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**Taking Food Systems Transformation Seriously
How Post-Growth Thinking Can Foster Food Regime Change**

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Abstract

“Food Systems Transformation” should be understood as more than just a buzzword in contemporary debates on food systems change. This research paper argues that the term’s meaning has been watered down considerably in recent years, with the majority of voices prevalent in the ongoing discourse insufficiently responding to the convergence of multiple aggravating crises. Introducing a comparative framework that pinpoints the key characteristics of different approaches to food systems transformation, it shows that the growth-based capitalist logic pervading most of them obstructs rather than impels truly transformative change. Motivated by the question of what the transition to an agri-food systems void of the economic growth-imperative could look like, I turn to growth-critical theory to lay bare the inconsistencies and shortcomings of growth-based approaches, before exploring several concrete entry routes for post-growth thinking to shape the transition to a new food regime. Whilst indicating that there is not one single approach able to steer agri-food system in the right direction, I suggest the forging of alliances between progressive actors working on multiple pressure points to move beyond growth and enable food regime change.

Relevance to Development Studies

The call for transformation is ubiquitous in current discussions around food systems change. At the same time, limited efforts have been taken so far to compare and assess the legitimacy with which different actors are utilising the term. This research paper seeks to develop a comparative framework to juxtapose the most prominent approaches to food systems transformation, drawing on a rich body of literature from the field of sustainability transitions. Incorporating a growing concern with the adherence to a growth-based logic prevalent among most approaches, it incorporates a post-growth perspective to reveal the shortcomings of various approaches in adequately addressing the most pressing challenges of our times. In linking two fields of study (food systems thinking and post-growth theory), it aims to provide important breeding ground for more critical engagement with the claims and propositions of different food systems actors.

Keywords

Food Systems, Transformation, Transition, Food Regimes, Post-Growth, Degrowth, Food Sovereignty, Sustainable Development

List of Acronyms

CFS	United Nations Committee on World Food Security
CSR	Corporate Social Responsibility
e.g.	for example (<i>exempli gratia</i>)
FAO	Food and Agriculture Organization of the United Nations
GHG	Greenhouse Gas Emissions
HLPE	High Level Panel of Experts on Food Security and Nutrition
IAASTD	The International Assessment of Agricultural Knowledge, Science and Technology for Development
i.e.	that is (<i>id est</i>)
LVC	La Via Campesina
MLP	Multi-level Perspective on Socio-Technical Transitions
SDGs	Sustainable Development Goals
SES	Socio/Social-Ecological Systems
STS	Socio-Technical Systems
TAMs	Transnational Agrarian Movements
UN	United Nations
UNFSS	United Nations Food Systems Summit
WBA	World Benchmarking Alliance
WBCSD	World Business Council for Sustainable Development

Chapter 1 Introduction

1.1 A Planetary Emergency and the Call for Transformative Change

Dominant food systems around the world are broken. They are failing to fulfil their basic function of providing safe and nutritious food to everyone whilst simultaneously producing negative externalities of unprecedented scale. With a myriad of proposed solutions shaping the current discourse on how to respond to such discrepancy, this study aims to unravel and contrast the problem-solving approaches different food systems actors are suggesting, before critically assessing the extent to which they are sufficient in addressing the most pressing issues of our time. Departing from the assumption that food system failures are inevitably linked to the neoliberal and growth-based logic dominating the global economy, the study fundamentally questions the adherence to this logic as a feasible response to the conjunction of multiple worsening crises. Showcasing a number of concrete examples where growth-critical thinking can help fuel profound food systems change, it aims to provide an outlook for post-growth thinking to shape the food systems of tomorrow.

Many of humanity's challenges are traceable to the way we produce, distribute, and consume food in an increasingly globalised and corporately controlled fashion (IAASTD, 2009; IPES-Food, 2016). Food systems are estimated to contribute 21–37% of total greenhouse gas (GHG) emissions (IPCC, 2019). They have a primary responsibility in unprecedented rates of biodiversity loss (IPBES, 2018) and drive land degradation that is adversely affecting the well-being of more than three billion people (IPBES, 2019). By the middle of the century, the interplay of land degradation and global warming is predicted to reduce global crop yields by an average of 10 per cent and up to 50 per cent in certain regions (ibid). Considering the simultaneous failure of current food systems in providing sufficient and adequate food to a growing population – food insecurity has been on the rise again since 2014, with almost 800 million people (or a tenth of the world population) experiencing severe forms of undernourishment in 2020 – this presents an enormous challenge requiring profound changes in the way agri-food systems are designed and organised (FAO et al., 2020).

Whilst it took a long time for the need to bring about change to ensure a liveable planet for future generations to be brought to the forefront of international policy making (think of the long struggles for the adoption of sustainability principles), little discussion is left about the importance of such an endeavour. The ongoing COVID-19 pandemic has once more reiterated the urgency, with most food systems actors aware of (and at least superficially concerned about) the struggles of our times. With a growing awareness has also come a shift in primary focus. Rather than asking *what* needs to be done – present-day objectives are surprisingly clear, not least through almost universally accepted targets like the Sustainable Development Goals (SDGs) – most friction currently centres around the questions of *how* that change needs to be brought about and *who* the actors of change are supposed to be? Participation in efforts to answer those questions has increased considerably, with a myriad of public and private actors having developed their very own understanding of and solutions to this ambitious yet indispensable endeavour. Despite a great diversity in the scope, profundity, and feasibility of propositions, one thing has been common: the call for “food systems transformation”.

Despite the term's soaring popularity and application, few have taken a step back to reflect on the question of what is actually meant by food systems transformation? Those that

have done so point out that the term has ‘entered into the rarefied atmosphere of development jargon’ (Haddad, 2019) and has become the new buzzword in communication around food and agriculture (Gliessman, 2021). Extensive use by various United Nations (UN) organisations (FAO, 2018b; UNEP, 2019) and rather opposing advocacy groups like the World Economic Forum (2020) and La Via Campesina (LVC) (2020a) speaks volumes, with limited efforts made so far to map and compare the different applications of the term and the underlying visions shaping the ongoing discourse on agri-food systems change.

