more "competitive" and thus see "income increases" (G20 2015, 11). While the farmer is expected to become more efficient and productive, family members of the farmer are invited to procure "better-paying off-farm work" (Ibid.). Although farmers can undoubtedly benefit from learning proven methods to increase their productivity and protect themselves from harvest losses, the view of the farmer as an "agropreneur" (FAO 2016a, 14) is ignoring or simplifying the rural reality in most countries in the Global South. As the UN Rapporteur (2014, 6) reports:

Finally, because global food systems have been shaped to maximize efficiency gains and produce large volumes of commodities, they have failed to take distributional concerns into account. The increases in production far outstripped population growth during the period from 1960 to 2000. But these increases went hand in hand with regional specialization in a relatively narrow range of products, a process encouraged by the growth of international trade in agricultural products. The associated technological and policy choices concentrated benefits in the hands of large production units and landholders at the expense of smaller-scale producers and landless workers, resulting in the growth of inequality in rural areas and a failure to address the root causes of poverty.

He tells a different story: of how smallholder farmers have not only been discriminated by the agricultural development model born out of the Green Revolution, but actively harmed, through the loss of lands and of access to resources and national markets, maintaining billions of people in abject poverty (UN Rapporteur 2014, 11). Farmworkers can "barely survive from their labour on large plantations" and often trade their rural poverty for an urban slum (Ibid.). Despite the fact that the other food actors recognise the crucial importance of improving the conditions of the rural population and of smallholder farmers as a buffer against hunger and

poverty, and against rural migration (see for example the case studies in FAO 2016a, 19), they insist on their focus on industrialised and mechanised farming and on productivity gains, which they believe will automatically improve rural lives. The G20 (2015, 9) goes as far as to claim that the blame lies partly with farmers' lack of entrepreneurial instinct:

Risk aversion hinders the adoption of new technologies and practices that may have long-term benefits for the individual farmer and for overall sustainable productivity growth. Small family farms may choose lower return crop and livestock production options over more technology and input-intensive options. The threat of shocks, either general (such as droughts) or farm-specific (such as a crop failure) increases their financial risks and makes smallholders reluctant to access credit markets – when these are available and accessible, which is not always the case – due to the consequences of an inability to repay.

The UK Science Office's recognition that value in agriculture is added "beyond the farmgate" does nevertheless not result in any recommendations to improve the remuneration and security of farmers, beyond helping the poorest of their number. The idea of protecting only the very weakest, while insisting all others should be entrepreneurs, is a classical conservative liberal approach, which appears to be what has inspired the UK Science Office report. Farming in this view is seen as unavoidably linked to the food industry, which is then linked to global trade, which in turn requires the specialisation of countries in a small number of commodities that other countries need. Locally oriented solutions, such as producing food exclusively for the region or country, or even diversifying food crops, are explicitly frowned upon: "[t]his Report rejects food self-sufficiency as a viable option for nations to contribute to global food security, but stresses the importance of crafting food system governance to maximise the benefits of globalisation and to ensure that they are distributed fairly" (UK Science Office 2011, 13). In other words, the food system, albeit recognisably unfair and keeping half of the world population in poverty, is not to be changed, but simply managed to avoid the worst inequities. Likewise, the Portuguese Farmers Association (2015, 46-47, my translation from the original Portuguese) presents a picture of a (probably) male agricultural businessman who contributes to the development of rural regions and the wealth production of his country by "maintaining and diversifying economic activities associated with agro-forestry", which include modernising, scaling up, increasing productivity, and attracting national and foreign investment.

Migrants are an undeniable interest group in the food system, with on the one hand an estimated three million people moving from rural areas to cities every week—accounting for

more than a third of the population in large gateway cities such as Sydney, London, and New York¹³—and on the other hand, migrant workers becoming a common feature in agriculture (in China alone there were 230 million rural migrant workers reported in 2009¹⁴ whereas in the USA, an estimated 70 percent of farm workers are Mexican-born¹⁵). Considering that farm workers are already recognised as a particularly vulnerable group that lacks work- as well as social protection, and who are among the lowest-paid workers, migrant workers are doubly vulnerable because they lack any form of social safety net that their family or community might have provided. Nevertheless, this interest group is largely ignored by the institutional food actors. In contrast, the social movements have embraced this agent as an underclass alongside the peasant, with LVC (2014, 10) dedicating a chapter to migration, stating: "The peasants and migrants struggle are not very much apart. With land grabbing, a number of peasants end up as migrant workers". In LVC's view, migration is "the site of struggle in which many separate issues intersect – labor and human rights, gender issues, climate, and many more" (Ibid., 22). It is both a consequence of an inequitable and industrialised food system, as well as a source of increased poverty and injustices, because of the extreme vulnerability of this group. The out-migration of men additionally creates imbalances in communities, which in some cases are constituted up to 70-90 percent of women (Ibid.). It is therefore surprising that FAO, which has studied the migration phenomenon and the consequent "challenges and opportunities for food security, sustainable agriculture and rural development"¹⁶, does not include migration or rural migrant workers in its prognosis for sustainable development. The WB and G20 make no reference to either rural-urban or rural work migration. The UK Science Office does make a reference to male out-migration as a problem, but does not discuss causes, implications, or other vulnerabilities of the rural migrant worker group. The UN Rapporteur is the only institutional food actor in this sample

13 International Organization for Migration, World Migration Report 2015, available:

http://publications.iom.int/system/files/wmr2015_en.pdf (accessed 30 August 2016).

14 International Labour Organization, Labour migration in China and Mongolia, available:

<http://www.ilo.org/beijing/areas-of-work/labour-migration/lang--en/index.htm> (accessed 30 August 2016).
Note: a migrant here is considered to be both domestic and international.

15 Migration Policy Institute, 2013 publication on farm labour markets, available:

<http://www.migrationpolicy.org/research/ripe-change-evolving-farm-labor-markets-united-states-mexico-and-central-america> (accessed 30 August 2016).

16 FAO, Migration, available: <http://www.fao.org/rural-employment/work-areas/migration/en/> (accessed 31 August 2016).

of reports to fully recognise the migratory trend and include migrants as a vulnerable interest group, although he does not expand upon specific migrant concerns.

Women as agents in their own right are championed by LVC and to a considerable extent by FAO and the G20. In the twenty-first century, the important role that women play in the local food systems that feed the majority of the world's population has been officially recognised, and the fifth goal of the brand-new Sustainable Development Goals of the United Nations is to achieve gender equality. The commitment to improving women's access to resources—whether natural resources such as land, or financial resources—is patent in both FAO's and the G20's report, while recommended in the UK Science report. The WB has no mention of women's role, or women at all for that matter, which is an important oversight—even though on their site it becomes apparent that the WB does work on gender equality and women empowerment, leaving this factor out of a flagship report is not a good sign of their commitment—while the WEF mentions the aim of women's economic empowerment as part of the description of one of its projects, but does not grant it status as a strategic objective. The UN Rapporteur (2014, 18) is a strong supporter of women's empowerment:

Because gender-based discrimination violates the right to food of women and girls, the empowerment of women and gender equality, as well as the adoption of social protection schemes that are transformative of gender roles, should be a priority of such strategies. Enhancing the role of women in decision-making at all levels, including within the household, moreover, improves nutritional and health outcomes.

He insists that in order to strengthen the protection of the right to food of women, states must "(m)ainstream a concern for gender in all laws, policies and programs, where appropriate, by developing incentives that reward public administrations which make progress in setting and reaching targets in this regard" (Ibid., 25). LVC not only promotes gender equality and women empowerment, but actually applies gender parity in its organisational structure. In a similar vein, involving youth—a critical interest group to revitalise rural communities—in decision-making over food, is a priority for LVC, while targeting youth with policies to improve access to resources for food production and improve livelihood opportunities is on both FAO's and G20's agendas. But the WB, WEF and UK Science Office are silent on the matter. Finally, indigenous people as agents are recognised by FAO and actively supported by LVC, but appear to be a non-issue with the other food actors.

All the actors recognise governments, the private sector, and civil society as separate agents, but they differ in how they see these agents relate. The supranational agencies and the business sector have embraced the term "partnership" as an alternative or shortcut to government regulation or international agreements. This term has entered the global agreements lexicon this century, and has been persistent, replacing other approaches to co-governance of global affairs. FAO and the WB have embraced it, and it is even part of the motto of the new sustainable development agenda "people, planet, prosperity, peace, and *partnership*" as well as the 17th Sustainable Development Goal ("partnerships for the goals"). The supranational agencies possibly envision what FAO calls the "major groups", i.e. previously identified "stakeholders", partnering together: "all actors supporting countries in implementing and monitoring global goals must partner and share knowledge" (FAO 2016a, 6). But the WEF, which is especially enthusiastic about partnership—which is one of their top most used words, appearing over 300 times in their report—possibly thinks of public-private partnerships¹⁷ when employing the term. In their report, they explain partnerships should be "(m)arket-driven with projects led by the private sector and rooted in viable business cases" (WEF 2016, 3). The UK Science Office (2011, 35) is also a fan, claiming "(i)nterinvestment in infrastructure and capacity is needed at a scale which will be realised only by innovative new partnerships between governments, multilateral bodies and the private sector". Neither LVC nor the UN Rapporteur use the word partnership, possibly because they do not consider it conducive to a rights-based approach to food democracy, due to the fact that partnerships can bypass legislation, as has been shown with the creation of mechanisms such as the ISDS¹⁸. The use of the term partnership is often paired with that of stakeholder, as in "multi-stakeholder partnerships". The officially recognised stakeholders are governments, the private sector, civil society, and farmers' organisations. But in practice, as becomes clear from the case studies offered by the WEF (2016) and WB (2015), the stakeholders are governments, large international corporations—perhaps working with larger domestic companies in countries in the Global South, which are most often the target of these partnerships—

17 This term, referring to partnerships between governments and the private sector, was introduced into the lexicon of global agreements at the 2000 Johannesburg Earth Summit. Before that it was not common to let businesses lead environmental solutions.

18 Investor-State Dispute Settlement, a form of arbitration that bypasses legal courts, see the definition of the European Commission here: http://trade.ec.europa.eu/doclib/docs/2013/october/tradoc_151791.pdf (accessed 24 September 2016).

supranational agencies (often called donors), such as FAO and IFAD, regional or national farmers associations, and international NGOs—perhaps working with local NGOs. Farmers and citizens are not expected to have an independent voice, but are expected to get themselves represented by a large association or an NGO. The WEF (2016, 3) attributes more weight to the leaders of these partnerships than to the people represented through them: "(b)uilding a multistakeholder partnership is a journey, and partnership leaders continue to improve and refine their approach over time". It calls the key leaders of partnerships in agriculture "champions" and sees no contradiction in confessing that these "have most often been government officials or major private sector players, and these two groups are often most critical as starting points to mobilize additional players" (Ibid., 11). Thus a picture emerges of investment in agriculture in the Global South that is mostly led by large players. Even though there are undeniable benefits for a number of farmers, the solutions thought up for them by the WEF and the WB make them and their governments dependent on the money, goodwill, and opinion of a small number of powerful actors. One of the partnerships that the WEF mentions, for Tanzania, was led by the Minister of Agriculture and the Executive Vice-President of Unilever, while it was further "enabled" by international organisations such as USAID and the (mostly US) foundations behind the AGRA¹⁹ initiative. The partnership in Mexico joins two large national companies (Grupo Minsa and Grupo Altex) with corporate giants Nestlé and PepsiCo. And the project mentioned in Indonesia unites a large local company, Sinar Mas Agribusiness, again with Nestlé. Many of the projects thus create a captive source of raw materials for multinational agribusiness giants such as Nestlé, Monsanto, and Cargill, which can rely on governments to improve infrastructure for the transport of the raw materials, reducing cost and improving delivery times, while they are able to impose their own standards of quality by training the farmers directly. Since the WEF represents the interests of major corporations it is understandable, although not justifiable, that they would not reflect upon the power imbalances that their projects create. However, their "partners", especially the supranational agencies such as the WB and FAO, should be expected to protect the interests of vulnerable groups and countries. Even when corporations are not directly mentioned—the WB report avoids mentioning the names of private sector partners, although in one case study the name of the world's largest organic coffee producer

19 Alliance for a Green Revolution in Africa, of which the Bill and Melissa Gates Foundation is a prominent member.

Keurig Green Mountain came up—the focus is on globally replicable and largely top-down solutions developed in international research organisations such as GRA and CGIAR²⁰ (WB 2015, 21). One of the tools the WB promotes is that of the Climate Smart Agriculture (CSA) Country Profiles, which are led by international organisations. Since the "triple win" in CSA, according to the WB, is productivity, adaptation, and mitigation (rather than the more common interpretation of sustainability: social, economic, and ecological sustainability), the resulting profiles do not necessarily incorporate the social and cultural needs of the countries involved. The WB (2015, 18) is clear on the bottomline: "(f)armers need to see how they can sustainably 'make money, save money, or save time' before they are likely to change their behaviors, adopt new practices or invest in new technologies". Less clear, but still implicit, is the WB's belief (Ibid.) that public money should kick-start the investments in their CSA initiative:

Where the individual value proposition is weaker, public incentives should align to incentivize farmers and companies to invest in CSA. It will not always be the case that adoption of CSA will result in short-term individual returns and so, due to the public good nature of the triple win, public resources should be aligned to catalyze action on CSA.

Lastly, one powerful agent in the food system has the capacity to divide all the food actors: the corporation. The corporation is a business entity that exists separately from its owners, and is therefore different from companies held as sole proprietorship or as partnerships, and also different from the limited liability company. This distinction has become clearer over the years, with the increase of the average size and wealth of corporations to a point where they economically compete with small or even medium-sized countries. Although all the food actors recognise business entities as agents, they differ markedly in how they characterise them. Thus, the institutional food actors all prefer to refer to business in general, and to companies in particular, avoiding any reference to corporations or to the size of business players, whereas the social movements and the UN Rapporteur purposefully use the term agribusiness, corporation, and transnational corporation, to not only distinguish between small and medium-sized local businesses and the behemoths of the agricultural and food industry, but also to make their distaste for the practices of the latter known. The UN Rapporteur (2014, 14) states: "(t)he dominant position of the larger agribusiness corporations is such that these actors have acquired, in effect, a veto power in the political system", while

20 Respectively, Global Research Alliance and Consultative Group for International Agricultural Research.

LVC (2014, 19) maintains that "(t)ransnational [c]orporations are being legitimized through narratives around their so-called beneficial solutions to various problems which are just further profit-making initiatives" and does not hide that they are "fundamentally opposed to the domination of Transnational Corporations in the food system and in all the spheres of life" (Ibid., 19).

The threats, challenges, and difficulties recognised by each of the food actors and the arguments behind their choices.

Considerable progress has been made in the global recognition of the worst inequities of the modern food system. All the international institutional food actors recognise hunger and poverty as major challenges of the modern food system and adopt the eradication of both as their top priorities. After the moderate, insufficient advances made with the Millennium Development Goals that expired in 2015, governments and supranational agencies have dared to be ambitious: the first three Sustainable Development Goals for 2030 are: an end to poverty, an end to hunger, and good health and well-being for all. FAO already speaks of the ambitious idea of "zero hunger generation".

In third place after hunger and poverty, the trade-oriented organisations have elected greenhouse gas emissions (GHG) as a major concern: in the World Bank's report *emissions* is the second most frequent word, while the UK Science Office (2011, 9) stresses that "(t)he need to reduce greenhouse gas emissions and adapt to a changing climate will become imperative", and the WEF adopts an unexplained objective of a 20 percent reduction in greenhouse gas emissions by 2020. Conversely, the remaining actors prefer to speak of climate change rather than emissions (with LVC speaking of a climate *crisis*) and tend to balance this threat with others, such as biodiversity loss, soil degradation, and water stress.

Other threats that the institutional food actors tend to agree on are the growth of the world population, increasing urbanisation, changing diets as a result of a growing middle class, pressures on natural resources that are leading to a loss in biodiversity and a deterioration of ecosystems (including soil and water). FAO has the most complete narrative of all the institutional actors, clearly linking social challenges with economic and ecological ones:

A global food polity

Tackling hunger and malnutrition is not only about boosting food production, but also to do with increasing incomes, creating resilient food systems and strengthening markets so that people can access safe and nutritious food even if a crisis prevents them from growing enough themselves. (FAO 2016a, 6)

Across the globe, natural resources are deteriorating, ecosystems are stressed and biological diversity is being lost. Climate change poses an added threat to global food production. (Ibid., 10)

The trade-oriented food actors differ from FAO in that they tend to stress economic and ecological factors over social factors. Thus the WB focuses on the need to increase productivity, while avoiding climate shocks and reducing GHG emissions. The WEF focuses on the factor of population growth and environmental stress, and the corresponding need to increase production without increasing emissions. The UK Science Office tells the story as follows:

On the demand side, global population size will increase from nearly seven billion today to eight billion by 2030, and probably to over nine billion by 2050; many people are likely to be wealthier, creating demand for a more varied, high-quality diet requiring additional resources to produce. On the production side, competition for land, water and energy will intensify, while the effects of climate change will become increasingly apparent. The need to reduce greenhouse gas emissions and adapt to a changing climate will become imperative. Over this period globalisation will continue, exposing the food system to novel economic and political pressures. (UK Science Office 2011, 9)

Likewise, the Portuguese large-farmers' association identifies population growth, dietary changes, urbanisation, and climate change as the main global threats, to which it adds its own local threats, which are all economic in nature: the rise of production costs, a lack of added value in agricultural products, lack of research, complex regulations, difficulty in accessing global markets, and a lack of qualified middle to senior managers. Hunger and poverty, or even the precarious livelihoods of Portuguese farmers and farm workers, are apparently not a concern. Their report therefore reads more like a business plan.

Volatility is a curious threat that is exclusively identified as such by the UK Science Office. When mentioned, rarely, by the other food actors, it is considered to be a recent characteristic of food prices (FAO, UN Rapporteur, and the other trade-oriented food actors). But the UK Science Office uses the term 33 times in barely 40 pages, and also dedicates a full chapter to the topic, while it remains unclear how the word is operationalised by them. It is as much applied to price fluctuations as to other instabilities in food markets (oil prices, the amount of food stocks, food supplies, armed conflict, etc.). Even though the word volatility presupposes a lack of predictability, the UK Science Office still believes it is something that can be planned for, and included in a risk analysis, even if:

A global food polity

The number of factors affecting volatility and the levels of uncertainty associated with each make it very difficult to predict whether the magnitude of fluctuations in food prices will fall or rise in the coming decades. Although predicting future volatility is complex, there are several arguments suggesting that volatility may well increase in the future. Also, at least some food price spikes are inevitable. (UK Science Office 2011, 22-23)

Despite the fact that all the food actors generally converge on the identification of the main crises that humans face in their food systems, especially the well-documented ones, such as hunger, extreme poverty, biodiversity loss, soil degradation, water stress, and climate-change induced drought, they separate ways when it comes to pointing out the underlying causes for these crises. With the modest exception of the UK Science Office, none of the institutional actors nor the Portuguese large-farmers association speak of the—widely documented—side effects of a highly industrialised and *chemicalised* agriculture that has been put in place all over the world since the 1960s. Despite the fact that some of the impacts are obvious, especially the contribution to GHG emissions of a model that is highly dependent on fossil fuels, the threats are mostly referred to as if coming from nowhere in particular.