The remaining sections of this chapter will provide a brief contextual perspective on the emergence of food systems thinking, the subsequent call for transformation and the relevance that a post-growth perspective holds in shifting the discourse to outcomes of stronger sustainability and social justice. It will conclude by presenting concrete research questions and a methodology used to derive answers. The second chapter provides a more in-depth synthesis of the linkage between corporate power and transition processes, drawing on valuable insights from “food regime analysis” and the (critical) literature on sustainability transitions. In Chapter 3, the study brings together the various conceptualisations in a comparative framework that helps separate and classify various approaches prevalent in the ongoing discourse, exposing the questionable cherishing of economic growth as a necessity prevalent among most of them. By examining them from a post-growth perspective¹, it aims to depict their inconsistencies and shortcomings in adequately addressing the combined weight of multiple complex and interrelated crises. Defying the growth-addicted nature of capitalism in general, and its unquestioned prevalence in most solution approaches to agri-food systems challenges in particular, Chapter 4 builds on the comparative framework by exemplifying entry routes for post-growth thinking to shape the future of agri-food systems around the world. Finally, Chapter 5 provides some concluding remarks and possibilities for follow-up research.

1.2 Food Systems Thinking entering the Global Agenda

Before the emergence of discussion on how food systems can be transformed, much research was concerned with building an understanding of how food systems contribute to global environmental change and are in turn shaped by it. Pivotal in this has been the resurgence of *food systems thinking*, which, albeit being already several decades old, has only recently gained traction among policymakers, scholars, civil society actors and practitioners active in the food and agricultural domain (Béné et al., 2018). The renewed interest was motivated by a general dissatisfaction with the limitations of precedent approaches focussed largely on production increases or value-chain interventions while failing to address complex interactions and feedback between different socio-economic and environmental variables (Erickson, 2008). It became increasingly apparent that in order to better understand and improve the societal and environmental performance of agri-food systems, more systematic approaches would be required.

Embracing complexity and cross-sectoral dependence, food systems thinking takes a transdisciplinary and integrated approach that aims to understand how multiple human and non-human drivers interact, leading to both intended and unintended socio-economic and environmental outcomes (Foran et al., 2014). The evolution of that thinking has brought forward a variety of new scientific and political insights, ranging from the elaboration of

¹ Whilst acknowledging the diversity of approaches having developed out of ecological economics in recent years, this research paper follows Gerber and Raina in using the term “post-growth” as the ‘combined application and theorization of the four major growth-critical currents of degrowth, agrowth, steady-state economics and post-development’ (2018: 353). If referring to a particular approach, this will be made specific throughout the paper.

conceptual frameworks (Ericksen, 2008; HLPE 2017; van Berkum et al., 2018) and operational opportunities at policy and practice level (Brouwer et al., 2020; Dekeyser et al., 2020) to attempts to comprehensively assess their sustainability (Blay-Palmer et al., 2019; FAO, 2018a; Chaudhary et al., 2018). Different scientific approaches have produced a multitude of different ways to define food systems, often as a consequence of diverse and conflicting views on the components, boundaries, and interactions constituting such systems (Brouwer et al., 2020). Most definitions like that of the Food and Agriculture Organisation (FAO) of the UN point to the essence of food systems as ‘the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products that originate from agriculture, forestry or fisheries, and parts of the broader economic, societal and natural environments in which they are embedded’ (2018: 1). Studies on the complexity of food systems need to distinguish between external drivers, inherent components and actual outcomes, with sustainable food systems being those able to deliver ‘food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised’ (FAO, 2018a; HLPE, 2017).

Whilst a general and at times pragmatic consensus has been reached on the definition of (sustainable) food systems, especially in relation to (inter-)national policy processes around food system governance, most research and political debate in recent years has shifted to the question of how food systems can adequately respond to the unfolding concurrence of socio-economic and environmental crises. Addressing the issue includes the growing recognition that a simple “more-food” approach falls short of eradicating the complex problem of hunger and that the social and environmental externalities of global supply chains prefigure the need for profound reconfiguration (Béné et al., 2018). Twelve years ago, The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) came to a similar conclusion in its landmark report *Agriculture at a Crossroads*, concluding that agriculture needed to take a fundamentally different path to be able to meet the challenges of the 21st century (2009). The following years saw a resurgence of interest in agriculture and food, not least as a reaction to the socio-economic crisis following the 2007-2008 spike in world food prices. The ambitions that followed were high, most notably reflected in the 2030 Agenda for Sustainable Development (2015). The final declaration indicated determination to ‘take the bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path’ (ibid.). Up to now, progress has been sobering, with only incremental advancements worth mentioning. At the same time, climate breakdown seems to be unstoppable (IPCC, 2021), a sixth mass extinction is on its way (IPBES, 2019) and even the number of people considered food insecure has been on the rise again for years (FAO et al., 2020). With little progress in sight, and the almost paradoxical role of agri-food systems as main causes of *and* solutions to humanity’s challenges stressed repeatedly (FAO, 2018b; FAO, 2019b), the UN decided to react.

On the 14th of October 2019, the UN Secretary-General Antonio Guterres announced to the world that a Food Systems Summit would be organised in 2021. In his message delivered during the 46th Session of the UN Committee on World Food Security (CFS), Guterres once more stressed the need for ‘transformative steps’ to end hunger and achieve food security for everyone, something the high-level UN Food Systems Summit would directly contribute to by rallying world leaders behind the call (FAO, 2019a). The appeal was meant to show that next to the often-cited energy and transportation sectors, food and agriculture are also considered key in achieving the SDGs by being able to help achieve many,

if not all of them² (2019b). Whilst language of “transformation” in relation to food systems had already been applied prior to Guterres’ announcement, especially in response to the SDGs, the almost two years long run-up to the UNFSS has triggered unprecedented utilisation. The call has been widely echoed by governments, civil society organisations, consumer/producer associations and private sector actors in various instances.

However, due to the aforementioned differences in understanding of the depth and scope of change required, responses have differed greatly. As a consequence, the preparations of the UNFSS became an intellectual and political battlefield of different epistemic and political forces. Although framed a “people’s summit” by the organisers offering an supposedly inclusive global process, the UNFSS has been sharply criticised for a lack of transparency, the undermining of already existing global food governance bodies like the CFS and its High-Level Panel of Experts on Food Security and Nutrition (HLPE), and a narrow focus on technofixes through corporate capture (Chandrasekaran et al., 2021a; De Schutter et al., 2021, ETC Group, 2021; LVC, 2020a). One outcome has been a boycott and subsequent organisation of a counter-mobilisation in the wake of the UNFSS’ Pre-Summit, gathering thousands of civil society actors calling for a more radical transformation of food systems (Chandrasekaran et al., 2021a).