In contrast, the social movements and the UN Rapporteur understand the crises as the consequences not only of the industrialisation and globalisation of agriculture, but also of an even deeper underlying cause: the tremendous power imbalances in the food system. To them the real threats are the other food actors, in particular the transnational corporations from agribusiness, the governments of powerful and wealthy countries, and the supranational organisations where the former two actor groups often have a disproportionate amount of influence. The organisations united in Nyéléni denounce what they call the "corporate model" that "over-produces food that poisons us, destroys soil fertility, is responsible for the deforestation of rural areas, the contamination of water and the acidification of oceans and killing of fisheries" (Nyéléni declaration). LVC (2014, 11) claims the "current neoliberal economic system that favors the concentration of capital is the fundamental reason behind these crises". While for the institutional food actors, climate change is a problem in itself, for these social movements representing smallholder farmers climate-change is the *result* of the problem, which is "unfettered industrialization that is geared towards consumerism for the elite" (Ibid.) and a "development model that prioritizes benefits to corporations over the lives of people and respect for nature" (Ibid., 10). As I shall show in the next section, the solutions proposed by the the social movements are therefore quite different. Social movements see the

corporate model as a threat that bears other threats within it, among them the use of agro-chemicals, the use of biotechnology—in particular genetic engineering—the imposition of rules from the wealthier countries through the celebration of bilateral and multilateral free trade agreements, the privatisation of common natural resources such as land, water, and peasant seeds, the loss of biodiversity because of the promotion of a restricted number of cash crops, and the disparagement of peasant and indigenous knowledge (LVC 2014, 14). None of these events, with the exception of land-grabbing, appears as a threat or even as a concern in the reports of the institutional food actors, with the lone exception of the UN Rapporteur.

The latter, although choosing his words carefully, makes no qualms about calling the modern food system a failed system. He tells a very different story from the other institutional food actors. His review of the evidence leads him to conclude that, even though the productivist path that was taken after the Second World War led to yields that are superior to the demand, this increase has come at a high price. A global trade in agricultural products based on high-value inputs and cash crops led to the specialisation of countries and narrowed the total range of products. Countries in the Global South, under the effect of food aid and later of the influx of cheap subsidised products in their markets, rapidly moved from a trade surplus to a trade deficit, condemned to keep exporting cash crops to pay off their debts. The focus on monocultures, of which the productivity is boosted by agro-chemicals and intensive irrigation, resulted in the loss of agro-biodiversity, soil erosion, water pollution, and increased GHG emissions (contrary to the other institutional food actors, who advance the number of 25 percent, the UN Rapporteur attributes about a third of global GHG emissions to agriculture, because he adds emissions from the production of agro-chemicals and from transport). The UN Rapporteur is not completely alone in his critical assessment of the modern food system. Other multi-expert, more broadly participated reports, where industry was not allowed to have a vote like they were in the UK Science Office report, have concluded very similarly that industrial agriculture and the uneven representation of food actors at decision-making fora is at the heart of the multiple crises that humanity is facing (IAASTD 2009, UNCTAD 2013).

Finally, the social movements mention additional, worrying threats caused by the current food system that go unreported by the other food actors. Among these are violence against women, against migrants, and against food activists who protest the takeover or monopolisation of

resources by transnational corporations. Although FAO makes two mentions of violence against women, LVC registers it as a major concern, being the only one to denounce the disregard of corporations and governments for the underclass of the poorest peasants and farm labourers, as well as their capacity for violence against any people that stand in the way of their plans²¹.

What are the solutions? Key solutions championed by each of the food actors and respective argumentation.

The trade-oriented food actors under analysis, and to a certain extent FAO, appear to be the most optimistic about tackling the challenges they have identified, believing them to be largely transformable into opportunities by on the one hand increasing efficiency, and on the other promoting market- and technology-based solutions. The G20 reassures readers of its report (who are mostly other policy makers) that:

Mechanisms and instruments that promote responsible investment in agriculture and food systems are indispensable to achieve higher productivity, inclusive growth, poverty reduction and improved food security and nutrition, as they help ensure widespread access to investment opportunities and benefits, as well as the sustainability of social, economic and environmental impacts over time. (G20 2015, 3)

Some of these "mechanisms and instruments" are guidelines for management, others are continued research and international funding. All of them are guaranteed to be "efficient and market-based" (Ibid., 7) while they are all presented in a favourable light, despite the fact no solid evidence exists as of yet as to their effectiveness. The WB (2015, 4) is equally confident that it can offer its "client" countries a "large spectrum of approaches that deliver productivity and resilience gains alongside lower emissions". In general, the emphasis is on increasing productivity, efficiency, and predictability of the food system.

21 Examples:

The murder of activist Valmir Mota de Oliveira in Brazil, with suspicions of the corporation Syngenta's involvement, available: <https://viacampesina.org/en/index.php/main-issues-mainmenu-27/biodiversity-and-genetic-resources-mainmenu-37/441-syngenta-murder-and-private-militias-in-brazil>

The murder of activist Berta Cáceres in Honduras, with suspicions of government and corporate involvement, available: http://www.huffingtonpost.com/peter-bosshard/who-killed-bertha-caceres_b_9387964.html (both sites accessed 28 October 2016).

In stark contrast to this bright future, the social movements and the UN Rapporteur see multiple crises where the other actors see challenges and opportunities, and express serious concern about whether and how the former will be addressed. The social movements generally consider not only that they are facing the social-ecological challenges posed by climate change and the degradation of the world's ecosystems, but also that they are first and foremost up against the defenders of the industrial model of agriculture. The struggles they face are imagined to be endless:

We will redouble our efforts to struggle against GMOs, pesticides, land grabbing, mono-cultures and industrial agrofuel production. We will continue our struggles against trade liberalization and privatization through the WTO and other Free Trade Agreements. We will struggle against military aggression (war, military occupations, paramilitary actions and “security” companies) used against the people around the world who oppose the plunder of their natural resources for corporate profit. (LVC 2014, 24)

The word *crisis* is generally avoided by the trade-oriented food actors and is only used by FAO in relation to temporary upsets (not general crises), while the word *struggle* is not even part of their lexicon.

The most optimistic food actor, the WB (2015, 4), believes part of the success of the SDGs will depend on a food system that is "productive, resilient, and contributes to tackling climate change". They call this a triple win: "agriculture and food production practices that not only boost productivity but also enhance resilience and lower greenhouse gas emissions" (Ibid.). The term *resilience* remains ambiguous throughout the text, it appears to refer to the capacity of food producers to adapt to "climate shocks" (i.e. droughts, floods, and heatwaves). The WB makes it clear that they believe not only in continuing the path of growth, but also in actually accelerating it. This, they say, will end poverty. The threat of climate change in the WB narrative, and to a lesser extent in the discourses of the other trade-oriented food actors, appears disconnected from its drivers, as an isolated threat to be dealt with directly. Despite the fact that agriculture is recognised as a large contributor to global warming (although the WB attributes it a lower percentage of GHG emissions than the UN Rapporteur), there is no discussion of the agricultural practices that have led to the current situation, only a very brief mention of "unsustainable agriculture and other practices" (WB 2015, 8). From this it follows logically that most of the solutions advanced by the WB will focus on improving the

efficiency and productivity of current agricultural practices, without demanding drastic changes of these practices: "[...] better fertilizer use, minimum tillage, alternative wetting and drying of rice, biogas production from agricultural waste products/ livestock manure, improved irrigation and drainage efficiency [...]" (Ibid., 9). The WB (Ibid., 8) expresses a firm belief in the capacity of science and technology to save humanity:

In short, investing in carbon sequestration techniques in the agricultural sector can deliver food security and development outcomes while "buying time" for other major technology breakthroughs to deliver on the mitigation agenda.

The bet is on new seeds, new fertilisers, new breeds, but not necessarily on new choices. The WB's case studies show that much of the investment and research goes to improving the productivity of the same cash crops (large-scale livestock for meat, coffee, tea, maize,...) that often displace other food products in the Global South.

Technology and innovation are also recurring themes in the reports of the other trade-oriented food actors. The G20 (2015, 12) proposes centralising research for poorer countries from the Global South in the Tropical Agricultural Platform, which will lead "capacity development for agricultural innovation systems in tropical countries". Hope is expressed that the farmer will become less risk averse and adopt "new technologies and practices that may have long-term benefits for the individual farmer and for overall sustainable productivity growth" (Ibid., 9). New technologies are also part of the package proposed by the WEF, which suggests measuring technology adoption as a success factor. The WEF is very keen on innovation, recommending it as a strategy across the board, whether in the business models proposed, the partnerships celebrated, the products developed, or the financial solutions that will help pay for the other innovations. Innovation appears to be a given in the business sector. The UK Science Office (2011, 12) recommends to invest in "new science and innovation", aside from the "spread and implementation of existing knowledge, technology and best practice". The new research is believed crucial to meet the challenges of food security, such as to deal with "new and more virulent pests and diseases", develop "new varieties of crops that are resistant to increased drought, flooding and salinity arising from climate change" (Ibid., 17), and reach "(s)cientific and technological advances in soil science and related fields" (Ibid., 18). Clearly this food actor is convinced that science and technology will resolve many of the present and future challenges in agriculture. The UK Science Office also makes no secret of their support

for controversial biotechnology, such as the "development of perennial grain crops, the introduction of nitrogen fixation into non-legume crops, and re-engineering the photosynthetic pathways of different plants" (Ibid.). Conscious of the resistance that exists in relation to certain technologies, they state that:

Communication is critical – not just to spread new knowledge to policy-makers and potential users, but also to the public, specifically to engender trust in new science and its application. (UK Science Office 2011, 18)

They ask that (Ibid., 11):

New technologies (such as the genetic modification of living organisms and the use of cloned livestock and nanotechnology) should not be excluded *a priori* on ethical or moral grounds, though there is a need to respect the views of people who take a contrary view.

Investment in research on modern technologies is essential in light of the magnitude of the challenges for food security in the coming decades.

The two main arguments advanced by the trade-oriented food actors to support a strong focus on science and technology are the need to intensify production without increasing the strain on the environment, and the possibility of evolving threats. In the background of the reasoning of these food actors, the need to increase yields looms large, while they cannot and do not deny the evidence of environmental degradation as a result of current production. This schizophrenic position helps explain why they wish to place so much faith in science and technology.

FAO has a more balanced view: even though they also subscribe to a strictly evidence-based approach, they do not promote the need for new science and technology *per se*, preferring to ensure existing knowledge about sustainable production is widely shared where it is needed. FAO explains that its "unified perspective [...] is underpinned by knowledge based on the best available science, and adaptation at community and country levels to ensure local relevance and applicability" (FAO 2016a, 11).

The social movements and the UN Rapporteur are very much at odds with the mainstream "solution package". They believe nothing less than a paradigm shift will even the stakes for the billions of rural poor. The UN Rapporteur imagines:

A new paradigm focused on well-being, resilience and sustainability must be designed to replace the productivist paradigm and thus better support the full realization of the right to adequate food. (UN Rapporteur 2014, 13)

What these interest groups therefore propose is a very different knowledge base for the road to sustainable agriculture, which they strongly believe must be first and foremost equitable.

This new paradigm for agriculture is agroecology, which LVC defines as follows:

Agro-ecology is a production technology that is based on ecological principles. For La Via Campesina agro-ecology also includes social justice principles. It is a balance of new ecological innovations and traditional peasant farming knowledge. Agro-ecology is considered to be a science, but has also become a social movement today, with a growing number of peasants, scholars, citizens and activists that are promoting it. (LVC 2014, 21)

Contrary to the solutions promoted by the trade-oriented food actors, agroecology is a relatively inexpensive way forward, with the potential to change many more lives than the high-tech solutions that spring from what are generally more technocratic frameworks. The UN Rapporteur concludes:

Because agro-ecology reduces the cost of farming by minimizing the use of expensive inputs, it improves the livelihoods of farming households, particularly the poorest households. And it supports rural development: because it is knowledge-intensive and generally more labour-intensive, it creates employment opportunities in rural areas. (UN Rapporteur 2014, 9)

Agroecology is more a way of life and practice than a set of tools and as such, as a bottom-up methodology, its transformative potential is superior. It does not need to wait for sophisticated technological solutions to become available and for the unavoidable funds that will be necessary to pay for them. It can be embraced the moment a farmer learns about it. What is more, the infrastructure to teach and spread agroecological practices are already in place in many countries in the Global South. Conversely, the solutions championed by the institutional food actors invariably require large investments, which benefit targeted and not all groups of farmers and rural populations. As an example, the WEF speaks of a US\$ 10.5 billion in investment commitments from their members, of which currently US\$ 1.9 billion has benefited 9.6 million farmers. A rough calculation shows us they can potentially reach a little under 50 million farmers, out of a total of 1.5 billion smallholder farmers. Undoubtedly, some of the investments are lasting and will benefit a wider population, but the fact that the model depends on large amounts of financing makes it subject to large fluctuations according to the economic climate of the donor countries. As I have shown, the WEF model has another important obstacle to replication: most of the projects are partnerships with transnational corporations, and therefore are not likely to escape the current logic of trade and profit. TNCs would not get involved if there would be no benefit for them, in fact, they are bound by a code

of conduct to maximise return on investment for their shareholders. There is a business model without room for subsistence farmers or for exclusively social objectives such as increased employment. The model is predicated on raising income for individual farmers, often by streamlining their operations and reducing the need for labour, and by inserting them into the so-called "value chains" of agricultural trade, with the TNCs buying their products as long as these products are geared towards their needs. Even a local food player such as the Portuguese farmers association mostly dreams of expanding the existing production potential, gaining efficiency through scale, while improved management will miraculously increase the efficiency of resource use and therefore reduce the pressure on ecosystems. This model clearly does not mean for regions or countries to reform their troubled food systems so that their rural population can feed itself through access to land and natural resources, and through protected local markets. We can read in the WB report that "deforestation free palm oil", "participatory outgrower schemes" (where farmers produce under contract), and the widespread adoption of improved plant varieties are some of the solutions that the trade-oriented food actors would like to see. They imagine leading food agents in each country working with international agents to create "value chains" based on "the most impactful crops/geographies/issues", within a market-driven business model that is "led by the private sector and rooted in viable business cases" (WEF 2016, 8). And even though the UK Science Office, similar to any institutional food actor today, accepts the duty to end hunger and poverty, while trying to privilege low-income countries by giving them priority access to knowledge and markets, they leave a clear message that any attempt at *localising* food economies is frowned upon: "(f)ood security is best served by fair and fully functioning markets and not by policies to promote self-sufficiency" (UK Science Office 2011, 19).

Despite a preference for market- and technology-based mechanisms of reform, or perhaps because of it, the institutional food actors all promote social protection as a solution to shield the poor from the worst hunger and extreme poverty. They have interiorised the insight from Amartya Sen (1991) that access to food is often dependent on being able to afford the food, not only for it to be available, but are yet to recognise the underlying reason for food having become both more expensive and less nutritive in countries in the Global South. We can read in the report of the UN Rapporteur (2014) how this phenomenon derives from the focus on cash crops for exportation and the import of subsidised food products from the Global North

—often imposed under trade agreements. Social protection, although an absolute necessity that has been used by capitalists over the centuries to ease the suffering of those left out of the growth cycle, is not a structural solution to hunger and poverty. Moreover, even though FAO has experimented with more targeted forms of social protection, such as school meals and other support to directly relieve hunger while promoting education, in general business is allowed to go on as usual.

There is also general agreement that some form of land reform is essential, and that this should be biased towards women, who are recognised as better able to leverage their family out of hunger and poverty than men. But it is not clear how far the institutional actors will go to ensure land is restored to smallholder farmers, and more worryingly, there is no mention of the increasing occupation of peasant and indigenous land by transnational corporations and foreign governments such as China and India, as well as exclusively financial entities. This land-grabbing occurs with the connivance of local governments that either fail or do not wish to protect their rural populations. The social movements are particularly bitter about the continuing land grabs despite international voluntary agreements to end them and warn that land grabs are "legitimized using the rhetoric of beneficial or responsible investments by governments and global institutions such as the World Bank" (LVC 2014, 22).

Besides access to land, most institutional food actors believe smallholder farmers in the Global South will benefit from access to finance, (technical) knowledge, and markets. In this view, the smallholder farmer is a potential agricultural entrepreneur that has the same needs as a larger farmer or farming business. The G20 (2015, 13) warns that "limited access to financial services can severely constrain smallholder investment, especially if combined with market failures such as lack of access to productive assets (e.g. land), information, and markets", while the WB (2015, 20) states:

Equally, we must develop the opportunities to leverage the commercial relationships within the food system. With over 90 percent of risk and emissions lying at the production level in food supply chains, food processors and retailers must work with farmers to develop resilient supply chains that help both sides to reduce risk and emissions. The key to success lies in creating leveraged finance that will enable farmers to invest in their farms and play a more active role in established supply chains. This new interdependence between farmers and companies is driving an improvement for farmers in terms of new financial opportunities.

The UN Rapporteur disagrees, arguing instead for a more holistic approach, claiming:

A global food polity

Finally, because food systems are in need of reform, it is not sufficient to protect existing entitlements or to preserve the status quo. Instead, transformative strategies must be adopted, with a view to guaranteeing access to adequate food for all by simultaneously supporting small-scale food producers' ability to produce food sustainably, improving employment opportunities in all sectors and strengthening social protection. (UN Rapporteur 2014, 17)

The UK Science Office, possibly influenced by government representatives on the steering committee of the project, takes advantage of the fact that their report will be widely read by policy-makers all over the world, to press for the conclusion of the latest round of World Trade Organization negotiations—the Doha Development Round—which is deadlocked due to the resistance of poorer countries that have realised that they are usually the losers in the global trade game. This pressure, as I mentioned previously, is also exerted on the SDG Agenda under the goal for partnerships. Wealthier countries would prefer a global trade agreement that removes trade barriers, opening up new opportunities for both buying and selling all over the world, while poorer countries are complaining that they can't compete with heavily subsidised agricultural products from the wealthier countries. The latest negotiations have been conducted under the guise of more development for poorer countries, but so far no evidence to this effect has materialised. We can read in the UK Science Office report:

An essential first step towards a more equitable global trading system for poor agricultural producers is the realisation of a *genuinely* pro-development Doha Development Agenda agreement via the negotiations of the World Trade Organization (WTO). (UK Science Office 2011, 20, emphasis in original)

The other institutional actors are silent on the issue of trade agreements, even though the WB is a known defender of the WTO agreement, and has itself imposed trade-facilitating measures on many countries in the Global South under the contested Structural Adjustment Programmes. LVC, on the other hand, is vehemently opposed to any trade agreement between wealthier and poorer countries, whether bilateral or multilateral:

These agreements are just arrangements which make it easier for Transnational Corporations to operate freely at the expense of the livelihoods of small peasants and food producers. In most of cases, they are concluded between unequal trading partners. (LVC 2014, 20)

I have discussed one of the democratic mechanisms that is being advanced, in different degrees, by most of the food actors, which is the idea of guaranteeing vulnerable agents access to key resources, including information. Some of the institutional food actors advocate going further, speaking of empowerment of vulnerable groups. On their part, the social movements ask for more than what is being offered. I will discuss the democratic implications

of the food politics discourses in the last section of this chapter, after summarising the way each of the discourses is constructed.

What are the key narrative strategies and versions of truth?

Throughout this analysis it has become clear that, even when they recognise the same elements and events in the food system, different food actors tell different stories, arriving at different strategies depending on their ultimate interests. It may seem unavoidable that interest groups act according to their interests, but it can be problematic when these interests are not declared or when they are downplayed, or when the interest group in question holds more power than other groups in the food system. The WEF tries to portray its organisation as independent of the corporations that fund it, with a mission that has it "committed to improving the state of the world" as the "International Organization for Public-Private Cooperation" (on the WEF website). But it is an undeniably powerful organisation that can dole out a lot of money to whom it likes (for example, they reserved around US\$ 11 billion for their New Vision for Agriculture projects), without any guarantee that it will not withhold it from whom it doesn't like. It has infiltrated or even helped create regional platforms in the Global South such as Grow Africa and Grow Asia, from whence it can promote its particular idea of "a transformation of the agricultural sector, leveraging market-based approaches through a coordinated effort by all stakeholders, including farmers, government, civil society and the private sector" (WEF 2016, 5). The WB, by comparison, is a more complex case. Its status as a supranational agency for development insulates it from much of the criticism, while its undemocratic decision-making structure (bigger donors having more votes, as I showed in Chapter 4) is sure to bias its decision-making towards wealthier countries. This can be felt in the levity with which the report glosses over the challenges faced in the food system, skipping the analysis of how these challenges came about, to arrive quickly at the apparently preferred (but unexplained) "triple-win" strategy of "higher agricultural productivity, increased resilience to climate change and lower emissions" (WB 2015, 4). FAO (2016a, 11) appears to suffer less from the pressure of powerful interest groups and advances more integrated solutions, where they purposefully place vulnerable groups at centre stage so that

"(p)rotecting and improving rural livelihoods and social well-being" becomes as important as natural resource management and ecosystem preservation.

Food actors also speak more or less freely depending on who commissioned the report they are preparing. For example, there appears to be a gap between what the UK Foresight report found when reviewing studies and consulting experts in 35 countries, and what they were "allowed" to recommend. Even in the Executive Summary there is a discontinuity between the facts presented and some of the recommendations that appear to flow from them. The excessive reference to the necessity of accepting evidence-based decisions and avoiding moral, ethical, and human considerations, may be explained by the fact that the 2011-2015 Conservative government, which commissioned the report, was a strong supporter of biotechnology, despite the distrust regarding its use in food and farming felt by a majority of UK citizens. The UN Rapporteur sits on the opposite end of the "free speech" spectrum. His "bosses" were the members of the United Nations Human Rights Council, while he was publicly recognised as an independent expert. His mandate was also restricted in time. These conditions together with Olivier de Schutter's personal convictions resulted in a series of unrestrained reports, of which I analysed the last. Finally, the social movements, including LVC, have as their "bosses" the most vulnerable groups on our planet, which I have flagged as an underclass and which are often in crisis or at the point of crisis, giving their spokespersons the moral outrage and courage to point fingers at questionable interest groups and practices in the food system.

The narrative employed by the institutional actors, with the exception of the UN Rapporteur, offers, at first glance, a cohesive diagnosis of the challenges faced by humanity in the twenty-first century. This diagnosis considers that global food production needs to increase by 60 percent by 2050 to feed over nine billion people projected to be living on Earth (a statistic used by all institutional actors), while at the same time the stress that agriculture exerts on the world's ecosystems, especially on forests, water sheds, and topsoil, needs to diminish. It also recognises that food and agriculture have a special role to play at all levels of sustainability: social, economic, and ecological. And finally, it recognises that vulnerable groups, among them most rural populations in the Global South, continue to be excluded from the growth of the food system. Based on this diagnosis, the institutional food actors minus the UN

Rapporteur arrive at the general conclusion that we should make our "agriculture and food systems more efficient and sustainable, and to shift to more sustainable consumption and production approaches" (FAO 2016a, 10). Although more a mission than a strategy, this objective has in the last year been merged with the newly endorsed Sustainable Development Goals, which have the advantage of being very comprehensive (169 targets in all) and of focusing on all dimensions of sustainability, to such an extent that the goals read like a declaration of human rights (i.e. No Poverty, Zero Hunger, Good Health and Well-Being, Quality Education, etc.). This is undoubtedly a positive achievement in global politics, but unfortunately the experience with the Millennium Development Goals that preceded the SDGs, and with the tragic Kyoto Protocol, show us governments more often than not fail to achieve the goals they set out. The previous development goals were very specific and even though the final reports attempt to highlight what *was* achieved—ignoring the indicators that were agreed upon—a quick comparison of the statistics shows that the majority of goals were only partially reached, with some falling very short of their objectives²². In the same report we can read that global emissions of carbon dioxide, rather than having decreased by 5 percent as was agreed among governments, have increased by a dramatic 50 percent in comparison to the base year 1990. The drafters of the SDGs were careful not to be as specific this time in establishing the targets, which therefore weakens their effectiveness²³.

There is no doubt much is being done and will be done, as the case studies presented by FAO indicate, but there is something crucial missing from the narrative: what will be asked of industrialised countries, their governments, and of transnational corporations? This question is curiously absent from the reports and visions of FAO, the WB, the WEF, and the G20. They all seem quite eager to reform agriculture and food systems in countries in the Global South, through partnerships in which they are included while they often benefit corporations from the Global North. However, beyond the recently launched Technical Platform on the Measurement and Reduction of Food Loss and Waste, which is also aimed at countries from the Global North, none of the institutional food actors minus the UN Rapporteur is advancing

22 United Nations, The Millennium Development Goals Report 2015, available:

[http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf)
(accessed 5 September 2016).

23 Sustainable Development Goals and respective targets, available: <https://sustainabledevelopment.un.org/sdgs>
(accessed 5 September 2016).

any strategy to tackle the consequences of a highly industrialised food system in the Global North and BRICS²⁴ countries, responsible for the lion share of the world's GHG emissions, water shed pollution, soil degradation, and loss of biodiversity. The way these food actors interpret agency may have contributed to this crucial omission: in their narrative, global food systems are at risk not from any particular group or because of any particular action taken by a group, but from an inanimate "(r)ising demand, scarce resources and increased volatility" (WEF 2013, 2). The UK Science Office (2011, 9) puts it this way:

The global food system will experience an unprecedented confluence of pressures over the next 40 years. On the demand side, global population size will increase from nearly seven billion today to eight billion by 2030, and probably to over nine billion by 2050; many people are likely to be wealthier, creating demand for a more varied, high-quality diet requiring additional resources to produce. On the production side, competition for land, water and energy will intensify, while the effects of climate change will become increasingly apparent. The need to reduce greenhouse gas emissions and adapt to a changing climate will become imperative. Over this period globalisation will continue, exposing the food system to novel economic and political pressures.

While the WB (2015, 4) says:

Droughts, floods and rising temperatures are already cutting crop yields, threatening food, fish and meat supply and pushing people deeper into poverty. Climate change and the effects of climate shocks are dampening the prospects for future productivity growth. Agriculture and land use changes already contribute 25 percent of greenhouse gas emissions. A more climate-smart food system is urgently needed to address these challenges.

Even though the trade-oriented food actors are quite accurate in their exposition of the threats that humanity is facing in the food system, none of their stories present a source for the problems. What is more, besides avoiding finger-pointing, the conception of the food system as an independent self-organised organism that is suffering a number of challenges has the added advantage that solutions only need to deal with the symptoms, not with their underlying causes. Where recognition is given to the effects of industrial agriculture (only in the UK Science Office report), no specific mention is made of the locus and agents of industrial agriculture. There is a gap between identifying the threats and arriving at conclusions about what needs to be done. This gap of unexplained dynamics of the food system allows each actor to develop their own version of truth. Additionally, it weakens the effectiveness of their solutions upon deeper analysis. For example, the World Bank foresees that, if nothing is done, agriculture will account for 70 percent of allowable emissions needed across the board to limit the temperature increase to 2° C. They nevertheless propose to increase production, without

24 Brazil, Russia, India, China and South Africa

explaining how they will reduce emissions simultaneously. Their unwillingness to look at major sources of emissions, such as the production and use of agro-chemicals, transport, and the meat sector, and at the imbalances between large and small contributors to GHG emissions (i.e. TNCs versus smallholder producers, wealthier countries versus poorer countries), ultimately precludes a positive outcome. Although the case studies they present are sure to effect some local changes, even if these solutions were to be widely replicated, major changes would need to be effected in the sectors and countries mentioned above that are responsible for the largest share of emissions (and other forms of pollution). The greatest potential for emission reduction unquestionably lies in the Global North. Instead, the only measure proposed by the institutional food actors (minus UN Rapporteur) that cuts into the lifestyle of the developed countries is the reduction of food waste and loss. The increase in a meat-based diet (the production of which is known to be very land and water intensive) and in the production of biofuels (which replace food production in the Global South, while the crops are exclusively destined for markets in the Global North), and the bias of actors in global markets towards the more affluent consumer, are problems that remain undiscussed in all the institutional reports with the exception of that of the UN Rapporteur.

The gap that exists in the narrative of institutional food actors between the enumeration of threats to food security and agro-ecosystems and the solutions proposed to deal with them, which I call the "systemic gap", might also explain why these actors are so keen on investing in new technologies. On the one hand, they may genuinely think this will solve some of the worst paradoxes in the food system (such as the rapid deterioration of the resource base for food production), and on the other, it is a way to maintain growth in a sector that technically shouldn't grow anymore. The focus is therefore on internationally coordinated scientific research, possibly more cutting-edge and potentially more valuable, but which may be biased towards larger farmers and existing markets, and which ignores the low-cost but high-impact farm-based innovations that are taking place in many countries of the Global South, led by social movements, indigenous movements, grassroots NGOs, and agroecological scientists (see the Nyéléni declaration for agroecology).

The systemic gap may also exist because the economic-interest groups and those that depend on them (such as the WB) are unwilling and/or unable to consider harming the revenue of

their members. A focus on small-scale, peasant-based, “dechemicalised” agriculture, would seriously threaten the business of the corporations that depend entirely on the maintenance of an industrialised food system where agricultural inputs are external—agrochemicals and commercial seeds—and raw materials for food processing—wheat, maize, oil seeds, etc.—are cheap and abundant.

Additionally, issues of equity and power imbalances are not addressed by institutional food actors. Many of the proposed solutions maintain the focus on cash crops that has created a trade deficit in countries of the Global South in the order of US\$ 11 billion²⁵. The fact that at the same time heavily subsidised agricultural products from the Global North are flooding the fragile markets in the Global South is something that is glossed over. The WB's "triple win" does not include a measure of justice, it is instead assumed that increases in productivity will have the classical (and already disproven) trickle-down effect. The idea is that farmers "make money, save money, or save time" (WB 2015, 18), thus ignoring subsistence farming and the possibility of using non-financial (and non-market) inputs. It is assumed that with the right "value proposition", farmers and companies will make "climate-smart investments and follow climate-smart behaviors" (Ibid.). The reasoning behind this is that the possibility of gains is the success factor here, and that investments and incentives should be channeled to this aim.

Besides incomplete and unreflexive, the trade-oriented food actors are also generally unrealistic in their prognoses. The UK Science Office (2011, 35) solves all the threats with one concept, "sustainable intensification", by which they understand: "simultaneously raising yields, increasing the efficiency with which inputs are used and reducing the negative environmental effects of food production". This is naturally what everyone wants, but without sacrifices made on the part of wealthier countries and wealthier consumers, and without drastic changes in the industrial model of agriculture, it is impossible to achieve, as the UN Rapporteur and the afore-mentioned IAASTD and UNCTAD reports point out. The WEF offers unexplained and far-off goals that they propose to achieve by changing "everything" except the way the global food system actually works. Their "Vision 2020" expects a 20 percent "improvement in each area per decade until 2050", the areas being food security, environmental sustainability, and economic opportunity. Although unexplained in most of

25 FAO 2004, *The State of Agricultural Commodity Markets*, available:

<http://www.fao.org/docrep/007/y5419e/y5419e03.htm> (accessed 23 September 2016).

their reports and on their site, I found a 2012 report that offered some rough indicators to measure this progress. Their rigour is questionable: one of the measures for food security proposed is tonnes of food produced, when it is well-known that food production is not an adequate predictor of food distribution (Sen 1991). As another example, the objective of environmental sustainability is measured exclusively in GHG emissions and water use. Without a comprehensive road book that presents the indicators and measures progress, it is hard to see how the WEF will claim their 20 percent improvement per decade.

The narratives of the trade-oriented food actors are based on the assumption that the risks faced in the food system, now and in the future, can be known, and that any decision should weigh one risk against the other. The possibility of uncertain or unknown events is either not recognised or it is dismissed. The precautionary principle, a term and a tool used for at least a decade after it was coined (at the 1992 Earth Summit), and which has been incorporated in environmental legislation of European Union countries, appears to have disappeared entirely from the discourses of the institutional food actors. The only actor mentioning the concept, the UK Science Office, actually dismisses it, reverting to the risk paradigm approach that was the reason for developing the precautionary principle in the first place. Whereas the precautionary principle asks to not equate the absence of evidence with the absence of harm, the UK Science Office (2011, 11) insists that "(d)ecisions about the acceptability of new technologies need to be made in the context of competing risks" whereas "the potential costs of not utilising new technology must be taken into account" .

The diagnoses of LVC, the Nyéléni organisations, and the UN Rapporteur are diametrically opposed to the above stories of social and environmental contingencies that can be minimised through efficiency and innovation. They instead tell a story of social and political power struggles that have put a corporate-dominated and corporate-serving food system in place. In the Nyéléni declaration we can read:

The industrial food system is beginning to exhaust its productive and profit potential because of its internal contradictions – such as soil degradation, herbicide-tolerant weeds, depleted fisheries, pest- and disease-ravaged monocultural plantations – and its increasingly obvious negative consequences of greenhouse gas emissions, and the health crisis of malnutrition, obesity, diabetes, colon disease and cancer caused by diets heavy in industrial and junk food.

But they have to speak loudly to be heard, because their version of events openly antagonises very concrete interest groups and precludes their participation in solutions that have otherwise been accepted by important institutional food actors, solutions such as partnerships with agribusiness corporations or with philanthropic foundations that support these corporations, or in general, any solution that promotes industrial agriculture. The fact that they are embracing confrontation rather than reform may explain why LVC chooses a different vocabulary from the one used by the institutional actors. By provocatively speaking of peasants, crises, struggles, agribusiness and “agro-toxins”, patriarchy, or even violence, and by insisting on placing blame for the threats that humans are facing on a system and a class that has imposed an industrial and neoliberal development model on most of the world, LVC creates a new narrative, a new explanation for what is happening, demanding very different solutions than the ones advertised by the institutional food actors. The UN Rapporteur, probably in order to maintain his primary audience—i.e. the other institutional actors, in particular the supranational agencies—has blended the two vocabularies, although he avoids the more controversial terms (such as “neoliberal” or “agro-toxins”). He adopts two of the strategies championed by LVC and the organisations behind Nyéléni: food sovereignty and agroecology. These strategies are another way that the food and farming social movements carefully distinguish their discourse from that of the food actors they are lobbying. Both approaches are built on an extension of human rights—right to food, right to resources, but also to a certain extent the right to autonomy in decision-making—and have peasants and their livelihoods at their locus, rather than agribusiness, global markets, consumers, or even farmers in general. The approaches also contrast with the solutions proposed by supranational agencies in that they are built bottom-up rather than top-down, while they aim to secure self-replicating, low-budget, Do-It-Yourself reforms, rather than donor-, infrastructure-, and in many cases industry-dependent reforms that can only be replicated with more donors, infrastructure, and commercial commitments.

LVC has managed to catch the ear of the Committee on World Food Security and of FAO. These organisms see some merit in their claims of injustice, and are endorsing some of their demands, such as the official recognition of the Rights of Peasants, stopping the land grabs, defending smallholder agriculture, and promoting agroecology as an alternative knowledge base for sustainable agriculture. The buck stops, however, at recognising food sovereignty

because, as explained in an analysis prepared for FAO (2013), food sovereignty not only questions the asymmetry of power in the global food system and asks that it be corrected, it also rejects industrial agriculture. FAO, incorporated as it is in the United Nations, where it has to respond to member-countries, cannot (or won't) endorse a paradigm that would destroy the economic base of many of its members.

The democratic implications of the different discourses in food politics

After reviewing the results, three general democratic visions emerge from the discourses of the nine food actors, also applicable to the modern food system as a whole. I have termed these the "trade hegemonic bloc", the "social capitalist", and the "radical ecological democratic" world visions.

The trade hegemonists²⁶ (the WB, the WEF, the UK Science Office, G20 and CAP), despite their overt neoliberal inclination, subscribe or have been forced to subscribe, due to strong indicators, to improving the equitability of the global food system. As capitalists, they also subscribe, on principle and out of self-interest, to freedom and equality. Freedom and equality are basic attributes for a trade-oriented world. But freedom does not necessarily mean freedom from coercion, nor does equality necessarily mean equity. Thanks to the "good governance" principles that were developed in successive international environmental and humanitarian summits, the trade-oriented food actors also subscribe, on principle, to rules of accountability. The same process opened them up to everyone's right of having rights, including of course, corporations that have their status partially equated to that of a citizen. Nevertheless, their openness to rights has led to the gradual adoption, on principle, of more inclusive rights, such as socioeconomic rights and the right to food. Finally, also due to the successive negotiations at Earth Summits, they have accepted the necessity of inviting the parties affected by decisions to participate in the discussions prior to the decisions. This is more or less how far the trade hegemonic bloc will go in conceding other interest groups their democratic rights. Their score does not go much beyond what I termed "basic democratic dimension".

26 As I said before, I follow Gramsci in the idea of consensual, unopposed power wielded by an unspoken alliance of political and economic elites, which is legitimated by a persuasive discourse.