1.3 The Relevance of Post-Growth for Food Systems Transformation

Central to the critique stemming from organisers of the so called “Autonomous People’s Response to the UNFSS” has been the role of the corporate power prevalent in food systems in general and the UNFSS process in particular (Chandrasekaran et al., 2021a), with corporations having increased their influence considerably in recent years (Canfield et al., 2021a; Clapp and Fuchs, 2009; Clapp et al., 2021). Starting already in the late 1980s, the growing consolidation and concentration of globalised supply chains has been described by McMichael as the emergence of a “corporate food regime” (2009). Despite efforts by *regime actors* to “green” their practices and consider corporate social responsibility (CSR) in their operations, *niche actors* (those operating either in the cracks or outside of corporately controlled supply chains) have continued to debunk such attempts as greenwashing efforts to sell old wine in new bottles. With the third group of *mediating actors* trying to establish common ground for dialogue and co-creation, the battle over authority and legitimacy in global food governance spaces like the UNFSS continues (Canfield et al, 2021b). Recalling that the call for transformation is ubiquitous amongst those actors, the question arises whether their underlying assumptions can be sufficient in view of multiple converging socio-environmental crises? Are their claims legitimate, or do they rather block than enable truly transformative change?

Over the years, a large body of scientific research has been created to advance understanding on various aspects of food systems change, including among others the role of technology and innovation (Barrett et al., 2020; Klerkx & Begemann, 2020 den Boer et al., 2021), the importance of considering health and nutrition impacts (Willet et al., 2019) and the special role of engaging youth in food systems (Glover and Sumberg, 2020). Just as in research, also in policy discourse the term has gained remarkable traction, with concrete sets of actions having been proposed by a large and diverse range of actors (Global Alliance for

² Framed a normative foundation by the Scientific Group behind the UNFSS (an assumption that will be challenged in Chapter 3), the dominant incentive behind the call for “food systems transformation” is thus to ensure that Food Systems contribute to the 2030 agenda for sustainable development (van Braun et al., 2021).

the Future of Food, 2021; FAO, 2018b; Steiner et al., 2020). The majority of research around transition and transformation³ in relation to food systems has focussed on single case studies of specific (geographical, technological or sectoral) sub-levels (e.g. Dengerink et al., 2020), without relating to larger systemic or societal transformation processes fiercely disputed at the international level. Comparatively few attempts have been made so far to analyse approaches to transformation in agri-food systems from a global perspective. Exceptions include Dentoni et al. (2017), who have reflected on different transition pathways from the perspective of large systems change theory and Wigboldus et al. (2020), who have developed a flexible ‘scoping canvas’ to provide insights on strategic orientations and ambitions of different food systems actors. One study that did develop a comparative framework to distinguish between different trends noticeable within global agri-food systems is Giménez and Shattuck (2011). Ten years later however, the wider landscape and discourse has shifted and expanded considerably, with language of transformation having turned mainstream. This study therefore aims to build on Giménez and Shattuck’s work and adapt it to the current context. In doing so, it will draw on insights and conceptualisations from the wider literature on transition/transformation processes in social-ecological systems.

A second aspiration of this study is to bring together two fields of study that up to now have only been linked to a limited extent, despite their mutual relevance: the elaboration of food systems thinking and subsequent call for transformation on the one hand and the increasing body of growth-critical theory with its analytical, holistic, and transdisciplinary capacity on the other. A core assumption underlying this attempt is that the increasing call for food systems transformation by various interest groups risks misinterpretation and manipulation, a danger that has already been observed in relation to other sustainability debates (Blythe et al., 2018; Brand et al., 2020; Feola, 2015; Temper et al., 2018). Termed ‘the dark side of transformation’ by Blythe et al., there are several latent risks associated with the wrong appropriation of the term that can render it nothing more than a metaphor (2018). Whilst acknowledging this as one potential outcome, Feola suggests an alternative, namely the use of the concept as an ‘analytically relevant concept’ that could help engaging in ‘a theoretically and empirically informed dialog’ (2015: 387). This study aims to inform that dialogue in relation to agri-food systems from a post-growth perspective, by not only conceptualising different approaches and their underlying strategies of transformation, but also challenging their almost hegemonic appliance of capitalist logic. In doing so, it aims to tackle a systematic problem that according to Brand et al. continues to persist, namely the way ‘epistemic and political power relations exclude or ignore more radical approaches that question dominant institutions (such as the market and the state) and logics (such as capitalist growth)’ (2020: 162-163). Consequentially, attempts to unravel and challenge logics of competition and growth prevalent in food systems have been limited, with Nelson and Edwards’ recent book *Food for Degrowth - Perspectives and Practices* (2020) being the first of its kind to make a direct effort to understand the social and territorial expressions of the degrowth principles as applied to different areas of the agri-food system (production, distribution, consumption). Their work however focusses mainly on empirical cases in spheres of the household, collectives and networks and puts less emphasis on the ongoing narratives and discourses shaping the way food systems transformation is being elaborated and refined in (inter-)national policy making and economic activity. In an effort to address that gap, this study aims to establish a stronger linkage between the two fields of study and provide fertile ground for further elaboration.

³ Recognising that there are etymological differences in the origins of the terms “transition” and “transformation” (most likely through different research communities in which they have been applied) (Hölscher et al., 20182), in this paper they are used interchangeably, unless stated otherwise.

1.4 Research Objectives and Questions

The overall goal of this research will be to achieve five objectives that are meant to show how growth-critical theory can reveal the limitations of current approaches to food systems transformation on the one hand and help in shaping a new food regime on the other. These objectives are:

1. To link two fields of study (food systems thinking and post-growth theory) that up to now have been insufficiently brought in relation with each other
2. To map and characterise prominent approaches to food systems transformation and their perception of change in a suitable comparative framework
3. To reveal how the notion of transformation is being misused by most food system actors talking the talk, but not walking the walk
4. To demonstrate the relevance of growth critical thinking in ensuring that the root causes of unsustainability prevalent in modern food systems are sufficiently tackled
5. To identify several concrete examples that present entry routes for growth-critical theory to help foster food regime change

In achieving its objectives, I will address the following main research question:

How is the notion of transformation given shape in the current discourse on food systems change and how can post-growth thinking help contest – and construct concrete alternatives to – the growth-driven nature of prevailing food regime configurations?

This question is discussed by disaggregating it into three more concrete and researchable sub-questions:

- What are the prominent approaches prevalent in current elaborations of food systems transformation, what are their key characteristics and how do they relate to one another?
- How is language being used (or misused) in the discourse around transformation and how can the analytical value of growth-critical theory help expose co-optation and discrepancy between words and deeds among existing approaches?
- What could exemplary entry routes for post-growth thinking to have a more substantial impact on the ongoing discussions around food systems transformation look like and which (unusual) collaborations can realistically help in achieving this?

1.5 Methodology

The methodological approach applied in this study comprises three different components that together will help answer the previously mentioned research questions. Those components are (i) an adaptation and consolidation of different conceptualisation and typologies developed to study transitions towards sustainability to create a comparative framework, (ii) a review of exemplary grey literature published by a variety of food systems actors and its categorisation based on a set of pertinent characteristics, and (iii) a critical

reflection from a growth-critical perspective coupled with a detection of food systems actors and components that can provide potential leeway for a post-growth food regime.

The comparative framework (i) developed in this paper takes Giménez and Shattuck's "Food Regime versus Food Movement" matrix (2011) as a starting point, adapting it to the current context by expanding the typology and points of comparison to pay specific attention to their interaction with the food systems transformation discourse. By looking specifically at systemic change processes, it incorporates parts of Geels' multi-level perspective on socio-technical transitions (MLP), which distinguishes between three levels – the *socio-technical landscape* (macro-level), the *socio-technical regime* (meso-level), and *niches* (micro-level) – whose complex interactions determine how transition processes take place (2002). The socio-technical regime is here linked to Friedmann and McMichael's food regime theory (1989) and the current, largely neo-liberal and growth-based version of it. Using some of the criticism on the MLP as a point of departure, Geels and Schot have undertaken additional conceptual refinements by developing a typology of transition pathways, specifically outlining the role that timing and the nature of interaction between niche-innovations and landscape developments have on changing regime configurations⁴ (2007). Those pathways will be adopted and matched with the strategic choices made by prominent approaches prevalent in the discussion on food systems change. Despite its extensive usage and refinement in relation to sustainability in general (Köhler et al, 2019) and agri-food systems in particular (El Bilali, 2019), the MLP and subsequent typologisation of transition pathways has also shown limitations. Consequentially, it has increasingly been combined with other approaches to studying transitions, especially in the food and agricultural domain where the complex and simultaneous co-existence of various transition pathways engaged with one another has proven difficult to conceptualise (El Bilali, 2019). Next to Geels and Schot's transition pathways, this paper thus also adopts the strategic "scoping canvas" developed by Wigboldus et al. (2020) to provide conceptual substantiation to the comparative framework.

The literature review (ii) comprises the study of selected exemplary material published by different public and private institutions (governmental and multi-lateral agencies, civil society actors, corporations and private sector representatives, and consumer/producer associations) published since the launch of the Sustainable Development Goals (SDGs) in 2015, focussing on archetypal elaborations that help characterising different approaches based on key points of comparison⁵. Adopting an interpretive analytic approach, it compares, amongst others, their strategic objectives, the depth of and relation to change, the intrinsic transformation strategy, the suggested transition pathways and attitude towards economic growth.

The third and last component of the analysis constitutes a critical reflection (iii) on the elaborations of different food system actors depicted in the comparative framework from a post-growth perspective. Applying a growth-critical lens to assess and challenge the assumptions and narratives behind the various approaches to food systems transformation identified, the paper unravels their shortcomings and contradictions in aiming to pursue both economic growth and ecological sustainability. The starting point for this application of a

⁴ Regime configurations are understood as 'the alignment between a heterogeneous set of elements [...] 'that work', which means that they are difficult to separate from the way society functions (Geels, 2002: 1258). They include, among others, existing institutions, technologies, infrastructure, forms of knowledge, practices, power structures and social imaginaries.

⁵ Given the diversity of actors and visions involved in shaping future food systems, it is out of the scope of this paper to outline all different perspectives comprehensively. Acknowledging that many actors are likely to fall in between different approaches classified here rather than perfectly epitomizing them, this classification is meant to provide clarity and stimulate subsequent discussion on potential collaboration and leeway for radical change.

“critical lens” is what Brand has coined a “New Critical Orthodoxy”, namely that ‘the strategic usage of the transformation concept does not pay sufficient attention to the structural obstacles to far-reaching transformation processes, including the avoidance of questioning dominant rationales and institutions like that of economic growth, world market competition, resource extractivism and austerity policies (2016: 24-25). By incorporating growth-critical reflections resting on visions of profound societal transformation (Brand et al., 2020; Hickel, 2021; Jackson, 2009; Wright, 2010), it identifies points of contact with the food systems transformation discourse and ascertains if and where different approaches have points of convergence with post-growth visions that could guide food regime change.

Chapter 2 Conceptualising the Transformation of Global Food Systems

This chapter provides a brief overview of existing theorisation on the interplay between agri-food systems and the global political economy, focusing especially on “food regime analysis” as a relevant analytical tool to inform the comparative framework elaborated in Chapter 3. This tool is augmented by conceptualisation of transition processes developed as a response to global environmental change, drawing on insights from a rich body of sustainability research.

2.1 Food Regime Analysis

Food Systems have experienced considerable change and reconfiguration throughout history. Especially since the expansion of capitalist modes of production, marketing, and consumption throughout the world from the 1500s onwards, agriculture has taken a pivotal role in shaping (and in turn being shaped by) the ever-increasing transnational movement and accumulation of capital in the world economy. A well-known analytical approach developed to explain and understand this development has been Friedmann and McMichael’s “food regime analysis” (1989). In their elaboration of food regimes, the two link ‘international relations of food production and consumption to forms of accumulation broadly distinguishing periods of capitalist transformation’ (1989: 95). Those periods are relatively stable, followed by rupturable transition periods of a roughly similar length. They distinguish between the *first food regime* (1870–1930s), a time in which British imperial hegemony was advancing agricultural imports of both tropical and outsourced staple food production from settler colonies and the *second food regime* (1950s–70s), when surplus staple food from a former settler colony, the United States, took the form of aid to post-colonial states as part of its ‘development project’, shaping and dominating world food price formation and a ‘selective Third World industrialisation’ (2009: 141).