The "social capitalists", here represented by FAO and to a certain extent the UK Science Office and G20, the latter two appearing divided between a more exclusively trade-oriented approach and a more inclusive approach, subscribe to the basic democratic dimension, and to some of the attributes of the popular control dimension. I use the term social capitalism in the same way the term social liberalism was used 100 years ago, in the sense of the strongest version of welfare capitalism identified in Esping-Andersen's *Three Worlds of Welfare Capitalism* (1990, cited in Ebbinghaus and Manow 2001). I additionally upgrade the term to include my observations as to the democratic inspiration of contemporary progressivists or reformists. Esping-Andersen relied on Polanyi's insight into the way capitalism mitigates its worst inequities, for instance through the offering of social protection to vulnerable groups. He conceptualised three ways in which nation-states placed these brakes on capitalism, the most interventionist of which he called the "social-democratic regime". I build on this work to give renewed meaning to the term "social capitalism". FAO is the institutional actor that embraces more attributes, albeit in practice the substance of their policies is thinner than on paper. Thus, they believe in actively including the people that need decisions most or that will be most affected by them, while they wish to see a more equitable distribution of access and benefits of natural resources. They have also recognised the merit of other forms of knowledge such as agroecology, and believe in active participation of the beneficiaries of their projects in the management of the project. The UK Science Office, mostly on principle (since their conclusions indicate the dominance of two powerful interest groups: the English Conservative party and large agribusiness), also subscribes to these attributes. The "social capitalists" recognise that the current system is inequitable and unsustainable and propose some democratic measures to correct the worst inequities. They will even address some attributes falling under the dimension I termed "autonomy", although never fully, because to grant full autonomy to peoples and communities would endanger their main donors, the governments of wealthier countries, which in turn depend on the industries that made them rich. To harm the interests of industry would be to harm the interests of the countries where they operate. That is why FAO may play with ideas of food sovereignty, but might never adopt the concept. FAO may reflect on the consequences of industrialised agriculture and ask to reform it, but not suggest to abolish it.

The social movements and the UN Special Rapporteur, which I have called the "radical ecological democrats", are not burdened by their dependence on powerful governments or powerful industrial interests. They are also not weighed down by a need to make a profit from the exploitation of natural resources and cheap labour. They either live a subsistence-style life or they represent people that live these lives. With not much to lose in their often desperate situation, but everything to gain, they are free to experiment with substantive democratic ideas. They adopt the full spectrum of democratic dimensions that I drew up based on the thoughts of the most imaginative of democratic thinkers. Some of the attributes, such as cognitive justice, social legitimacy in the sense that it is used in this research, social control over resources, Rights of Nature, and altruism, were coined either by them or by the thinkers of the radical ecological democracy movement, among them Vandana Shiva and Ashish Kothari.

Table 3 presents a summary of my conclusions as to the ecological-democratic quality of the global food polity and of the discourses of each of the food actors included in my analysis. The results are obtained by directing the questions that operationalise each of the attributes (presented in the introduction to Part 2) to the data characterising each of the entities / food actors. For each of the questions, I reviewed the indications that would permit to answer them affirmatively or negatively. Often, the democratic attributes are recognised on principle by the food actors, but are missing in their final decisions and practices. When this is the case, I distinguish between theory and reality.

The most striking, although unsurprising, result is that reality is much worse than theory, whereby theory I mean the policy proposals made by prominent food actors in the modern food system. The global food polity as a whole scores terribly on any of the indices of ecological-democratic quality, even on the most basic democratic attributes that most decision-makers anywhere would claim to uphold: political equality, political freedom, accountability, and responsiveness. Only the most vulnerable groups (and similarly, the most vulnerable natural organisms or ecosystems) are deemed worthy of protection, all others are expected to fend for themselves, in true liberal fashion. I advance at least two reasons for the fact that the global food polity does not reflect the promises of its decision-makers: the views of corporations have only been included through the WEF, which necessarily moderates its

discourse in order to be able to negotiate with all the other food actors; and discourses generally represent intentions and not actions nor even a willingness to act. Nevertheless, by zooming in on the narratives of truth, the depictions of reality and the respective contradictions found therein, the critical discourse analysis conducted here was capable of teasing out the true intentions and real interests of the institutional food actors, finding that they stand in striking contrast with their professions of democratic and ecological solutions to the challenges that we collectively face as humans. In fact, with the exception of FAO and the UN Rapporteur, their claims of equity and justice sink mostly into the quicksand of their true interests.

Table 3. The ecological-democratic quality of the global food polity

Democratic dimensions	Related attributes	Modern food system / polity as a whole	Food and Agriculture Organisation	The World Bank	World Economic Forum	UK Government Office for Science	G20	Special Rapporteur Right to Food	La Via Campesina	Nyéleni Forum	CAP - Portuguese farmers' confederacy
Basic democratic dimension	Political equality	Not always on principle and not in practice	Yes, at least on principle	Yes on principle, but not in practice	Yes on principle, but not in practice	Yes on principle	Yes on principle, but not in practice	Yes	Yes	Yes	Yes on principle
	Political freedom	Yes on principle, but with restrictions and existence of coercion	Yes on principle	Yes on principle, but not in practice	Yes on principle, but not in practice	Yes on principle	Yes on principle, but not in practice	Yes	Yes	Yes	Yes on principle
	Accountability	Poor accountability	Yes	Yes on principle	Yes on principle	Yes on principle	Yes on principle	Yes	Yes	Yes	Yes on principle
	Responsiveness	Poor responsiveness	Yes on principle	Yes on principle	Yes on principle	Yes on principle	Yes on principle	Yes, this is a core value	Yes	Yes	Yes on principle
Popular control	Active Inclusion	Although examples exist of inclusion, it is not systematic	Yes	Yes on principle	Limited to leaders of major interest groups	Yes on principle	Yes on principle	Yes, this is a core value	Yes, this is a core value Example: women, youth	Yes, this is a core value	Yes on principle
	Equitable distribution of common resources	Very weak equity	Yes on principle	Compensation for the most vulnerable	Compensation for the most vulnerable	Compensation for the most vulnerable	Compensation for the most vulnerable	Yes this is seen as a core necessity	Yes this is seen as a core necessity	Yes this is seen as a core necessity	Non-issue
	Deliberative decision-making process	Even when processes are deliberative, decisions are rarely taken cooperatively and in the interest of the common good	Yes on principle	Yes on principle, but limited to invited groups	Negotiation among major interest groups	Yes on principle	Negotiation among governments and major interest groups	Yes, part of modus operandi	Yes, part of modus operandi	Yes, part of modus operandi	Non-issue, possibly accepts negotiation among major interest groups

Table 3 (cont.)

Democratic dimensions	Related attributes	Modern food system / polity as a whole	Food and Agriculture Organisation	The World Bank	World Economic Forum	UK Government Office for Science	G20	Special Rapporteur Right to Food	La Via Campesina	Nyeléni Forum	CAP - Portuguese farmers' confederacy
	Cognitive Justice	In general cognitive justice is not respected	Yes on principle	No	No	Only as secondary sources	Only as secondary sources	Yes	Yes, this is a core value Example: agroecology	Yes, this is a core value Ex.: agroecology, peasant wisdom	No
	Social legitimacy	In most decisions, the affected parties are <i>not</i> the decision-makers, whereas the burden of proof remains with them	Affected are heard, but never in charge	Representatives of interest groups are heard, but never in charge	Leaders of major interest groups are heard, government and or investors decide	Affected are heard, but never in charge	Affected are heard, but never in charge	Yes, this is a core value	Yes, this is a core value	Yes, this is a core value	Adheres to idea of bargaining among interest groups
	Political participation	Affected parties are sometimes involved in the middle phase of decision-making, but public affairs are generally run by elites.	Yes on principle	Participation through representation of some interest groups	Major interest groups are the participants	Participation through representation of some interest groups	Participation through representation of some interest groups	Yes, seen as crucial	Yes, this is a core value	Yes, this is a core value	Participation through representation of some interest groups
Autonomy	Contestation	Conflicts are considered according to the strength of respective voices, and decisions can rarely be overturned by non-economic minorities	Addressed, not embraced	Avoided	Avoided	Yes on principle, but as complement to an "evidence-based" consensus	Avoided	Yes	Adopted as modus operandi	Adopted as modus operandi	Avoided

Table 3 (cont.)

Democratic dimensions	Related attributes	Modern food system / polity as a whole	Food and Agriculture Organisation	The World Bank	World Economic Forum	UK Government Office for Science	G20	Special Rapporteur Right to Food	La Via Campesina	Nyeléni Forum	CAP - Portuguese farmers' confederacy
	Reflexivity	Decision-makers generally do not confront their own ideas, and there is indication of path dependence rather than social learning	Some capacity for reflexivity	None	None	None	None	Yes, makes a systematic effort	Yes, listens to minorities among its ranks, changes tactics	Yes, listen to minorities among their ranks, change tactics	None
	Social control over common resources	Only in very rare and controlled cases (indigenous groups) are primary users allowed to control common resources	Only if according to rule of law	Private or public control, not social	Private or public control, not social	Private or public control, not social	Private or public control, not social	Recommends greater freedom of communities in managing their resources	Yes, this is a core value	Yes, this is a core value	Private or public control, not social
	Diversity	The right to self-determination is only recognised for a few very vulnerable minority groups	Yes on principle	Non-issue	Non-issue	Non-issue	Non-issue	Yes	Yes	Yes	Non-issue
	Altruism	In general, not embraced, the norm is charity	Yes on principle	Not deemed necessary, other solutions assumed available	Non-issue	Some indication that this was considered, but very tentative	Not deemed necessary, other solutions assumed available	Yes, recommends change in diet and lifestyle for affluent consumers	Yes	Yes	Non-issue

Table 3 (cont.)

Democratic dimensions	Related attributes	Modern food system / polity as a whole	Food and Agriculture Organisation	The World Bank	World Economic Forum	UK Government Office for Science	G20	Special Rapporteur Right to Food	La Via Campesina	Nyeléni Forum	CAP - Portuguese farmers' confederacy
Negative dimension	Rights of Nature	Not recognised	Recognises some merit, does not endorse	Not recognised	Not recognised	Not recognised	Not recognised	Open to the idea	Yes, promotes the concept	Yes, promote the concept	Not recognised
	Restriction of elite control	Although sometimes restrictions are placed on the use of resources by elites, the latter are not barred from the decision-making on these restrictions and their interests are always respected to a significant degree	Might be open to the idea	This would go against freedom to conduct business	This would go against freedom to conduct business	Non-issue	This would go against freedom to conduct business	Yes, this is a core problem	Yes, this is a core problem	Yes, this is a core problem	This would go against freedom to conduct business

Conclusion

Food glorious food
What wouldn't we give for
That extra bit more
That's all that we live for
Why should we be fated to do
Nothing but brood on food
Magical food,
Wonderful food,
Marvellous food,
Fabulous food,
Beautiful food,
Glorious food

—excerpt from the song “Food, Glorious Food” of the musical *Oliver!*, written by Lionel Bart, 1963

The popularised version of the nineteenth century story by Charles Dickens springs to mind as I prepare to bring together the ideas developed throughout my dissertation. It’s not surprising that *Food, Glorious Food* is a key song in the musical, if we consider that hunger was a key theme in Dickens’ novel and a widespread phenomenon in industrialising Britain. Hunger was the manifestation of a brutal society that believed that the destitute were responsible for their own fates. In his book, Dickens denounces the Poor Law of 1834, which forcibly sent “paupers”, including orphans such as the fictional *Oliver Twist*, to workhouses, where conditions were deliberately made harsh, because the general opinion of the wealthy was that poor people did not deserve better. Two hundred years later, the industrialised countries have not entirely shaken this cruel view. They may have substituted glaring hunger and poverty within their borders for less visible manifestations of malnutrition and social exclusion, but in the countries where most of their products are now produced, conditions are often just as harsh as they were in the 1800s in the Global North.

Even though the 795 million chronically hungry can be found predominantly in countries in the Global South, worldwide at least 2 billion people suffer from some form of micro-nutrient deficiency (lack of certain vitamins or minerals), while an equal amount of people are overweight, a different but equally pernicious form of malnutrition. Increasingly, overweight and obesity, once the hallmark of wealthy countries, are creeping up on the less wealthy

countries, and we have reached a point where overweight and undernourishment co-exist in the same households, communities, and countries.

That more than half of the world's population can be considered malnourished at a time when WHO estimates that average food availability has gone up 25 percent compared to fifty years ago, and 40 percent in the Global South alone—currently possibly enough to cover the dietary needs of nine billion people—is one of the many internal contradictions that I came across in my analysis of the modern food system.

The picture that was revealed as I peeled away the manifestations of the global food system and the food politics that hold it in place, is far removed from the bucolic ideal that is still transmitted in Western primary school classrooms. Food and agriculture are part of a multi-trillion dollar industry that sustains oligopolies or near-oligopolies in all sectors, except for the sector of the farmers themselves, the primary resource suppliers. Although 1.5 billion smallholder farmers, most of them poor, continue to struggle to make the most of the resources their land, animals, and their labour offer, a minority of very large farmers have become, as Bookchin put it in 1976¹: “an airplane pilot who dusts crops with pesticides, a chemist who treats soil as a lifeless repository for inorganic compounds, an operator of immense agricultural machines who is more familiar with engines than botany, and perhaps most decisively, a financier whose knowledge of land may be less than that of an urban cab driver”. The enormous monocultures of predominantly grains (maize, soybean, to a lesser extent wheat), forage crops, and fibre (cotton), which cover large areas in the biggest agricultural exporting countries such as the USA, China, Brazil, and Mexico, have almost to perfection completed the “metabolic rift” that Marx warned of. While often under contract from an input agribusiness company such as Monsanto or Pioneer—from which they are obliged to annually buy a stipulated package of seeds and pesticides—the richest of these agricultural entrepreneurs use algorithms and drones rather than their hands or noses to calculate the exact dosages of synthetic chemicals that will boost their single crop and replace the nutrients of their deadened soils. Similarly, the produce that they sell obeys to the standards of a highly lucrative food processing industry—such as ease of storage, transport,

1 Bookchin 1976, 4.

compatibility with industrial processes—whereas taste, nutritional content, and public health have become secondary values. Shiva (1993) has called the commercial society's obsession with standardisation and homogenisation the “monocultures of the mind”.

The depth of the capitalist economy's penetration of this “recalcitrant” sector, replacing nature, humans, and animals with commercial products would have shocked even Marx, who foresaw the commodification of agriculture and food. What has now become more of a “life sciences industry”, joining the sectors of chemicals, biotechnology, energy, pharmaceuticals, defence, and—well-hidden in the background—that of “big finance”, is pushing against the last frontier of exploitation and accumulation: the capacity of life to reproduce itself. The Canadian corporate watchdog ETC Group, one of the few civil society initiatives monitoring the trend in life sciences exploitation, warns that we are in for the biggest “earth grab” ever: “the gravitational pull of biomass is creating new constellations of corporate convergence across diverse industry sectors”². The new joint ventures between corporate giants are looking to take advantage of the search for clean and carbon-neutral technology to develop hitherto unheard of synthetic products and synthetic organisms, based on the exploitation of organic matter.

Even before it was able to develop hybrids of plants on a commercial scale, and long before it was able to genetically modify them, the industrial-age agribusiness developed its lobbying skills. As I showed in Chapter 1, what I called the “biocapitalist food regime” paved its road to ever-growing profit with publicly-funded research, government subsidies and political support, the securing of strong corporate rights as well as intellectual property rights on living organisms, and finally, with free trade agreements that gave it access not only to the fragile markets, but also, more importantly, to the biodiversity spoils of the Global South. While the agribusiness transnational corporations enjoyed, and still enjoy, a measure of protectionism from their home countries, they helped “kick away the ladder” (of development, in Chang 2002) from the countries in the Global South.

In Chapter 1 and 4, I gathered indications that biocapitalism did not only overstep the boundaries of the world's ecosystems, or breach the barrier between species, but also

2 ETC Group 2011, ii.

dispossessed and disqualified the original care-takers of agricultural land. Agro-industry now dictates *what* is produced, *how* it is produced, and *where* it is produced, controlling both the in- and outputs of farming. The expansion of the rights of TNCs occurred simultaneously with the shrinking of the rights of farmers and people in general. An example of the erosion of social and economic rights is the prohibition, inscribed in the UPOV (plant variety protection) convention, for farmers to save seeds that they have bought. Most, if not all, of the bilateral free trade agreements that the USA celebrates with countries in the Global South, include a clause for a “seed law”, restricting or prohibiting the use and reproduction of local seeds whenever there is a commercial “alternative” available.

The globalised food system has become the epitome of a capitalist economy. The tragic downside of the success in accumulating capital beyond the biological barriers that agriculture poses, is the fact that, like in other resource-based industries, the capitalist solution in agriculture can only create wealth for some, while the majority remains in misery. Also, like in other industries, while profits are privatised, costs are socialised, spelling disaster for the financially insecure as much as the environment. But unlike other industries, this power imbalance ironically takes away the capacity to provide in their own food from the primary producers of food, both the smallholder farmers and the raw agricultural commodities exporting countries. After all, the objective of a global agri-food sector is trade, not food, and the primary concern is to ensure property rights over the key elements of the agri-food chain, not to fight hunger (Friedmann 2005).

How, then, to summarise the political economy of food that emerges from a critical analysis of the modern food system and of the behaviour of some of its main actors? Having observed the trend of commodification of what strictly speaking constitutes a commons—land, water, seeds, food—its subsequent privatisation as well as the increasing privatisation of the knowledge associated with the commons through patenting, and the parallel legitimisation process of the previous two activities through intense lobbying, I am reminded of Polanyi’s assertion that “laissez-faire was planned; planning was not”³. I believe his idea of a double movement still largely applies, with the laissez-faire project being counter-balanced and even

3 Polanyi 1944/ 2001, 147

slowed down by attempts to re-embed the economy in society. But my discourse analysis revealed a split in the counter-movement, almost constituting a triple movement. The countermovement to neoliberalism consists on the one hand of people and organisations that want to reform and/or mitigate the capitalist economy, the group I have called “social capitalists”, and on the other hand of a more radical, albeit heterogeneous group, which desires changes of a more systemic nature, and which I have called the “radical ecological democrats”. The triple movement shows that capitalism is proving very adept at stretching the limits to growth, as exemplified by the discourse of the “trade hegemonic bloc”, whose defenders continue to search for market- and technological fixes for the un-sustainability of the food system that they have reluctantly had to recognise. They take refuge in new concepts that hide old practices, such as “climate-smart” agriculture, the “green economy”, the “bioeconomy”, and “sustainable intensification”.

Concurrently, society continues resisting its complete reduction to market dynamics, in fact, society is proving to be the ultimate “recalcitrant sector”. The social capitalists are willing to give up some of their wealth to heal the gross inequities and injustices of the modern food system. They are tentatively embracing new views of agriculture, among these the science and practice of agro-ecology, and the idea of local food sovereignty for vulnerable communities. They have taken the step to embrace more ambitious goals, such as zero hunger, zero poverty, and full equality for women. However, they stop the buck at overt autonomy of peoples, communities, or countries in the shaping of their food systems, when this impacts the global food system. They also still see corporations as “stakeholders” and “partners”, even though, so far, agribusiness and public sector partnerships have yielded benefits mostly for the former.