The characterization of the period from the 1980s onwards has been subject to much debate, with a discussion ongoing on whether a full-fledged new food regime has developed. While McMichael points out that a *third food regime*, or a ‘corporate food regime’ has emerged, one in which globalised and corporately controlled industrial value chains of ‘food from nowhere’ contrast localised and environmentally sound production of ‘food from somewhere’ through the concept of food sovereignty (2005), Friedmann indicates that there is a ‘corporate-environmental regime’ possibly emerging, but not yet fully developed (2005). Both have refined and sharpened their perspectives in various occasions (Friedmann 2009, 2016; McMichael, 2009, 2016), with other scholars in the field offering critical as well as complementary reflections (e.g. Bernstein, 2016; Pritchard, 2009; Tilzey, 2019). As McMichael has pointed out, along the question of whether or not a third regime has emerged as ‘an episodic structure’, the concept has increasingly been deployed as ‘an analytical device to pose specific questions about the structuring processes in the global political-economy, and/or global food relations, at any particular moment’ (2009: 148). Whilst it is beyond the scope of this paper to comprehensively outline the application of the concept over the last thirty-plus years, it is nonetheless important to emphasise that despite divergent utilisation and interpretation, regime analysis ‘remains central to larger dynamics of accumulation, power, class and territory’ (Friedmann, 2016: 3). The next section will therefore build on the vibrant discussions around the (emergence of a) third food regime and its contemporary ramifications on human and planetary wellbeing, before highlighting how its recurrent

transformation can be understood and potentially steered by research on sustainability transitions.

2.2 Corporate Power, the Third Food Regime and Transition Processes

Central to most discussions around the currently present regime is a complex dichotomy between corporate dominated and increasingly globalised food systems on the one hand and (often localised) alternatives supported by social movements emerging in the wake of an exacerbating socio-ecological crisis on the other (Campbell, 2009; Friedmann, 2009; McMichael, 2009). The scholarly literature has substantiated both developments in detail, with corporate power over global food governance (Clapp and Fuchs, 2009), the prevalent role of financialisation (Burch and Lawrence, 2009), the important role of ‘nutrition transitions’ (Dixon, 2009) and the emergence of transnational agrarian movements (TAMs) confronting globalization (Borras et al., 2008) having been studied concomitantly. McMichael sees the tension as an epistemic contradiction between a trajectory of ‘world agriculture’ following what Harvey termed ‘accumulation by dispossession’ (2003, as cited in McMichael, 2005: 287) and ‘cultural survival’ represented by the concept of food sovereignty (2005: 278). His rigorousness in stipulating the consolidated state of the third food regime leads Friedmann to assume that his ‘argument for an “epochal” confrontation between agrifood-led capital and a farmer-led food sovereignty movement implies that the “corporate food regime” is the last one’ (2016: 673). Unlike McMichael, she has resisted committing to ‘something so elusive and one-dimensional’, highlighting that it is inadequate to reduce the corporate food regime to a single contradiction (2016: 650-651). Instead, for Friedmann, the emerging concern for ecological and health issues and subsequent entanglement of interests and responses from environmental movements and corporate actors alike leads to contradictions in an unfolding ‘green capitalism’ (Friedmann, 2005: 229). She sees the separating lines as less clear, with corporate actors keen to selectively include societal and sustainability concerns in what constitutes a ‘dance of creativity and appropriation between social initiatives and agrifood capitals’ (2016: 676). Consequentially, and different to McMichael, she can ‘imagine a capitalist transition [...] in food and farming’ (ibid.). This is echoed by Pechlaner and Otero, who reject using the framing of a “corporate food regime” they consider too generic and instead opt for the delineation of a “neoliberal food regime” that indicates that corporations currently act under a specific configuration of capitalism (neoliberal globalism) that can be subject to change if and when societal configurations and relations of power change over time (2010: 182).

Following the stance that positive change is possible, Campbell has been keen to explore the use of food regime analysis to not only highlight the implicitly negative trends prevalent in antecedent applications of the concept, but also in considering change processes and new (positive) food regime configurations (2009). Building on both joint and separate outcomes of McMichael and Friedmann’s earlier work, he has attempted to identify ‘conditions and coalitions’ that could help in developing a more sustainable food regime in the future (2009: 310). Such coalitions are largely driven by the desire to counteract the detrimental effects of dominant food systems already outlined in the previous chapter and aim to find ways of how to transform them towards greater sustainability. Both McMichael and Friedmann have acknowledged that the added value of food regime analysis has shifted from a primal focus on periods of hegemony to the study of transition processes between food regimes (Friedmann 2016, McMichael 2009), something that has increasingly been picked up by scholars concerned with socio-technical and social-ecological transition processes towards greater environmental sustainability and human well-being (Leeuwis et al.,

2021; Pereira et al., 2020). Those scholars draw their work from a rich body of inter- and transdisciplinary research focused on systemic transformation processes, an increasing part of which is challenging the corporate led and growth-obsessed nature of governing system transformation processes. Before outlining how change is perceived and shaped by prominent food systems actors in the next chapter, the final section of this chapter outlines how the rich body of literature on transition and transformation processes can inform and strengthen the study of current approaches to food systems change.

2.3 Studying Transformation in the Wake of Global Environmental Change

Preceding and by now accompanying the prominent application of transformation research to food systems has been the elaboration of the approach in the field of sustainable development and responses to global environmental change (Feola, 2015; O'Brien, 2012; Patterson et al., 2017; Scoones et al., 2015). An important contribution has been made by scholars applying transdisciplinary approaches that recognise the multifaceted composition of the ecological crisis, combining different scientific disciplines and non-academic knowledge to unravel the complexity inherent in most real-world problems (Lang et al., 2012; Brandt et al., 2013). A successful application of transdisciplinary research notwithstanding, not everyone in the field of transformation study has embraced such an approach. As Göpel points out in her comprehensive case for a 'Great Mindshift' to guide sustainability transformations, also positivist paradigms continue to prevail in the research community, featuring considerably different epistemologies and ontologies (2016: 14-15). Whilst it goes beyond this paper to assess this divergence in more detail, it is nonetheless noteworthy, as it lays bare a fundamental difference in the point of departure of most transdisciplinary transformation research underlying this paper on the one hand, and the positivist logic underpinning the prevailing economic paradigm and its methodological individualism on the other⁶. Unlike the sustainability proposals brought forward by mainstream economic institutions often based on specific technological adjustments and/or economic incentives, transdisciplinary transformation research has focussed on first 'understanding the dynamics of wider socio-technical or socio-ecological systems'⁷ (STS or SES) before thinking about which interventions could improve sustainability' (Göpel, 2016: 16). It embraces rather than downplays the constantly changing nature of reality, seeing humans as subject and object of making history alike: 'today's interactions do not happen in a vacuum but under the circumstances created by us and the generations before us' (Göpel, 2016: 15).