Finally, the radical ecological democrats are significantly more critical and go significantly deeper in their analysis and demands. This group is generally made up of people who are unburdened by a dependence on powerful governments or on powerful industrial interests. They either live a subsistence lifestyle (identifying as peasants or indigenous peoples) or defend people who live that way. This is why they add, to the basic tenets of ecological sustainability and social equity that social capitalists also recognise, values that are part of a vision of an alternative world, such as the respect for diversity and pluralism, the need for

cooperation instead of competition, the assignment of responsibilities to rights (ethical citizenship), the recognition of the dignity of labour, the acknowledgement of the subsistence economy—which sustains most small farmers and rural populations—and finally, a new conceptualisation of the "good life" (Buen Vivir) as "simple living and the qualitative pursuit of happiness"⁴.

My thesis has been a quest for the ecological-democratic quality—the degree to which decision-making is responsive both to its *demos* and to the environmental and social challenges of our time—of decision-making in the modern food system. To answer my question, I developed a framework for assessing this ecological-democratic quality, based on an analysis of theories and proposals for “substantive” democracy. I believe that the “substantiveness” of a democratic model depends on how close it is to fulfilling its original promise of “rule of the people”. Ecological-democratic quality is obtained, in my conceptualisation, by grounding democracy in the human activity of food and basic needs production, while making it both socially and ecologically responsive to its *demos*. My insight derives from having observed the political economy of food, from its genesis at the beginning of the industrial revolution to its current “life sciences” form.

I found agriculture and food to be at the heart of the commercial society, which at the same time has embraced a mixture of liberal democracy and supranational rule-making as its preferred social arrangement, creating a democratic gap in decision-making. I also found agriculture to be both a source and solution of major challenges that humanity is facing, most prominently persistent hunger and poverty, climate change, biodiversity loss, and systemic pollution, which together constitute the ecological gap. Finally, agriculture is at the centre of a conflict for resources, especially land and water, but increasingly also seeds and knowledge. This conflict materialises as a highly unequal battle between, on the one hand, TNCs and the governments that often back them, and on the other, extremely vulnerable social groups, generating tremendous injustices and increasingly resulting in violence.

The era of globalisation has brought to the fore a contradiction between the simultaneous practice of state-bounded democracy and a weak respect for democratic values at the global

4 Kothari 2009, 404.

scale. The primacy of trade rules over national laws has created severe inequalities between peoples living in different parts of the world, and between two or more new groups or classes: on the one hand, a dominant class, as also suggested by Sklair (2001)—made up of the bureaucrats of supranational supervising institutions, politicians of trade-leading countries, executives of transnational corporations, the services and media professionals that support them, and to a certain degree the middle classes that depend on the former four groups—and on the other hand, a heterogeneous class consisting of all those that have been left out or subjugated by the dominant class. The dominant class secures its power firstly by relying on the path dependence that characterises the global growth economy—which locks it in institutions that are favourable to a global elite⁵—and secondly by fomenting the "culture-ideology of consumerism"—persuading people that "the business of society is business". Within the underclasses we can find the new "global untouchables", most of whom are from the rural world: peasants, indigenous peoples, and migrants. Not a class as such, but without a doubt an actor to be reckoned with, are the dissident members of Sklair's transnational capitalist class, members who are mostly from the middle-class but who have joined, helped create or at least animate, the social and environmental justice movements that are resisting the TCC all over the world.

In the commercial society, our democracies have become very thin, to use Barber's words. "Thin" democracies that are based on an economic rationale have no incentive to adequately feed the world, especially those who can't afford what's offered on sale. I used my exploratory democratic framework to assess the modern food system, based on documentary indicators, and on the food policies proposed by nine different food actors in the global system, to see if my political economic reflection on the food system could be corroborated according to more systematic criteria. My final framework retained the best ideas and practices from a large number of democratic thinkers. Collectively they opened up several avenues to the "deepening" of democracy.

A rights-based approach focuses on essential human rights and proceeds to expand them as far as they will logically and morally stretch, adding criteria of democratic quality that go beyond

5 As also demonstrated by Stone Sweet and Sandholtz (1997) and Habermas (1992).

the classical dimensions of freedom and equality. Food sovereignty may be considered a radical outgrowth of the rights-based approach to democratising the food system, combining it with elements of commons and radical ecological democracy. Food sovereignty places the needs of primary food producers at the core of food system decision-making, over the demands of markets and corporations. But developing rights is not sufficient, we must conquer first and foremost the “right to have rights”, as Arendt warned after the Second World War left many people state-less. The existence of rights does not guarantee that they will be respected, as has been shown time and again.

Republicanists believe the solution lies in an active citizenship, i.e. in the elevation of political participation to the main democratic dimension. They neither romanticise public life as the playground of associative life nor humans as naturally cooperative and solidary. They believe humans have to strive to be citizens, while enjoying equal status in dignity and freedom. Their option has the downside that it requires an a priori significant upgrade in the political and civic education of people.

Others have proposed creating an economic democracy to reign in the excesses of ruling elites, whether economic or political. Solutions that I looked at vary from elevating workers to owners of the means of production, restricting private ownership of the means of production to small-scale enterprises, or creating a “Machiavellian democracy”⁶, with modern tribunates from whence the wealthy are excluded and with political trials to judge policies.

Another way to go is to elevate essential resources to the status of commons. Commons democrats believe that when democracy and economy are grounded in a shared responsibility for the commons, this may facilitate the creation of spaces of social autonomy where state and market have subordinated roles. The expectation is that by bringing the potential victims of environmental degradation within the political process, not only are fairness and legitimacy of environmental decision-making improved, but also its quality, in terms of the effective protection of natural resources and satisfaction of those that depend on them.

6 McCormick 2011.

Ecological democrats share the idea of a commons, but also call attention to the need for realising environmental justice, understood as the fair distribution of benefits versus environmental risks and harms across social groups. They premise a direct link between economic arrangements and social and environmental inequities, and are therefore sceptical of simple so-called “governance” or “public participation” solutions, believing inclusion will have to be more active. Decision-making by largely self-selected groups through governance and public participation approaches has become a depoliticised activity, which ends up mostly serving the interests of the state, supra-state institutions, and large economic entities that have often already made their decision and are merely looking for legitimation.

Finally, radical ecological democrats adopt the full spectrum of democratic dimensions that I developed and presented in Table 1. Some of the attributes that I chose, such as cognitive justice, social legitimacy (in the sense that it is used in this research)⁷, social control over resources, Rights of Nature, and altruism, were coined by the thinkers of the radical ecological democracy movement, among them Shiva and Kothari.

The title of my dissertation is “a global food polity”. I have purposefully only referred to a food polity as a goal. My analysis did not reveal support for the existence of a global food polity, in its original sense of a democratic commonwealth, common government, or citizen body applied to the organisation of agriculture and food. I found strong indicators for a political economy of food, i.e. the social, political, and economic dynamics that tie food actors and food agents together in the modern food system. This political economy is strongly biased towards a political-economic elite, which enjoys considerable support, including culturally, from bureaucrats, scientists, professionals, and conventional media. The political economy as a whole scores worse on any of my indices of ecological-democratic quality, even according to the most basic of democratic attributes, than the policy proposals made by prominent food actors in the modern food system. It seems that only the most vulnerable groups (and similarly, the most vulnerable natural organisms or ecosystems) are deemed worthy of protection, all others are expected to fend for themselves, in true liberal fashion. As I said in my introduction to Part 2, after more than twenty years of international promises in matters of

⁷ Dewey 1925-1927/ 2012, 22: "the burden of proof must rest with those who seek less rather than more inclusive arrangements".

environmental and social justice, the world is both different and the same. It is different because the social struggle for equity in the food system has been globally recognised and important advances have been made in identifying the factors that underlie persistent hunger and poverty. The right to food has been inscribed in several national constitutions and is an integral part of international agreements. A more prominent role, albeit largely consultative, has been granted to civil society groups in decision-making. But it is also the same because, while food production continues hitting all-time highs, and while drug, chemical, and biotech behemoths, which own patents on our food and other organic resources, continue to merge in multi-billion dollar deals, half of the world is not getting the diet they need and an equal amount still lives with less than two dollars a day, while at least a third of the world is truly destitute. It is additionally the same because, under the guise of “multi-stakeholder partnerships”, an economic elite continues to wield an equal vote to the people it is dispossessing from their common resources, while they mask their continuing wealth and resource accumulation with terms such as “green economy” and “climate-smart agriculture”, which have even infiltrated agronomy and environmental science courses.

It seems that our recent history, which coincides with that of the capitalist creed, is one of advancing two rungs on the ladder of enlightenment, and subsequently descending one, while sometimes slipping down two or three—especially in times of acute economic, financial, social, and environmental crises, the likes of which we have already seen numerous times in the past decades, and of which we are bound to see more. Polanyi’s double movement, which I have given an extra fork on one end, manifests itself in every aspect of the modern food system. While agribusiness celebrates land- and exploitation deals in vulnerable countries, they also sit at the table with supranational agencies to promise voluntary guidelines for responsible land tenure. Conversely, when governments of the world decide to definitively end hunger, poverty, and ecosystem degradation, they also accept “trade caveats” that limit their action to achieve these goals. My hope is, since I have identified three general, distinct views on food politics in the political economy of the modern food system—of which one embraces the full spectrum, and the other a significant part, of ecological-democratic quality—that their conjoint efforts will create the necessary leverage to pull humanity out of the commercial society, towards a food democracy. Since the concepts and practices of food

sovereignty, agroecology, right to food, and the restriction of corporate rights, are not compatible with the acceptance of “trade caveats”, it is possible that by attempting to erase the glaring contradictions in decision-making on food, the more inclusive projects will gain the upperhand. I propose that decision-making on matters of commons always be verified as to its ecological-democratic quality, to avoid the prolongation of false promises that do no more than conceal the true intentions of economic elites.

In this dissertation I have offered my best analysis of food politics at the time of this particular cut-off point, in the hope that it contributes to furthering our critical understanding of the dynamics of food politics in a global, industrialised, and currently highly neoliberal world, and of the criteria that could help measure whether our decision-making is furthering the goals of substantive equity and sustainability, in the sense of economic, ecological, and social justice. My field of research was knowingly too broad to be able to derive specific conclusions or make specific recommendations. What I have mostly achieved is a contribution to the conceptualisation of the modern food system as a political economy of food, as well as to the conceptualisation of a democratic and ecological gap in food politics. I have also developed a comprehensive exploratory framework for the achievement of ecological-democratic quality, which I tested against documentary and discourse data, finding that the only attributes capable of distinguishing between the many “equity and sustainability” rhetorics are those that defend the autonomy of peoples, the rights of organisms other than people, and the exclusion of political-economic elites from decision-making on primary resources. All of the classical democratic attributes (freedom, equality, accountability, responsiveness) and many of the more progressive attributes that have been promoted in the past decades, relating to popular control (in particular active inclusion, deliberation, and political participation) have been adopted into the discourses of even the staunchest defenders of neoliberalism. Where what I have called the “systemic gap” becomes truly apparent is when policies and practices are tested against their capacity for incorporating contestation, diversity, and altruism, their ability to self-confront, and finally, to what degree they will allow underclasses to self-organise in the management of natural resources. By confronting food policies and practices with these radical attributes, the mask drops and a space opens up for alternative world visions to take hold.

I hope that my ecological-democratic framework will be picked up by scholars and practitioners from the schools of food sovereignty and radical ecological democracy so that it may be tested in more controlled settings, taking care to include the underclass to which I have alluded but not been able to interact with, so as to refine the ecological-democratic attributes, complete their operationalisation, and gain a more complete understanding of those attributes that are the best predictors of substantive democratic decision-making styles.

References

- Acosta, Alberto and Esperanza Martinez (eds.). 2009. *El Buen Vivir: Una vía para el desarrollo*. Quito: Ediciones Abya-Yala.
- Altieri, Miguel A. 2009. "Agroecology, small farms, and food sovereignty". *Monthly review*, no. 61 (3): 102-113.
- Altieri, Miguel A. and Laura C. Merrick. 1997. In situ conservation of crop genetic resources through maintenance of traditional farming systems. *Econ. Bot.*, no. 41: 86–96.
- Altieri, Miguel A., Clara Nicholls, and Fernando Funes. 2012. "The scaling up of agroecology: spreading the hope for food sovereignty and resiliency". Position paper for the Sociedad Científica Latinoamericana de Agroecología. Retrieved from: http://www.wur.nl/upload_mm/9/9/7/74e224d3-530e-416e-8729-aa9978638495_Rio20.pdf (accessed 12 December 2016).
- Altieri, Miguel and N. Uphoff. 1999. *Report of Bellagio Conference on Sustainable Agriculture*. Cornell, USA: Cornell International Institute for Food, Agriculture and Development.
- Amelung, Nina and Britta Baumgarten. 2017. "The transnational perspective of political participation: Linkages and differences between social movement and public participation studies". *Global Society*, no. 31 (1): 3-22.
- Anderson, Molly D. 2008. "Rights-based food systems and the goals of food systems reform". *Agriculture and Human Values*, no. 25 (4): 593-608.
- Anseeuw, W., L. Alden Wily, L. Cotula, and M. Taylor. 2012. *Land Rights and the Rush for Land: Findings of the Global Commercial Pressures on Land Research Project*. Rome: ILC.
- Antonio, Robert J., and Douglas Kellner. 1992. "Communication, modernity, and democracy in Habermas and Dewey." *Symbolic Interaction*, no. 15 (3): 277-297.
- Antoniou, M., M. E. M. Habib, C. V. Howard, R. C. Jennings, C. Leifert, R. O. Nodari, C. Robinson, and J. Fagan. 2011. *Roundup and birth defects: Is the public being kept in the dark?* Earth Open Source, June 2011.
- Appadurai, Arjun. 2001. "Deep democracy: urban governmentality and the horizon of politics." *Environment and Urbanization*, no. 13 (2): 23-43.
- Arnsperger, Christian, and Yanis Varoufakis. 2006. "What Is Neoclassical Economics? The three axioms responsible for its theoretical oeuvre, practical irrelevance and, thus, discursive power." *Panoeconomicus* 53, no. 1: 5-18.
- Avritzer, Leonardo. 2009. *Democracy and the public space in Latin America*. Princeton University Press. Previously published in paperback in 2002.
- Bakan, Joel. 2005. *The corporation: the pathological pursuit of profit and power*. UK: Constable. First published in the USA by Free Press in 2004.
- Barber, Benjamin R. 2003. *Strong democracy: Participatory politics for a new age*. Berkeley and Los Angeles: University of California Press. Twentieth anniversary edition with a new preface. First published in 1984.
- Barrett, Christopher B., Marc F. Bellemare, and Janet Y. Hou. 2010. "Reconsidering conventional explanations of the inverse productivity–size relationship". *World Development*, no. 38 (1): 88-97.
- Beardsworth, Alan, and Teresa Keil. 1997. *Sociology on the Menu: An Invitation to the Study of Food and Society*. USA and Canada: Routledge.
- Beaulac, Julie, Elizabeth Kristjansson, and Steven Cummins. 2009. "A systematic review of food deserts, 1966-2007". *Prev Chronic Dis* 6, no. 6 (3).

A global food polity

- Beetham, David. 2013. *The legitimation of power*. UK: Palgrave Macmillan. First published 1991.
- Beetham, David (ed.). 1994. *Defining and Measuring Democracy*. Sage Modern Political Series, Volume 36. Great Britain: Sage Publications.
- Beetham, David, Edzia Carvalho, Todd Landman, and Stuart Weir. 2008. *Assessing the Quality of Democracy: A Practical Guide*. Stockholm: International IDEA.
- Beierle, Thomas C. 2002. "The quality of stakeholder-based decisions". *Risk analysis*, no. 22 (4): 739-749.
- Benbrook, Charles M. 2012. "Impacts of genetically engineered crops on pesticide use in the US--the first sixteen years." *Environmental Sciences Europe* no. 24 (1).
- Benbrook, Charles. 2009. *Impacts of Genetically Engineered Crops on Pesticide Use in the United States: The First Thirteen Years*. A report from The Organic Center, USA.
- Bender, Barbara. 1978. "Gatherer-Hunter to Farmer: A Social Perspective". *World Archaeology*, no. 10 (2): 204-220.
- Bernstein, Steven. 2004. "Legitimacy in global environmental governance". *Journal of International Law and International Relations* no. 1 (1-2): 139-166.
- Best, Edward. 2005. "Supranational institutions and regional integration". Paper presented at the Workshop on Experiences in Processes of Regional Integration and Impacts on Poverty, Lima, 3-4 March.
- Bevir, Mark. 2012. *Governance: A Very Short Introduction*. Hampshire: Oxford University Press.
- Bohman, James. 1996. *Public deliberation, pluralism, complexity and democracy*. London: MIT Press.
- Bohman, James and Rehg, William. 2014. "Jürgen Habermas". In *The Stanford Encyclopedia of Philosophy* (Fall 2014 Edition), Edward N. Zalta (ed.). Available: <http://plato.stanford.edu/archives/fall2014/entries/habermas/> (accessed July 2016).
- Bonanno, Alessandro. 2004. "Globalization, transnational corporations, the state and democracy". *International Journal of Sociology of Agriculture and Food*, no. 12 (1): 37-48.
- Bonanno, Alessandro, and Lawrence Busch (eds.). 2015. *Handbook of the International Political Economy of Agriculture and Food*. Edward Elgar Publishing.
- Bonanno, Alessandro, and Douglas H. Constance. 2001. "Globalization, Fordism, and Post-Fordism in Agriculture and Food: A Critical Review of the Literature". *Culture & Agriculture*, no. 23 (2): 1-18.
- Bookchin, Murray. 2015. *The Next Revolution: Popular Assemblies and the Promise of Direct Democracy*. US: Verso Books.
- Bookchin, Murray. 1976. "Radical agriculture". In *Radical Agriculture*, Richard Merrill (ed.). New York: Harper and Row, 3-13.
- Boyd, Danah, and Kate Crawford. 2012. "Critical questions for big data: Provocations for a cultural, technological, and scholarly phenomenon". *Information, Communication & Society*, no. 15 (5): 662-679.
- Brunori, Gianluca, Francesca Galli, Dominique Barjolle, Rudolf van Broekhuizen, Luca Colombo, Mario Giampietro, James Kirwan et al. 2016. "Are Local Food Chains More Sustainable than Global Food Chains? Considerations for Assessment". *Sustainability*, no. 8 (5): 449.
- Campbell, David F. J. 2008. *The Basic Concept for the Democracy Ranking of the Quality of Democracy*. Vienna: Democracy Ranking.