Approaches studying transitions in STS have focused on the ways technological progress is shaping (and is in turn shaped by) society in general and different socio-political and economic institutions in particular. As Ahlborg et al. point out, 'society and technology are mutually constitutive – social processes shape the development and use of technology, but technologies in turn embody power relations and come to constitute our lifeworld, reshape our social interactions and practices in society' (2019: 5). Particular attention is paid to the role of innovation and its role in shaping sustainable development and its concomitant transition processes. Examples include the previously described MLP developed and refined

⁶ The point Göpel makes here is important, as both systems thinking as well as the study of transformation in relation to food systems are based on holistic understandings of complex socio-environmental processes and interactions that expose the shortcomings of the rational neo-classical theorization that has governed agri-food systems throughout the last centuries.

⁷ The terms "socio-ecological" and "social-ecological" are used interchangeably in this paper and are both abbreviated as SES in relation to systems.

by Geels (2002; 2019) and Transition Management approaches (Kemp et al., 2007; Loorbach, 2009).

Studies of change in SES on the other hand look at the interactions between humans and the ecosystems surrounding us, departing from the basic premise that humans are part of (and not separate from) nature. As a complex systems theory, the SES framework aims to address the question of how humans can build resilience to global environmental change, which constitutes a foundation for sustainable development (Berkes et al., 2003). It forms the basis for much research on the sustainability outcomes of natural resource management and has received considerable attention from different disciplines, including ecology (Berkes et al., 2003), political science (Ostrom, 2009) and more recently 'earth system governance' (Biermann, 2007) and the elaboration of 'planetary boundaries' depicting a safe operating space for humanity (Rockström et al., 2009).

Whilst all concerned with transition and transformation processes towards stronger sustainability (albeit from different angles), a third emerging field has been that of combining concepts from research on both STS and SES, emphasising the relevance they entail for one another while aiming to create synergies (Ahlborg et al., 2019; Göpel, 2016, Järnberg et al., 2018). Smith and Stirling echo that mutual benefit, but caution that the consideration of 'explicit analyses of power and politics is just as salient to social-ecological systems as to sustainability transitions' (2010: 10). According to Göpel, political economy approaches are increasingly gaining traction among those studying transitions, but due to their limited 'ecological literacy', it is especially ecological economists that can pinpoint unsustainable capitalist path dependencies and the ways they are keeping STS and SES from enabling sustainable development⁸ (2016: 18-19). Among them, those embracing post-growth approaches that have shown to be particularly sharp in analysing the correlation of political economy, environmental limits and transformation processes, given their careful examination of the interaction between social, ecological and technological system components. Consequentially, they will form the basis when depicting the limitations of current approaches to food systems transformation in the following two chapters.

The conceptualisation of transition processes in food systems has been just as diverse as in sustainability studies (El Bilali, 2019). A chief difference however has been the level of analysis that most studies of food systems transformation have taken. Whilst sustainability studies have increasingly tackled global challenges (see some of the examples mentioned above), studies of transition in food systems have been largely limited to specific geographies, value chains, or sectors of food systems (*ibid*). The main reason is that unlike studies of the earth system or the planet's boundaries for example, food systems are not confined, but rather numerous and diverse (Gaitán-Cremaschi et al., 2019).

Despite different strategies and visions on food systems and their various components, a general consensus exists that 'the transformation [of food systems] should deliver multiple and simultaneous social, economic, and environmental outcomes', which implies that 'a radical shift [is needed] in comparison with the paradigms that steered the agricultural changes of the XXth century' (Caron et al., 2018: 2). Rockström et al. echo this call, postulating that a new paradigm for the future of food is needed altogether, one that can navigate our 'Common Food Future' (2020: 5).

This chapter has shown that contemplating food systems transformation is a complex and deeply political endeavour, with questions on the political economy of sustainability

⁸ As Erik Olin Wright has pointed out, capitalism generates systems of power in which power is allocated to precisely those classes of people who benefit most from the harms it generates (2010: 273). Consequentially, its critique is alarmingly absent from most solution approaches presented in international policy making around sustainable development.

transitions vital to consider when assessing the feasibility of diverging proposals for change. As food regime analysis has shown, power has and continues to shape the way agri-food systems operate, indicating the great importance it holds when studying if and how they can change. The following chapter will elucidate which proposals for change are currently prevalent in the discourse and what their proposals for the above-mentioned “new paradigm” are, before critically assessing if and how their proposals can ensure that global food systems stay within planetary boundaries whilst ensuring a sound social foundation for everyone.

Chapter 3 Economic Growth – The Elephant in the Room?

In this chapter, different approaches to food systems transformation are being compared and assessed on their ambition whilst faced with various compounding social and environmental crises. Reflecting on them from a post-growth perspective, it discloses the discrepancy behind their undertaking and the contentious (mis-)use of language afflicting the discourse.

3.1 Different Approaches to Realising Transformative Change

To better understand the political dynamics of food systems change, this paper has developed a comparative framework that distinguishes between different approaches prominent in the current discourse (see Table 1). It takes inspiration from and further expands on the work of Gímenez and Shattuck's (2011), who have developed a typology of four dominant approaches (or what they call trends) and their key characteristics visible in the “corporate food regime” on the one hand and global food movements (or TAMs) on the other. Given the changing configurations of global food governance and increasing attention for agri-food systems in the last ten years (Canfield et al, 2021b; McKeon, 2021), and considering the adaptive capacity of corporate actors to incorporate social and environmental concerns observed by Friedmann and expounded above, this framework complements Gímenez and Shattuck's typology with two additional approaches. By arranging the total of six approaches differently, it clusters two of their approaches under an intermediate category of “mediating actors” to complement that of “regime actors” and “niche actors” (as equivalents to their classification of the corporate food regime and global food movements). The two additional approaches are subsequently to be found among regime and niche actors respectively to more comprehensively depict the diversity of approaches concerned with food systems transformation.

I consider regime actors those perpetuating and profiting from a growth-driven global economy, whilst niche actors are defined as those developing and impelling alternatives to the prevailing regime, actively challenging the hegemonic appliance of a growth-based economic logic. Mediating actors aim to create dialogue between the two and see lively exchange between diverging actors as key to success. The total of six categories elaborated in this chapter include (i) *neoliberal* and (ii) *adaptive* approaches mostly visible among regime actors, (iii) *reformist* and (iv) *progressive* approaches taken mainly by mediating actors, and (v) *radical* or (vi) *visionary* ones found among niche actors. Using a number of key characteristics, the comparative framework is used to depict similarities and differences between those approaches and elucidates on how they frame the notion of transformation.

Adapting parts of Wigboldus et al.'s so called “Strategic Scoping Canvas”, it distinguishes the depth of change envisioned by different actors interested in improving the sustainability of food systems, including a reinforcement of the status quo, incremental changes that promote optimization, more progressive voices suggesting a reform of current regime configurations all the way to those aiming to radically transform food systems as part of a larger societal transformation (2020: 4). The depth of change thus implies how different the foreseen outcomes of a sustainability transition are from an initial situation, ranging from no or only superficial adjustments to a complete systemic change.

Table 1.
Six approaches to food systems transition based on a number of key characteristics

	Characterisation of different approaches to food systems transformation					
	Regime Actors		Mediating Actors		Niche Actors	
Points of Comparison	<i>(i) Neoliberal</i>	<i>(ii) Adaptive</i>	<i>(iii) Reformist</i>	<i>(iv) Progressive</i>	<i>(v) Radical</i>	<i>(vi) Visionary</i>
Strategic Objective	Profit Maximisation	Corporate Social Responsibility	Collaboration	Shift of power	(Food) Sovereignty	Ethical Consumption
Relation to Change	Capitalise on it	Recognise it	Pluralise it	Shape it	Politicise it	Materialise it
Principal Driver of Change	Consumer demand	Business ethics	Multi-Stakeholder Platforms	Inclusive Dialogue	Social movements	Progressive trailblazers
Depth of Change by Wigboldus et al. (2020)	Reinforcement	Optimisation	Reform	Reform/Transformation	Transformation	Optimisation/Transformation
Transformation Strategy	Hegemony	Endogenous renewal	Co-creation	Empowerment	Overturn	Emergence
Associated Transition Pathways by Geels and Schot (2007)	Reproduction	Regime Transformation	Regime Reconfiguration	Regime Transformation/ Technological Substitution	De-alignment and re-alignment	Technological Substitution
Representative Slogan	"Feeding the world"	"Healthy People, Healthy Planet, Healthy Business"	"Working together to realize the ambition of the 2030 Agenda"	"Shaping the Transition to Sustainable Food Systems"	'Sow the seeds of struggle and resistance, and cultivate our rights'	"Using business as a force for good"
Modus Operandi	Reluctance	Leadership	Brokering	Pragmatism	Confrontation	Proactivity
Position on Economic Growth	"Consumer-led" Economic Growth	"Green" Growth	"Inclusive & sustainable" Growth	"Inclusive & sustainable" Growth	Growth-critical	Agnostic/"Ethical" Growth
Involvement with the UNFSS	Ignoring	Active participation	Active participation	Ambivalence	Boycott	Ignoring
Exemplary Actor	Bottom 2/3 of WBA benchmark (e.g. JBS S.A.)	Members of WBCSD (e.g. Unilever)	UN Institutions (e.g. FAO)	International NGOs (e.g. Oxfam Novib)	Transnational Agrarian Movements (e.g. LVC)	Certified B Corporations (e.g. Riverford Organics)

By additionally using the MLP and adapting Geels and Schot's typology of transition pathways to the context of food systems, the framework differentiates how actors relate to the regime (the corporately dominated third food regime), niches (radical novelties and innovations outside the mainstream) and the landscape level (exogenous changes outside the direct influence of actors, e.g. climate change and pandemics, but also deep cultural patterns) (2007). Doing so helps forming a basis on which to reflect on when assessing which approaches actually contribute to the large-scale societal transformation that the SDGs call for. It is important to mention that those six approaches are considered archetypes whose boundaries are made rigorous for analytical purposes. In reality, actors have shown to change approaches over time or even employ different ones at the same time, depending on the occasion and/or issue at stake. In addition to that, there are actors whose self-prescribed purpose has been to tactically manoeuvre in the intermediate spaces between different approaches, e.g. by officially or unofficially representing one's constituency in uncharted territories like the increasing structures of multistakeholder governance.

3.1.1 Regime Actors

The first two approaches in the comparative framework, (i) *neoliberal* and (ii) *adaptive*, are considered approaches mainly followed by 'regime actors', i.e. those driving and benefiting most from the commodification and financialisation of food that has shaped its production, distribution and consumption over the three last decades (Isakson, 2014). A result of this process has been an unprecedented concentration of corporate power along agri-food supply chains, driven by the acquisitions of smaller competitors and subsequent mergers among some of the largest agri-food companies in the world (Clapp and Fuchs, 2009; Clapp et al., 2021; IPES-Food, 2017). Among those actors, a clear distinction is visible in the way they reflect on and respond to the concurrence of different social and environmental crises.

(i) *neoliberal approaches*

Despite already being ten years old, Giménez & Shattuck's general description of *neoliberal* approaches can still be considered accurate, with corporate-driven food enterprises continuing to be anchored in free-market capitalism and the seemingly indispensable push for economic liberalization (2011: 116). What has changed though is that even neoliberal actors are not able to avoid questions of sustainability anymore, with many of them having published social and environmental sustainability reports in recent years. The main objective of such an examination however has not been to radically change business conduct, but to use it for continuous maximisation of profit and efforts to cement its ideological and political hegemony over agri-food system. In Geels and Schot's typology, they are engaged in a 'reproduction process' aimed at sustaining capitalist regime configurations whilst keeping radical niche-innovations at bay (2007: 406). As a result, they show little interest in altering operations more than necessary to respond to shifting consumer demand, often failing to improve basic sustainability indicators.