- CAP - Confederação dos Agricultores Portugueses. 2015. *Visão 2020 Agricultura Portuguesa | Vision 2020 for Portuguese Farming*. Presentation.
- Carayannis, Elias G., and David F.J. Campbell. 2009. "'Mode 3' and 'Quadruple Helix': toward a 21st century fractal innovation ecosystem". *International Journal of Technology Management*, no. 46 (3-4): 201-234.
- Carpini, Michael X. Delli, Fay Lomax Cook, and Lawrence R. Jacobs. 2004. "Public deliberation, discursive participation, and citizen engagement". *Annual Review of Political Science*, no. 7: 315-344.
- Carson, Rachel. 1962. *Silent Spring*. Boston, MA: Houghton Mifflin.
- Castro, Josué de. 1965. *Geografia da Fome; O Dilema Brasileiro: Pão ou Açúcar*. São Paulo: Brasiliense (9ª edição).
- Chadwick, Andrew. 2007. "Digital network repertoires and organizational hybridity". *Political Communication*, no. 24 (3): 283-301.
- Chambers, Simone. 2003. "Deliberative democratic theory". *Annual Review of Political Science*, no. 6 (1): 307-326.
- Chang, Ha-Joon. 2002. *Kicking Away the Ladder: Development Strategy in Historical Perspective*. Anthem Press.
- Chomsky, Noam, David Barsamian, and Arthur Naiman. 1998. *The common good*. Monroe, ME: Odonian Press.
- Clapp, Jennifer, and Doris A. Fuchs (eds.). 2009. *Corporate power in global agrifood governance*. Cambridge, Mass. And London: MIT Press.
- Cohen, Joshua. 2003. "Deliberation and democratic legitimacy". In *Debates in Contemporary Political Philosophy: An Anthology*, Derek Matravers & Jonathan E. Pike (eds.). Routledge, in Association with the Open University: 342-360.
- Cohen, Joshua. 1997a. "Deliberation and democratic legitimacy". In *Deliberative democracy: Essays on Reason and Politics*, James Bohman and William Rehg (eds.). Cambridge, Mass: MIT Press, 67-91.
- Cohen, Joshua. 1997b. "Procedure and substance in deliberative democracy". In *Deliberative democracy: Essays on reason and politics*, James Bohman and William Rehg (eds.). Cambridge, Mass: MIT Press, 407-438.
- Cohen, Joshua, and Archon Fung. 2004. "Radical democracy". *Swiss Journal of Political Science*, no. 10 (4): 23-34.
- Collier, David, and Steven Levitsky. 1997. "Democracy with adjectives: Conceptual innovation in comparative research". *World Politics*, no. 49 (3): 430-451.
- Committee on World Food Security. 2014. *Principles for Responsible Investment in Agriculture and Food Systems*. Forty-first session of the Committee on World Food Security, Rome, Italy, 13-18 October 2014. Available: <http://www.fao.org/3/a-ml291e.pdf> (accessed 15 June 2015).
- Comprehensive Assessment of Water Management in Agriculture. 2007. *Water for Food, Water for Life: A Comprehensive Assessment of Water Management in Agriculture*. London: Earthscan, and Colombo: International Water Management Institute.
- Dahl, Robert A. 2005. "What Political Institutions Does Large-Scale Democracy Require?" *Political Science Quarterly* no. 120 (2): 187-197.
- Dahl, Robert A. 1998. *On Democracy*. New Haven and London: Yale University Press.
- Dahl, Robert A. 1985. *A Preface to Economic Democracy*. Berkeley: University of California Press.

A global food polity

- Delicado, Ana, and Maria Eduarda Gonçalves. 2007. "Os portugueses e os novos riscos: resultados de um inquérito". *Análise Social*, no. 42 (184): 687-718.
- Demaria, Federico, Francois Schneider, Filka Sekulova, and Joan Martinez-Alier. 2013. "What is degrowth? From an activist slogan to a social movement." *Environmental Values* no. 22, (2): 191-215.
- d'Entrevos, Maurizio Passerin. 2014. "Hannah Arendt". In *The Stanford Encyclopedia of Philosophy* (April 2014 Edition), Edward N. Zalta (ed.). Available: <http://plato.stanford.edu/archives/sum2014/entries/arendt/> (accessed 6 May 2016).
- De Schutter, Olivier. 2014. *Final report: The transformative potential of the right to food*. Report of the United Nations Special Rapporteur on the Right to Food, submitted at the twenty-fifth session of the Human Rights Council, 24 January 2014.
- De Schutter, Olivier. 2010. *Agroecology and the right to food*. Report of the United Nations Special Rapporteur on the Right to Food, submitted to the Human Rights Council on 20 December 2010.
- Deutsch, Morton. 1975. "Equity, equality, and need: What determines which value will be used as the basis of distributive justice?" *Journal of Social Issues*, no. 31 (3): 137-149.
- Dewey, John. 2012. *The Public and its Problems: An Essay in Political Inquiry*. USA: Penn State Press. Edited by Melvin L. Rogers. Reprinted from *The Collected Works of John Dewey: The Later Works*, Volume 2: 1925-1927.
- Dewey, John. 1939. "Creative Democracy: The Task before Us". In *John Dewey and the Promise of America*, Progressive Education Booklet No. 14. Columbus, Ohio: American Education Press. Retrieved from: http://archive.aacu.org/meetings/annualmeeting/AM13/documents/WyeReadingsDewey_CreativeDemocracy_000.pdf (accessed 11 November 2016).
- Diamond, Jared. 1987. "The worst mistake in the history of the human race." *Discover Magazine*, May 1987, 64-66.
- Diamond, Jared. 1999. *Guns, Germs, and Steel: The Fates of Human Societies*. New York and London: W.W. Norton & Company.
- Diamond, Larry Jay, and Leonardo Morlino (eds). 2005. *Assessing the Quality of Democracy*. Baltimore: Johns Hopkins University Press.
- Dietz, Thomas, Richard York, and Eugene A. Rosa. 2001. "Ecological democracy and sustainable development". Paper presented at the Open Meeting of the Human Dimensions of Global Environmental Change Research Community, Rio de Janeiro, Brazil, October 8.
- Dimitri, Carolyn, Anne Effland, and Neilson Conklin. 2005. *The 20th century transformation of U.S. agriculture and farm policy*. United States Department of Agriculture, Economic Research Service, Electronic Inform. Bull. No. 3, June 2005.
- Druker, Steven M. 2015. *Altered Genes, Twisted Truth: How the Venture to Genetically Engineer Our Food has Subverted Science, Corrupted Government and Systematically Deceived the Public*. USA: Clear River Press.
- Drummond, Erica Anne. 2012. "Global Governance and Food Security Discourses". Master of Arts thesis in Geography, Carleton University, Ottawa.
- Dryzek, John S. 2005. *The Politics of the Earth: Environmental Discourses*. Oxford: Oxford University Press. First published 1997 by Oxford University Press.
- Dryzek, John S. 2000. *Deliberative Democracy and Beyond: Liberals, Critics, Contestations*. USA: Oxford University Press.

A global food polity

- Dryzek, John S. 1999. "Global ecological democracy". In *Global ethics and environment*, edited by Nicholas Low. London, New York: Routledge, 264-282.
- Dryzek, John S., and Aviezer Tucker. 2008. "Deliberative innovation to different effect: Consensus conferences in Denmark, France, and the United States". *Public Administration Review*, no. 68 (5): 864-876.
- Dubreuil, Gilles Hériard, and Stéphane Baudé. 2008. "Innovative Approaches to Stakeholder Involvement in Risk Governance. Lessons from TRUSTNET IN ACTION European Research Project". In *European Risk Governance: Its Science, its Inclusiveness and its Effectiveness*, Ellen Vos (ed.). Mannheim: CONNEX.
- Durkheim, Emile. 1933. *The Division of Labour in Society*. New York: The Free Press.
- Ebbinghaus, Bernhard, and Philip Manow. 2001. "Studying varieties of welfare capitalism". In *Comparing Welfare Capitalism, Social Policy and political economy in Europe, Japan and the USA*, B. Ebbinghaus and P. Manow (eds.). London: Routledge, 1-26.
- Edelman, Marc. 2013. "What is a peasant? What are peasantries? A briefing paper on issues of definition". Briefing prepared for the First session of the Intergovernmental Working Group on a United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, Geneva, 15-19 July.
- El Ouali, Abdelhamid. 2012. *Territorial Integrity in a Globalizing World: International Law and States' Quest for Survival*. Springer Science & Business Media.
- Elster, Jon (ed.). 1998. *Deliberative democracy*. UK: Cambridge University Press.
- European Environment Agency. 2013. *Late lessons from early warnings: Science, Precaution, Innovation*. Environmental issue report No 1-2013. Office for Official Publications of the European Communities.
- ETC Group. 2014. *The New Biomasssters. Synthetic Biology and The Next Assault on Biodiversity and Livelihoods*. ETC Group Communiqué n° 104. Retrieved online from: http://www.etcgroup.org/sites/www.etcgroup.org/files/biomasssters_27feb2011.pdf (accessed 12 October 2016).
- ETC Group. 2013. *The state of corporate concentration: Putting the cartel before the horse... and farm, seeds, soil, peasants, etc. Who will control agricultural inputs?* ETC Group Communiqué n° 111. Retrieved online at: <http://www.etcgroup.org/sites/www.etcgroup.org/files/Communique%CC%81%2011%204%20sep%203%20pm.pdf> (accessed 15 September 2015).
- ETC Group (2011). *Who will control the Green Economy?* ETC Group Communiqué n° 107. Retrieved online at: http://www.etcgroup.org/files/publication/pdf_file/ETC_wwctge_4web_Dec2011.pdf (accessed 12 June 2012).
- European Commission. 2015. *You are part of the food chain: key facts and figures on the food supply chain in the European Union*. EU Agricultural Markets Briefs No 4, June 2015.
- Faber, Daniel, and Deborah McCarthy. 2003. "Neo-liberalism, globalization and the struggle for ecological democracy: linking sustainability and environmental justice". In *Just sustainabilities: Development in an unequal world*, Julian Agyeman, Robert D. Bullard, and Bob Evans (eds.). London: Earthscan, 38-63.
- Fairclough, Norman. 2001. *Language and power*. Malaysia: Pearson Education. First published 1989.
- FAO - Food and Agriculture Organization. 2016a. *Food and agriculture: key to achieving the 2030 agenda for sustainable development*. Rome: FAO.
- FAO. 2016b. *Food Outlook: Biannual Report on Global Food Markets*. Rome: FAO, June 2016. Available: <http://www.fao.org/3/a-i5703e.pdf> (accessed 2 December 2016).
- FAO. 2016c. *Save and grow in practice: maize, rice, wheat. A guide to sustainable cereal production*. Rome: FAO. Available: <http://www.fao.org/3/a-i4009e.pdf> (accessed 4 December 2016).

- FAO. 2015. *The State of Food and Agriculture. Social protection and agriculture: breaking the cycle of rural poverty*. Rome: FAO.
- FAO. 2014. *The State of Food and Agriculture. Innovation in family farming*. Rome: FAO.
- FAO. 2013. *Food security and food sovereignty*. Base document for discussion prepared by Gustavo Gordillo and Obed Méndez Jerónimo.
- FAO. 2012a. Greening the economy with agriculture (GEA): Taking stock of potential, options and prospective challenges. FAO Concept Note for RIO+20. Retrieved from <http://uncsd.iisd.org/news/fao-issues-concept-note-on-greening-the-economy-with-agriculture/> (accessed 15 June 2012).
- FAO. 2012b. *Smallholders and family farmers*. Factsheet by the Food and Agriculture Organization of the United Nations. Rome: FAO.
- FAO. 2012c. *State of World's Forests 2012*. Rome: FAO.
- FAO. 2012d. *Statistical Yearbook 2012: world food and agriculture*. Rome: FAO.
- FAO. 2011. *Global food losses and food waste – Extent, causes and prevention*. Rome: FAO.
- FAO. 2006. *Food Security*. Policy Brief, June 2006, Issue 2.
- FAO. 2004. "What is agrobiodiversity?" Factsheet from the training manual *Building on Gender, Agrobiodiversity and Local Knowledge*. Rome: FAO.
- FAO. 2003. *World agriculture: towards 2015/2030, an FAO perspective*. Edited by Jelle Bruinsma. London: Earthscan.
- FAO. 2002. *The State of Food Insecurity in the World 2002*. Rome: FAO.
- FAO, IFAD, and WFP. 2015. *The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress*. Rome, FAO. Key messages available: <http://www.fao.org/hunger/key-messages/en/> (accessed 15 September 2015).
- FAO, WFP, and IFAD. 2012. *The State of Food Insecurity in the World 2012. Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition*. Rome: FAO.
- FAO, WFP, and IFAD. 2011. *The State of Food Insecurity in the World 2011. How does international price volatility affect domestic economies and food security?* Rome: FAO.
- Farrelly, Michael. 2015. *Discourse and Democracy: Critical Analysis of the Language of Government*. Routledge critical studies in discourse. New York and London: Routledge.
- Felt, Ulrike, and Maximilian Fochler. 2008. "The bottom-up meanings of the concept of public participation in science and technology". *Science and Public Policy*, no. 35 (7): 489-499.
- Fish, Laurel. 2013. "Homogenizing community, homogenizing nature: An analysis of conflicting rights in the rights of nature debate". *Social Science*, Stanford University: 6-11. Available: <http://web.stanford.edu/group/journal/cgi-bin/wordpress/wp-content/uploads/2013/06/Fish-.pdf> (accessed 13 May 2016).
- Fishkin, James, and Peter Laslett (eds.). 2003. *Debating Deliberative Democracy*. Singapore: Blackwell Publishing.
- Foley, Jonathan A., Ruth DeFries, Gregory P. Asner, Carol Barford, Gordon Bonan, Stephen R. Carpenter, F. Stuart Chapin et al. 2005. "Global consequences of land use". *Science*, no. 309 (5734): 570-574.

- Fonseca, Susana, Luísa Schmidt, and Ana Delicado. 2015. "Consulta mundial sobre clima e energia: os efeitos da participação nos cidadãos". In *Ambiente, Território e Sociedade: Novas Agendas de Investigação*, João Ferrão and Ana Horta (coord.). Lisboa: Imprensa de Ciências Sociais, 215-221.
- Fonte, Maria. 2002. "Food systems, consumption models and risk perception in late modernity". *International Journal of Sociology of Agriculture and Food*, no. 10 (1): 13-21.
- Ford, Paula B., and David A. Dziewaltowski. 2008. "Disparities in obesity prevalence due to variation in the retail food environment: three testable hypotheses". *Nutrition Reviews*, no. 66 (4): 216-228.
- Foresight. 2011. *The Future of Food and Farming*. Executive Summary of Final Project Report. London: The Government Office for Science.
- Foster, John Bellamy. 1999. "Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology". *American Journal of Sociology*, no. 105 (2): 366-405.
- Fotopoulos, Takis. 2000. "The limitations of life-style strategies: The ecovillage 'movement' is NOT the way towards a new democratic society". *Democracy & Nature*, no. 6 (2): 287-308. Available: http://www.democracynature.org/vol6/takis_trainer_reply.htm (accessed 9 May 2016).
- Fotopoulos, Takis. 1999. "CNS and 'Bookchin-ology'". *Democracy & Nature*, no. 5 (1). Available: http://www.democracynature.org/vol5/fotopoulos_cns.htm (accessed 10 May 2016).
- Fotopoulos, Takis, ed. 1997. *Towards an inclusive democracy: The crisis of the growth economy and the need for a new liberatory project*. London and New York: Cassell.
- Friedmann, Harriet. 2016. "Commentary: Food regime analysis and agrarian questions: widening the conversation." *The Journal of Peasant Studies*, no. 43 (4): 671-692.
- Friedmann, Harriet. 2009. "Moving food regimes forward: reflections on symposium essays". *Agriculture and Human Values*, no. 26 (4): 335-344.
- Friedmann, Harriet. 2005. "Feeding the empire: the pathologies of globalized agriculture". In *The Empire Reloaded: Socialist Register 2005*, Colin Leys, and Leo Panitch (eds.). London: Merlin, 124-143.
- Fuchs, Doris. 2005. "Commanding heights? The strength and fragility of business power in global politics." *Millennium-Journal of International Studies* no. 33 (3): 771-801.
- Funtowicz, Silvio O., and Jerome Ravetz. 1991. "A New Scientific Methodology for Global Environmental Issues". In *Ecological Economics: The Science and Management of Sustainability*, Robert Costanza (ed.). New York: Columbia University Press, 137-152.
- Funtowicz, Silvio, and Roger Strand. 2007. "Models of science and policy". In *Biosafety first: Holistic approaches to risk and uncertainty in genetic engineering and genetically modified organisms*, Terje Traavik, and Li Ching Lim (eds.). Trondheim: Tapir Academic Press, 263-278.
- G20 Development Working Group for Food Security and Nutrition. 2015. *Implementation plan of the G20 food security and nutrition framework*.
- Garcia, José Luís. 2006. "Biotecnologia e biocapitalismo global". *Análise Social*, no. 41 (181): 981-1009.
- Gaventa, John. 2006. "Triumph, deficit or contestation? Deepening the 'deepening democracy' debate". Working paper no. 264. Brighton: IDS.
- Geuna, Marco. 2013. "The tension between law and politics in the modern republican tradition". In *Republican Democracy: Liberty, Law and Politics*, Andreas Niederberger and Philipp Schink (eds.). Great Britain: Edinburgh University Press, 5-40.

- Giampietro, Mario. 2002. "The precautionary principle and ecological hazards of genetically modified organisms". *AMBIO: A Journal of the Human Environment*, no. 31 (6): 466-470.
- Giner, Salvador. 2012. *El origen de la moral: ética y valores en la sociedad actual*. Barcelona: Península.
- Giner, Salvador. 1998. "Las razones del republicanismo". *Claves de Razón Práctica*, no. 81: 2-13.
- Goldman, Michael. 2006. *Imperial nature: The World Bank and struggles for social justice in the age of globalization*. USA: Yale University Press.
- Graeb, Benjamin E., M. Jahi Chappell, Hannah Wittman, Samuel Ledermann, Rachel Bezner Kerr, and Barbara Gemmill-Herren. 2015. "The state of family farms in the world." *World Development*, no. 87: 1-15. Retrieved from: <http://www.sciencedirect.com/science/article/pii/S0305750X15001217> (accessed 1 December 2016).
- GRAIN. 2016. *The global farmland grab in 2016: how big, how bad?* GRAIN report, June 2016.
- GRAIN. 2014. *Hungry for land: Small farmers feed the world with less than a quarter of all farmland*. GRAIN report, May 2014.
- Graham, John, Bruce Amos, Timothy W. Plumptre. 2003. *Governance principles for protected areas in the 21st century*. Report prepared for the Fifth World Parks Congress, Durban, South Africa, June 30. Canada: Institute on Governance.
- Green, Judith M. 1999. *Deep democracy: Community, Diversity, and Transformation*. USA: Rowman & Littlefield Publishers.
- Gottfried, Paul. 1994. "Thomas Hobbes and the natural law tradition". *History of European Ideas*, no. 18 (4): 632-633.
- Guimarães, Roberto, and Yuna Fontoura. 2012. "Muito ruído e poucas vozes: os discursos na Rio+ 20 e a governança global para o desenvolvimento sustentável". *Idéias*, no. 2 (5): 31-54.
- Gunnell, John G. 1982. "The Technocratic Image and the Theory of Technocracy". *Technology and Culture*, no. 23 (3): 392-416
- Habermas, Jürgen. 2008. *Between Naturalism and Religion: Philosophical Essays*. UK and USA: Polity. First published in German in 2005.
- Habermas, Jürgen. 1996. *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy*. Cambridge, MA: MIT Press. Translated by William Rehg.
- Habermas, Jürgen. 1992. "Citizenship and national identity: some reflections on the future of Europe". *Praxis International*, no. 12 (1):1-19.
- Habermas, Jürgen. 1991. *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Cambridge, MA: MIT Press.
- Habermas, Jürgen. 1979. *Communication and the evolution of society*. London: Heinemann.
- Hadenius, Axel. 1992. *Democracy and development*. Cambridge University Press.
- Hardin, Garrett. 1968. "The tragedy of the commons". *Science*, no. 162 (3859): 1243-1248.
- Harvey, David. 2005. *A Brief History of Neoliberalism*. Oxford University Press.
- Hassanein, Neva. 2003. "Practicing food democracy: a pragmatic politics of transformation". *Journal of Rural Studies*, no. 19 (1): 77-86.

A global food polity

- Hayden, Brian. 1990. "Nimrods, piscators, pluckers, and planters: the emergence of food production". *Journal of Anthropological Archaeology*, no. 9 (1): 31-69.
- Hendrickson, Mary K., and William D. Heffernan. 2002. "Opening spaces through relocalization: Locating potential resistance in the weaknesses of the global food system". *Sociologia Ruralis*, no. 42 (4): 347-369.
- Hester, Randolph T. 2006. *Design for Ecological Democracy*. Cambridge, MA: MIT Press.
- HLPE. 2013. *Investing in smallholder agriculture for food security*. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. Rome: HLPE.
- HLPE. 2011. *Land tenure and international investments in agriculture*. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. Rome: HLPE.
- Hodder, Ian. 1990. *The Domestication of Europe*. Oxford: Blackwell.
- Holt-Giménez, Eric. 2009. "From food crisis to food sovereignty: the challenge of social movements". *Monthly Review*, no. 61 (3): 142-156.
- Holt-Giménez, Eric and Patel, Raj. 2009. *Food Rebellions: The real story of the world food crisis and what we can do about it*. Oxford, UK: Fahumu Books and Grassroots International.
- Holt-Giménez, Eric and Peabody, Loren. 2008. *From food rebellions to food sovereignty: urgent call to fix a broken food system*. Food First Backgrounder, Spring 2008, Volume 14, Number 1. Institute for Food and Development Policy.
- Hont, Istvan. 2015. *Politics in Commercial Society: Jean-Jacques Rousseau and Adam Smith*. Edited by Béla Kapossy and Michael Sonenscher. Cambridge, Massachusetts and London, England: Harvard University Press.
- Horstink, Lanka. 2017. "Online Participation and the New Global Democracy: Avaaz, a Case Study". *Global Society*, no. 31 (1): 101-124.
- Horstink, Lanka. 2013. "Es sostenible si es comercializable: la brecha democrática y ecológica en el discurso del desarrollismo verde" | "Sustainable if tradeable: the democratic and ecological gap in the green developmentalism discourse". *Ecología Política*, no. 44 (January 2013): 15-20.
- Howard, Philip H. 2009. "Visualizing consolidation in the global seed industry: 1996–2008". *Sustainability*, no. 1 (4): 1266-1287.
- IAASTD. 2016. *Agriculture at a Crossroads: IAASTD findings and recommendations for future farming*. Germany: Foundation on Future Farming. Retrieved from: http://www.globalagriculture.org/fileadmin/files/weltagrarbericht/EnglishBrochure/BrochureIAASTD_en_web_small.pdf (accessed 15 September 2016).
- IAASTD (2009). *Agriculture at a Crossroads: Global Report*. International Assessment of Agricultural Science and Technology for Development. Washington, DC: Island Press.
- IAASTD (2009). *Agriculture at a Crossroads: Synthesis Report*. International Assessment of Agricultural Science and Technology for Development. Washington, DC: Island Press.
- IFAD and UNEP. 2013. *Smallholders, food security, and the environment*. International Fund for Agricultural Development.
- IFAD. 2010. *New realities, new challenges: new opportunities for tomorrow's generation*. Rural Poverty Report 2011. Rome: Quintily.
- International Forum for Agroecology. 2015. Declaration of the International Forum for Agroecology, Nyéléni, Mali, 27 February 2015. Available: <http://www.foodsovereignty.org/forum-agroecology-nyeleni-2015/> (accessed 12 October 2016).

A global food polity

- International Labour Office (ILO). 2012. *Global estimate of forced labour: results and methodology*. Report of the Special Action Programme to Combat Forced Labour (SAP-FL). ILO.
- IPCC. 2014. *Climate Change 2014: Synthesis Report*. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. Geneva, Switzerland: IPCC.
- Irwin, Alan. 2001. "Constructing the scientific citizen: science and democracy in the biosciences". *Public Understanding of Science*, no. 10 (1): 1-18.
- Jerónimo, Helena Mateus, and José Luís Garcia. 2011. "Risks, alternative knowledge strategies and democratic legitimacy: the conflict over co-incineration of hazardous industrial waste in Portugal". *Journal of Risk Research*, no. 14 (8): 951-967.
- Jerónimo, Helena M. 2006. "A peritagem científica perante o risco e as incertezas". *Análise Social*, no. 41 (181): 1143-1165.
- Johnston, Josée. 2008. "The citizen-consumer hybrid: ideological tensions and the case of Whole Foods Market". *Theory and Society*, no. 37 (3): 229-270.
- Keane, John. 2009. *The life and death of democracy*. London: Simon and Schuster.
- Keane, John. 2008. "Monitory democracy?" Paper prepared for the ESRC Seminar Series, "Emergent Publics", The Open University, Milton Keynes, 13-14 March.
- Klytchnikova, Irina I., Marc Peter Sadler, Robert Townsend, Svetlana Edmeades, Vikas Choudhary, Sarwat Hussain, Holger A. Kray, Erick C.M. Fernandes, Eugene Moses, James T. Cantrell, Xenia Zia Morales, and Michele Sue Pietrowski. 2015. *Future of Food : shaping a climate-smart global food system*. Washington, D.C.: World Bank Group.
- Kloppenborg, Jack Ralph. 2004. *First the Seed: The political economy of plant biotechnology*. Madison: University of Wisconsin Press. First published in 1988 by Cambridge University Press.
- Köchler, Hans. 2006. "The United Nations Organization and global power politics: the antagonism between power and law and the future of world order". *Chinese Journal of International Law*, no. 5 (2): 323-340.
- Kothari, Ashish. 2014. "Radical Ecological Democracy: A path forward for India and beyond". *Development*, no. 57 (1): 36-45.
- Kothari, Ashish. 2009. "Radical ecological democracy: escaping India's globalization trap." *Development*, no. 52 (3): 401-409.
- Kothari, A., Demaria, F. & Acosta, A. 2014. "Buen Vivir, Degrowth and Ecological Swaraj: Alternatives to sustainable development and the Green Economy". *Development*, no. 57 (3-4): 362-375.
- KPMG. 2013. *The agricultural and food value chain: Entering a new era of cooperation*. KPMG International.
- La Via Campesina. 2014. Declaration on Trade, Markets and Development in the context of the Fourteenth Session of the United Nations Conference on Trade and Development (UNCTAD), 17–22 July 2016, Nairobi, Kenya. Available: <https://viacampesina.org/en/index.php/actions-and-events-mainmenu-26/stop-free-trade-agreements-mainmenu-61/2101-lvc-declaration-on-trade-markets-and-development> (accessed 15 October 2016).
- La Via Campesina. 2014. Report of the VI International Conference of La Via Campesina, Jakarta, 9-13 June 2013.
- La Via Campesina. 2009. *Policy Documents*. Published for the 5th Conference in Mozambique in October 2008. Available: <http://viacampesina.org/downloads/pdf/policydocuments/POLICYDOCUMENTS-EN-FINAL.pdf> (accessed 20 May 2012).

A global food polity

- Laclau, Ernesto, and Chantal Mouffe. 2001. *Hegemony and Socialist Strategy: Towards a radical democratic politics*. Great Britain: Verso. First published in 1985.
- Lang, Tim. 2007. "Food security or food democracy? Rachel Carson Memorial Lecture." *Pesticides News*, no. 78 (December 2007): 12-16.
- Lang, Tim. 1999. "Food policy for the 21st century: Can it be both radical and reasonable". In *For hunger-proof cities: Sustainable urban food systems*, Mustafa Koc, Rod MacRae, Luc J.A. Mougeot and Jennifer Welsh (eds.). Ottawa: International Development Research Centre, 216-224.
- Lang, Tim. 1998. "Towards a food democracy". In *Consuming Passions: Food in the age of anxiety*, Sian Griffiths and Jennifer Wallace (eds.). Manchester: Mandolin, 13-24.
- Lappé, Frances Moore. 2010. *Diet for a Small Planet*. USA: Ballantine Books. First published in 1971.
- Leach, Helen M. 2003. "Domestication Reconsidered". *Current Anthropology*, no. 44 (3): 349-368.
- Lotter, Don W., Rita Seidel, and William Liebhardt. 2003. "The performance of organic and conventional cropping systems in an extreme climate year." *American Journal of Alternative Agriculture*, no. 18 (2): 146-154.
- Lowder, Sarah K., Jakob Skoet, and Terri Raney. 2016. "The Number, Size, and Distribution of Farms, Smallholder Farms, and Family Farms Worldwide". *World Development*, no. 87: 16-29.
- Magdoff, Fred, John Bellamy Foster, and Frederick H. Buttel (eds.). 2000. *Hungry for profit: The agribusiness threat to farmers, food, and the environment*. New York: Monthly Review Press.
- Mahoney, James. 2000. "Path dependence in historical sociology". *Theory and Society*, no. 29 (4): 507-548.
- Mansbridge, Jane, James Bohman, Simone Chambers, Thomas Christiano, Archon Fung, John Parkinson, Dennis F. Thompson, and Mark E. Warren. 2012. "A systemic approach to deliberative democracy". In *Deliberative systems: Deliberative democracy at the large scale*, John Parkinson and Jane Mansbridge (eds.). UK: Cambridge University Press, 1-26.
- Marris, Claire, Brian Wynne, Peter Simmons, and Sue Weldon. 2001. *Public perceptions of agricultural biotechnologies in Europe*. Lancaster, UK: Lancaster University.
- Marshall, Thomas. 2009. "Citizenship and social class". In *Inequality and Society: Social Science perspectives on social stratification*, Jeff Manza and Michael Sauder (eds.). New York: W.W. Norton, 148-154. Excerpt from book of the same name originally published in 1950.
- Marshall, Thomas. 1950. *Citizenship and social class and other essays*. Cambridge, Great Britain: Cambridge University Press.
- Martinez-Alier, Joan. 2002. "The environmentalism of the poor". Paper prepared for the conference The Political Economy of Sustainable Development: Environmental Conflict, Participation and Movements, University of Witwatersrand, Johannesburg, 30 August. Available: <http://tinyurl.com/gnkq789> (accessed 18 January 2016).
- Martinez-Alier, J. 1995. "Distributional issues in ecological economics". *Review of Social Economy*, no. 53: 511-28.
- Martinez-Alier, Joan, Giuseppe Munda, and John O'Neill. 1998. Weak comparability of values as a foundation for ecological economics. *Ecological economics*, no. 26 (3): 277-286.
- Martinez-Alier, Joan, Leah Temper, Daniela Del Bene, and Arnim Scheidel. 2016. "Is there a global environmental justice movement?" *The Journal of Peasant Studies*, no. 43 (3): 731-755.
- Marx, Karl and Friedrich Engels. 1848. "Manifesto of the Communist Party". In *Marx/Engels Selected Works*, Vol. One, Progress Publishers, Moscow, 1969, 98-137. Translated by Samuel Moore in cooperation with Frederick Engels, 1888.

A global food polity

- Marx, Karl. 1911. *A Contribution to the Critique of Political Economy*. Translated from the 2nd German edition by N.I. Stone. Chicago: C.H. Kerr. First published 1904.
- Marx, Karl. [1863–65] 1981. *Capital: A Critique of Political Economy*, Vol. 3. New York: Vintage.
- Marx, Karl. [1867] 1976. *Capital: A Critique of Political Economy*, Vol. 1. New York: Vintage.
- Mason, Michael. 2012. *Environmental Democracy: A contextual approach*. UK, USA: Earthscan, Routledge.
- McAfee, Kathleen. 1999. "Selling nature to save it? Biodiversity and green developmentalism". *Environment and Planning D: Society and Space*, no. 17 (2): 133 -154.
- McCarthy, Thomas. 1994. "Kantian constructivism and reconstructivism: Rawls and Habermas in dialogue". *Ethics*, no. 105 (1): 44-63.
- McCormick, John P. 2011. *Machiavellian Democracy*. Cambridge, UK: Cambridge University Press.
- McMichael, Philip. 2009a. "A food regime genealogy." *The Journal of Peasant Studies*, no. 36 (1): 139-169.
- McMichael, Philip. 2009b. "A food regime analysis of the 'world food crisis'". *Agriculture and Human Values*, no. 26: 281-295.
- McMichael, Philip. 2005. "Global development and the corporate food regime". *Research in Rural Sociology and Development*, no. 11: 269-303.
- McMichael, Philip. 2000. "The power of food". *Agriculture and Human Values*, no. 17: 21-33.
- Mekonnen, Mesfin M., and Hoekstra, Arjen Y. 2010. *The green, blue and grey water footprint of farm animals and animal products*. Value of Water Research Report Series No. 48. Delft, the Netherlands: UNESCO-IHE.
- Millennium Ecosystem Assessment. 2005. *Ecosystems and Human Well-being: Synthesis*. United Nations Report coordinated by UNEP. Washington DC: Island Press.
- Milonakis, Dimitris, and Ben Fine. 2009. *From Political Economy to Economics: Method, the social and the historical in the evolution of economic theory*. USA and Canada: Routledge.
- Mindell, Arnold. 2002. *The Deep Democracy of Open Forums: Practical steps to conflict prevention and resolution for the family, workplace, and world*. USA: Hampton Roads Publishing.
- Misra, A., R. M. Pandey, J. Rama Devi, R. Sharma, N. K. Vikram, and Nidhi Khanna. 2001. "High prevalence of diabetes, obesity and dyslipidaemia in urban slum population in northern India". *International Journal of Obesity & Related Metabolic Disorders*, no. 25 (11): 1722-1729.
- Mitchell, Ross E. 2006. "Green politics or environmental blues? Analyzing ecological democracy". *Public Understanding of Science*, no. 15 (4): 459-480.
- Monsivais, Pablo, and Adam Drewnowski. 2007. "The rising cost of low-energy-density foods". *Journal of the American Dietetic Association*, no. 107 (12): 2071-2076.
- Morlino, Leonardo. 2004. "What is a 'good' democracy?" *Democratization*, no. 11 (5): 10-32.
- Morlino, Leonardo. 2002. "What is a 'good' democracy? Theory and empirical analysis". Paper delivered at the conference on The European Union, Nations State, and the Quality of Democracy: Lessons from Southern Europe, Berkeley, University of California, Oct.–Nov.
- Morrison, Roy. 1995. *Ecological democracy*. USA: South End Press.
- Munck, Gerardo L., and Jay Verkuilen. 2002. "Conceptualizing and measuring democracy: Evaluating alternative indices". *Comparative Political Studies*, no. 35 (1): 5-34.

- Munton, Richard. 2003. "Deliberative democracy and environmental decision making." In *Negotiating Change: Advances in Environmental Social Science*, Frans Berkhout, I. Scoones, and M. Leach (eds.). Camberley, UK: Edward Elgar, 63-80.
- Murray, Georgina. 2007. "Who Is Afraid of TH Marshall? Or, What Are the Limits of the Liberal Vision of Rights?" *Societies Without Borders*, no. 2 (2): 222-242.
- Nellemann, C., MacDevette, M., Manders, T., Eickhout, B., Svihus, B., Prins, A. G., Kaltenborn, B. P. (Eds). 2009. *The environmental food crisis – The environment's role in averting future food crises*. A UNEP rapid response assessment. Norway: United Nations Environment Programme, GRID-Arendal, February 2009. .
- Nestle, Marion. 2013. *Food politics: How the food industry influences nutrition and health*. Revised edition. California, USA: University of California Press. First published by University of California Press in 2002.
- Nolte, Kerstin; Chamberlain, Wytse; Giger, Markus. 2016. *International Land Deals for Agriculture. Fresh insights from the Land Matrix: Analytical Report II*. Bern, Montpellier, Hamburg, Pretoria: Centre for Development and Environment, University of Bern; Centre de coopération internationale en recherche agronomique pour le développement; German Institute of Global and Area Studies; University of Pretoria; Bern Open Publishing. Retrieved from: http://landmatrix.org/media/filer_public/ab/c8/abc8b563-9d74-4a47-9548-cb59e4809b4e/land_matrix_2016_analytical_report_draft_ii.pdf (accessed 8 December 2016).
- O'Connor, James R. 1998. *Natural causes: Essays in ecological Marxism*. USA: The Guilford Press.
- O'Donnell, Guillermo. 2004. "Human development, human rights, and democracy". In *The quality of democracy: Theory and applications*, Guillermo O'Donnell, J.V. Cullell and O.M. Iazzetta (eds.). Indiana, USA: University of Notre Dame Press, 9-92.
- OECD. 2015. *In it together: why less inequality benefits all*. Paris: OECD publishing.
- OECD. 2011. *Divided we stand: why inequality keeps rising*. Paris: OECD publishing.
- Ostrom, Elinor. 1990. *Governing the Commons: The evolution of institutions for collective action*. Cambridge, UK: Cambridge University Press.
- Oxford Farming Conference (2012). *Power in Agriculture: A vital report on the future of farming*. Report produced for the OFC by the Scottish Agricultural College.
- Patel, Raj. 2009. "What does food sovereignty look like?". In Grassroots voices, Raj Patel (Guest Editor). *The Journal of Peasant Studies*, no. 36 (3): 663–706.
- Patel, Raj. 2008. *Stuffed and Starved. Markets, power and the hidden battle for the world food system*. Portobello Books Ltd. First published by Portobello Books in 2007.
- Patel, Raj, and Philip McMichael. 2009. "A political economy of the food riot". *Review: A Journal of the Fernand Braudel Center*, no. 32 (1): 9-35.
- Pickard, Victor W. 2006. "Assessing the radical democracy of Indymedia: Discursive, technical, and institutional constructions". *Critical Studies in Media Communication*, no. 23 (1): 19-38.
- Pierce, Clayton. 2012. "The Promissory Future(s) of Education: Rethinking scientific literacy in the era of biocapitalism". *Educational Philosophy and Theory* no. 44 (7): 721-745.
- Pimbert, Michel. 2010. *Towards Food Sovereignty: Reclaiming autonomous food systems*. IIED multimedia on line book. London: International Institute for Environment and Development. Available: <http://www.iied.org/towards-food-sovereignty-reclaiming-autonomous-food-systems> (accessed 12 October 2016).

A global food polity

Pimbert, Michel. 2006. "Transforming Knowledge and Ways of Knowing for Food Sovereignty and Bio-Cultural Diversity". Paper for Conference on Endogenous Development and Bio-Cultural Diversity, the Interplay of Worldviews, Globalisation and Locality, Geneva, Switzerland, 3-5 October.

Pimbert, Michel, and Tom Wakeford. 2003. "Prajaateerpu, Power and Knowledge: The Politics of Participatory Action Research in Development, Part 1. Context, Process and Safeguards". *Action Research* no. 1 (2): 184-207.

Polanyi, Karl. 2001. *The Great Transformation: the political and economic origins of our time*. Foreword by Joseph E. Stiglitz and new introduction by Fred Block. USA: Beacon Press. Originally published by Farrar & Rinehart in New York, 1944 and republished by Beacon Press in Boston, 1957.

Prugh, Thomas, Robert Costanza, and Herman E. Daly. 2000. *The local politics of global sustainability*. USA: Island Press.

Ravallion, Mark, Shaohua Chen and Prem Sangraula. 2008. "Dollar a day revisited". Policy research working paper n°4620. The World Bank Development Research Group.

Rawls, John. 2001. *Justice as fairness: A restatement*. Edited by Erin Kelly. Cambridge, MA and London, England: Harvard University Press.

Rawls, John. 1999a. *A Theory of Justice. Revised Edition*. Cambridge, MA: Belknap Press of Harvard University Press. Originally published in 1971 by Harvard University Press.

Rawls, John. 1999b. *The Law of Peoples*; with "The idea of public reason revisited". Cambridge, MA: Harvard University Press.

Rayner, Steve. 2003. "Democracy in the age of assessment: reflections on the roles of expertise and democracy in public-sector decision making". *Science and Public Policy*, no. 30 (3): 163-170.

Reed, Mark S. 2008. "Stakeholder participation for environmental management: a literature review." *Biological Conservation*, no. 141 (10): 2417-2431.

Right to Food and Nutrition Watch. 2015. *Peoples' nutrition is not a business*. Right to Food and Nutrition Watch, Issue 7. Published by Bread for the World, FIAN International, and ICCO Cooperation. Retrieved from: http://www.righttofoodandnutrition.org/sites/www.righttofoodandnutrition.org/files/R_t_F_a_N_Watch_2015_eng_single-page_Web.pdf (accessed 20 October 2016).

Rindos, David. 1984. *The Origins of Agriculture: An Evolutionary Perspective*. Orlando, Florida: Academic Press.

Ringen, Stein. 2011. "The measurement of democracy: towards a new paradigm". *Society*, no. 48 (1): 12-16.

Rosanvallon, Pierre. 2011. *Democratic legitimacy: Impartiality, reflexivity, proximity*. USA and UK: Princeton University Press. Translated by Arthur Goldhammer.

Rosanvallon, Pierre. 2008. *Counter-democracy: Politics in an Age of Distrust*. New York: Cambridge University Press. Translated by Arthur Goldhammer.

Rosset, Peter. 2006. *Food is different: Why the WTO should get out of agriculture*. Zed Books.

Rosset, Peter. 2003. "Food sovereignty: global rallying cry of farmer movements". *Food First Backgrounder*, no. 9 (4): 1-4.

Rosset, Peter. 2000. "The multiple functions and benefits of small farm agriculture in the context of global trade negotiations." *Development*, no. 43 (2): 77-82.

Rosset, Peter Michael, and María Elena Martínez Torres. 2013. "Rural social movements and Diálogo de Saberes: territories, food sovereignty, and agroecology." Conference paper no. 4, prepared for the conference "Food Sovereignty: A Critical Dialogue", Yale University, USA.

- Rowe, Gene, and Lynn J. Frewer. 2004. "Evaluating public-participation exercises: a research agenda". *Science, Technology & Human Values*, no. 29 (4): 512-556.
- Sahlins, Marshall. 1974. "The Original Affluent Society". In *Stone Age Economics*, Marshall Sahlins. London: Tavistock, 1-39.
- Saward, Michael. 2000. "Direct and deliberative democracy". Paper for presentation at the ECPR Joint Sessions, Copenhagen, April 2000, Workshop on Democracy from Below.
- Saward, Michael. 1994. "Democratic theory and indices of democratization". In *Defining and Measuring Democracy*, David Beetham (ed.). Sage Modern Politics Series (36). London, UK: Sage, 6–24.
- Schmidt, Jan C. 2011. "Toward an epistemology of nano-technosciences". *Poiesis & Praxis*, no. 8 (2-3): 103-124.
- Schmitter, Philippe C. 2002. "Neo-neo-functionalism". Earlier draft of chapter prepared for publication in: *European Integration Theory*, Antje Wiener, and Thomas Diez (eds.). Oxford: Oxford University Press (2003). Available: https://unila.edu.br/sites/default/files/files/05%20Neo-Neo7_final.pdf (accessed 9 November 2016).
- Schnepf, Randy. 2013. *Farm-to-food price dynamics*. Congressional Research Service Report for US Congress. Available: <https://www.fas.org/sgp/crs/misc/R40621.pdf> (accessed 1 September 2015).
- Sclove, Richard E. 2010. *Reinventing technology assessment: A 21st century model*. Washington, DC: Science and Technology Innovation Program, Woodrow Wilson International Center for Scholars.
- Scott, John. 1990. *A Matter of Record: Documentary Sources in Social Research*. USA and UK: Polity Press.
- Sen, Amartya. 1991. "Food, Economics, and Entitlements". In *The political economy of hunger: Volume 1: Entitlement and well-being*, Jean Drèze, and Amartya Sen (eds.). USA: Clarendon Press, 34-52.
- Senauer, Benjamin, and Luciano Venturini. 2005. *The globalization of food systems: A conceptual framework and empirical patterns*. Food Industry Center, University of Minnesota.
- Shiva, Vandana. 2005. *Earth democracy: Justice, sustainability and peace*. Zed Books.
- Shiva, Vandana. 2000. "North–South Conflicts in Intellectual Property Rights". *Peace Review* no. 12 (4): 501-508.
- Shiva, Vandana. 1993. "Monocultures of the Mind". *Trumpeter*, no. 10 (4). Retrieved from: http://www.trabal.org/ad_ict4d_reader/shivamono1993.pdf (accessed 22 December 2016).
- Shiva, Vandana. 1991. *Biodiversity: Social & ecological perspectives*. Zed Books.
- Silva, Clayton Rodrigues França, and Loreley Garcia. 2016. "Free Seeds: Connecting Freedom and Autonomy of Nature". *International Journal of Social Science and Humanities Research*, no. 4 (2): 160-172.
- Sklair, Leslie. 2002. "Democracy and the Transnational Capitalist Class". *ANNALS, AAPSS*, no. 581 (May 2002): 144-157.
- Sklair, Leslie. 2001. *The Transnational Capitalist Class*. Oxford: Blackwell Publishing.
- Soromenho-Marques, Viriato. 1996. *A Era da Cidadania—De Maquiavel a Jefferson*. Mem Martins, Portugal: Publicações Europa–América.
- Sneddon, Chris, Richard B. Howarth, and Richard B. Norgaard. 2006. "Sustainable development in a post-Brundtland world". *Ecological Economics*, no. 57 (2): 253-268.

A global food polity

- Steenblik, Ronald. 2007. *Biofuels – at what cost? Government support for ethanol and biodiesel in selected OECD countries*. A synthesis of reports addressing subsidies for biofuels in Australia, Canada, the European Union, Switzerland and the United States. Geneva: The Global Subsidies Initiative (GSI).
- Steiner, Philippe. 2011. *Durkheim and the Birth of Economic Sociology*. Princeton: Princeton University Press.
- Steinfeld Henning, Pierre Gerber, Tom Wassenaar, Vincent Castel, Mauricio Rosales, and Cees de Haan. 2006. *Livestock's Long Shadow: Environmental issues and options*. The Livestock, Environment and Development Initiative (LEAD). Rome: FAO. Available <http://www.fao.org/docrep/010/a0701e/a0701e00.HTM> (accessed 12 December 2016).
- Stone, Glenn Davis. 2012. "Constructing facts". *Economic & Political Weekly*, no. 47 (38): 62-70.
- Strauss, Anselm, and Juliet Corbin. 1994. "Grounded theory methodology: An overview". In *Handbook of Qualitative Research*, Norman Denzin and Yvonna Lincoln (eds.). USA: Sage Publications, 273-285.
- Subirats, Joan. 2011. *Otra sociedad; otra política?: De «no nos representan» a la democracia de lo común*. Barcelona: Icaria Asaco.
- Swedberg, Richard. 2000. *Max Weber and the Idea of Economic Sociology*. Princeton University Press.
- Sweet, Alec Stone, and Wayne Sandholtz. 1997. "European integration and supranational governance". *Journal of European Public Policy*, no. 4 (3): 297-317.
- Tansey, Geoff, and Tony Worsley. 2014. *The food system: A guide*. USA and Canada: Earthscan. First published in 1995.
- Tanumihardjo, Sherry A. et al. 2007. Poverty, Obesity, and Malnutrition: An International Perspective Recognizing the Paradox. *Journal of the Academy of Nutrition and Dietetics*, no. 107 (11): 1966–1972.
- Taylor, C. Robert. 1999. Economic Concentration in Agribusiness: Testimony to the United States Senate Committee on Agriculture, Nutrition and Forestry. January 26, 1999.
- Tilly, Charles. 2007. *Democracy*. Cambridge: Cambridge University Press.
- Traavik, Terje, and Li Ching Lim (eds.). 2007. *Biosafety first: holistic approaches to risk and uncertainty in genetic engineering and genetically modified organisms*. Trondheim: Tapir Academic Press.
- UNDESA. 2009. *Rethinking Poverty: Report on the World Social Situation 2010*. United Nations Department of Economic and Social Affairs. New York: UN.
- UNCTAD (United Nations Conference on Trade and Development). 2013. *Trade and Environment Review 2013: Wake up before it is too late; Make agriculture truly sustainable now for food security in a changing climate*. New York: UN.
- UNCTAD. 2009. *World Investment Report 2009: Transnational corporations, agricultural production and development*. New York: UN.
- UNDP. 2000. *Human Development Report*. New York and Oxford: Oxford University Press. Published for UNDP.
- Unger, Roberto Mangabeira. 1987. *False Necessity: Anti-necessitarian social theory in the service of radical democracy*. Part I of Politics: A work in constructive social theory. USA: Cambridge University Press Archive.
- VanGrasstek, Craig. 2013. *The History and Future of the World Trade Organization*. WTO.
- Varoufakis, Yanis. 2015. "How I became an erratic Marxist". *The Guardian*, 18 February 2015.
- Vasconcelos, Francisco de Assis Guedes de. 2008. "Josué de Castro and The Geography of Hunger in Brazil". *Cadernos de Saúde Pública*, no. 24 (11): 2710-2717.

- Vaughn, Karen. 1980. "John Locke's theory of property: problems of interpretation". *Literature of Liberty: A Review of Contemporary Liberal Thought* no. 3 (1). Retrieved from: <http://oll.libertyfund.org/pages/locke-on-property-a-bibliographical-essay-by-karen-vaughn> (accessed 10 September 2016).
- Vermeulen, Sonja J., Bruce M. Campbell, and John SI Ingram. 2012. "Climate change and food systems". *Annual Review of Environment and Resources*, no. 37 (1): 195-222.
- Vitali, Stefania, James B. Glattfelder, and Stefano Battiston. 2011. "The network of global corporate control". *PLoS ONE*, no. 6 (10). doi: [10.1371/journal.pone.0025995](https://doi.org/10.1371/journal.pone.0025995)
- Visvanathan, Shiv. 2005. "Knowledge, Justice and Democracy". In *Science and Citizens: Globalization and the Challenge of Engagement*, Melissa Leach, Ian Scoones, and Brian Wynne (eds.). Zed Books, 83-94.
- Visvanathan, Shiv. 2001. "Knowledge and information in the network society". Seminar, No. 503, Special Issue "Globalization: A symposium on the challenges of closer global integration", July 2001. Available: <http://www.india-seminar.com/2001/503/503%20shiv%20visvanathan.htm#top> (accessed 10 June 2016).
- Voss, Jan-Peter, and René Kemp. 2005. "Reflexive Governance for Sustainable Development – Incorporating feedback in social problem solving". Paper for the ESEE Conference, Lisbon, 14-17 June 2005. Available: <http://kemp.unu-merit.nl/pdf/Voss-Kemp%20Reflexive%20Governance%20for%20ESEE%202005.pdf> (accessed 18 June 2013).
- Voss, Jan-Peter, Dierk Bauknecht, and René Kemp (eds.). 2006. *Reflexive Governance for Sustainable Development*. UK and USA: Edward Elgar Publishing.
- Wadley, Greg, and Angus Martin. 1993. The origins of agriculture: A biological perspective and a new hypothesis. *Australian Biologist*, no. 6: 96-105. Retrieved online: <http://www.ranprieur.com/readings/origins.html> (accessed 12 June 2015).
- Weber, Max. 2002. *The Protestant Ethic and the Spirit of Capitalism: and other writings*. Penguin Books. Edited, translated, and with an introduction by Peter Baehr and Gordon C. Wells. Expanded version of the manuscript originally published in 1920.
- Weintraub, Jeff. 1997. "The theory and politics of the public/private distinction". In *Public and Private in Thought and Practice: Perspectives on a grand dichotomy*, Jeff Weintraub, and Krishan Kumar (eds.). Chicago, London: The University of Chicago Press.
- Weir, Stuart, and David Beetham. 2002. *Political Power and Democratic Control in Britain; The democratic audit of the United Kingdom*. London and New York: Routledge. First published 1999.
- Willcox, George. 2013. "The roots of cultivation in Southwestern Asia". *Science*, no. 341 (6141): 39-40.
- Williamson, John. 1993. "Democracy and the 'Washington consensus'". *World Development*, no. 21 (8): 1329-1336.
- Windfuhr, Michael, and Jennie Jonsén. 2005. *Food Sovereignty: Towards democracy in localized food systems*. ITDG Working Papers. ITDG Publishing.
- World Bank. 2016. *Poverty and Shared Prosperity 2016: Taking on Inequality*. Washington, DC: World Bank. doi:10.1596/978-1-4648-0958-3.
- World Bank. 2015. *Future of Food Report*: see under Klytchnikova, Irina I.
- World Bank. 2007. *World Development Report 2008 : Agriculture for Development*. Washington, DC: World Bank.
- World Economic Forum (WEF). 2016. *Building Partnerships for Sustainable Agriculture and Food Security: A Guide to Country-Led Action*. Davos: WEF.

A global food polity

World Economic Forum (WEF). 2013. *Achieving the New Vision for Agriculture: New Models for Action*. Davos: WEF.

World Economic Forum (WEF). 2012. *Putting the New Vision for Agriculture into Action: A Transformation Is Happening*. Davos: WEF.

World Resources Institute (WRI) in collaboration with United Nations Development Programme, United Nations Environment Programme, and World Bank. 2005. *World Resources 2005: The Wealth of the Poor—Managing Ecosystems to Fight Poverty*. Washington, DC: WRI.

World Trade Organization (WTO). 2014. *World Trade Report 2014. Trade and development: recent trends and the role of the WTO*.

Wynne, Brian. 2007. "Public Participation in Science and Technology: Performing and Obscuring a Political–Conceptual Category Mistake". *East Asian Science, Technology and Society: an International Journal*, no. 1 (1): 99-110.

Wynne, Brian. 2005. "Risk as globalizing ‘democratic’ discourse? Framing subjects and citizens". In *Science and Citizens: Globalization and the Challenge of Engagement*, Melissa Leach, Ian Scoones, and Brian Wynne (eds.). London: Zed Books, 66-82.

Young, Cristobal. 2009. "The emergence of sociology from political economy in the United States: 1890 to 1940". *Journal of the History of the Behavioral Sciences*, no. 45 (2): 91-116.

APPENDIX A

Reports used in the Critical Discourse Analysis

CAP - Confederação dos Agricultores Portugueses. 2015. *Visão 2020 Agricultura Portuguesa | Vision 2020 for Portuguese Farming*. 50 pgs.

Declaration of the International Forum for Agroecology, Nyéléni, Mali, 27 February 2015. Available: <http://www.foodsovereignty.org/forum-agroecology-nyeleni-2015/>. 5 pgs.

Food and Agriculture Organisation (FAO). 2016a. *Food and agriculture: key to achieving the 2030 agenda for sustainable development*. 32 pgs.

Foresight. 2011. *The Future of Food and Farming. Executive Summary of Final Project Report*. The Government Office for Science, London. 37 pgs.

G20 Development Working Group for Food Security and Nutrition. 2015. *Implementation plan of the G20 food security and nutrition framework*. 20 pgs.

La Via Campesina Declaration on Trade, Markets and Development in the context of the Fourteenth Session of the United Nations Conference on Trade and Development (UNCTAD), 17–22 July 2016, Nairobi, Kenya. Available: <https://viacampesina.org/en/index.php/actions-and-events-mainmenu-26/stop-free-trade-agreements-mainmenu-61/2101-lvc-declaration-on-trade-markets-and-development> 3 pgs.

La Via Campesina. 2014. *Report of the VI International Conference of La Via Campesina*, Jakarta, 9-13 June 2013. 36 pgs.

De Schutter, Olivier. 2014. *Final report: The transformative potential of the right to food*. Report of the United Nations Special Rapporteur on the Right to Food. Presented at the twenty-fifth session of the Human Rights Council, January 2014. 28 pgs.

World Bank Group. 2015. *Future of Food: Shaping A Climate-Smart Global Food System*. 32 pgs. (full citation: Klytchnikova, Irina I., Marc Peter Sadler, Robert Townsend, Svetlana Edmeades, Vikas Choudhary, Sarwat Hussain, Holger A. Kray, Erick C.M. Fernandes, Eugene Moses, James T. Cantrell, Xenia Zia Morales, and Michele Sue Pietrowski. 2015. *Future of Food : shaping a climate-smart global food system*. Washington, D.C.: World Bank Group)

World Economic Forum (WEF). *New Vision for Agriculture*. Available: <https://www.weforum.org/projects/new-vision-for-agriculture/>. 1 pg.

World Economic Forum (WEF). 2016. *Building Partnerships for Sustainable Agriculture and Food Security: A Guide to Country-Led Action*. Davos: WEF. 40 pgs.

World Economic Forum (WEF). 2013. *Achieving the New Vision for Agriculture: New Models for Action*. Davos: WEF. 32 pgs.

World Economic Forum (WEF). 2012. *Putting the New Vision for Agriculture into Action: A Transformation Is Happening*. Davos: WEF. 29 pgs.