A recent analysis by the World Benchmarking Alliance (WBA) has shown that the majority of corporate actors working in different segments of globalised food systems do little to nothing about elaborating sustainability strategies and presents poor performance on various indicators related to social inclusion, nutrition and the environment⁹ (2021). More

⁹ The WBA's *Food and Agriculture Benchmark* has been the first of its kind to comprehensively measure and rank 350 keystone companies on key issues underpinning the food systems transformation agenda. Whilst certainly useful and comprehensive in its assessment, it departs from the fundamental (and questionable) assumption that the food and agriculture companies assessed do hold a key position in guiding transformative change.

specifically, two thirds of the 350 world's leading companies in the food and agricultural sector have shown to provide insufficient or no information on their social and environmental impact and fail to provide basic transparency about their endeavours (or the lack thereof) (ibid.). Instead, many of them continue to perpetuate the self-congratulatory attitude of being responsible for 'feeding the world' or 'feeding a growing population' (JBS S.A., 2020; J.P. Morgan Chase, 2019; COFCO International Ltd, 2020). The mantra accompanying this self-aggrandising notion is that a doubling of food production by 2050 is necessary to ensure food security, a claim that has been refuted repetitively¹⁰ (Hunter et al., 2017; Tomlinson, 2013; van Dijk et al, 2021). For actors like J.P. Morgan Chase (one of the world's largest banks), the panacea to population growth and raising consumption of meat are to be found in 'technology and a new age of precision farming [which] are likely to hold the answer to growing demand' (2019). Both economic growth and change are first and foremost driven by consumer demand, with neoliberal actors unlikely to depart from a business-as-usual trajectory by their own hand.

Such positioning has led neoliberal actors from what Weis calls the industrial 'grain-oilseed-livestock complex' to venture into emerging markets like those of BRICS¹¹ countries, with especially Brazil and China having experienced rapid changes in food production and consumption in recent years (Weis, 2013). Corporates like the Chinese COFCO Group (one of the largest agricultural commodity traders in the world) and the Brazilian JBS S.A. (the biggest protein producer in the world) are pivotal in the expansion process, with both having undergone multiple mergers and acquisitions lately (IPES-Food, 2017: 20). Given their limited attention to social and environmental sustainability, they are both found in the lower section of the WBA ranking (#261 and #146 respectively out of 350) (2021), joint by other exemplary actors of the neoliberal approach. Likewise, neoliberal thought is ubiquitous among most private institutional investors (like banks, hedge funds, pension funds and private equity funds) increasingly interested in returns of investment from agri-food systems (Clapp and Fuchs, 2009; Isakson, 2014). Given their reluctance to change, I consider their depth of change little more than a reinforcement of existing regime rules. Consequentially, most actors in that category are therefore absent from the UNFSS and have limited interest in engaging with other (critical) stakeholders pushing for change.

(ii) *adaptive approaches*

Whilst Gimenez and Shattuck have opted for McMichael's characterization of a "corporate food regime" to describe the antagonist of global food movements, this framework extends by adding the adaptive approach between the neoliberal and reformist one (classified as conduct of mediating actors in the next paragraph). This approach, which has grown considerably in size and importance in recent years, involves increasing corporate attention for what can be called non-traditional corporate food interests, anchored in the advancing application of Corporate Social Responsibility (CSR) and voluntary self-regulation by regime actors. Adaptive here describes the attitude of those regime actors acknowledging that certain changes in their own conduct are necessary to ensure consumer and planetary health. Such developments corroborate the divergent view of Friedmann who, unlike McMichael, has paid specific attention to the increasing (self-)auditing of supply chain actors and corporate

¹⁰ While it is without a doubt necessary to increase food production in order to accommodate a growing and changing future food demand, it is foolish to assume that solutions to this challenge are merely a question of supply (Fouilleux et al., 2017; Tomlinson, 2013). Nonetheless, the productivist paradigm continues to perpetuate messages of the need to produce more food as a magic cure to food (in-)security (ibid.).

¹¹ BRICS is a term used to encompass the world's major emerging economies: Brazil, Russia, India, China, and South Africa.

environmentalism emerging in the light of various unfolding crises (2005). This study does not intend to take position in the intellectual debate between the two, but nonetheless recognises that the number of actors having incorporated social and environmental concerns in their business strategy has grown considerably, especially since the launch of the SDGs in 2015. Slogans like ‘Healthy People, Healthy Planet, Healthy Business’ from the World Business Council for Sustainable Development (WBCSD) indicate that corporate interests have expanded beyond solely economic growth to also include greater development objectives (2019). Underlying that intention has been the questionable idea of green growth, meaning that economic growth and development are fostered whilst ‘ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies’ (OECD, 2011: 4). Driving efforts to adapt to a changing world are thus business ethics and the intention to use power to actively push new sustainability initiatives. In Wigboldus et al.’s terms, actors in this category are aimed at ‘optimising the existing’ or ‘playing the game well’ (2020: 4). However, as the previously mentioned WBA analysis indicates, only a small fraction of prominent food and agricultural companies has actually demonstrated leadership on sustainability, with a meagre eleven corporations scoring 50 or more out of 100 points in their assessment (2021).

Just like neoliberal actors, also those with pledges to adapt through CSR have been put under scrutiny by civil society actors and consumer advocacy groups, with many of their approaches and proposed solutions (from climate-smart agriculture to nature-based solutions) receiving strong criticism for their greenwashing attempts and hollow sustainability promises (Delvaux et al., 2014; Chandrasekaran, 2021b; GRAIN, 2021). Supposedly green corporate groups like the WBCSD include a diversity of actors, from corporations like Unilever deemed frontrunner in the field according to the WBA assessment to members like Barry Callebaut (one of the world’s biggest manufacturers of chocolate and procurers of cocoa), scoring 131/350 and doing little to nothing on improving the nutritional quality of their products or labour conditions in their supply chains (2021). Unlike with neoliberal actors, the language of transforming food systems is much more prominent (Rabobank, 2020; Unilever, 2021; WBCSD, 2019, WEF, 2020), yet it largely constitutes a strategy of endogenous renewal that does not change regime configuration significantly.

In Geels and Schot’s typology, those actors are following a path of ‘regime transformation’, which although unfavourable in its naming, implies a modification of the rules and direction the regime is taking (2007: 406-408). They are not interested in fundamentally changing the underlying economic logic of the regime in which they are operating, but rather adapt to landscape pressure (the convergence of multiple crises) and the attention brought to it by societal pressure groups. This adaptation is done by altering their outward appearance to one that is supposedly annihilating public concerns. Pivotal in their strategy is also the co-optation of language previously considered radical, as the proliferation of the call for food systems transformation has arrestingly shown. Not too surprisingly, actors taking an adaptive approach have been strongly involved in the UNFSS, with the Chief Executive Officer of the WBCSD stressing that ‘so many core elements of our food [...] depend on the innovation, expertise and dedication of the business community’ (Bakker, 2020).

3.1.2 Mediating Actors

Different to the first two approaches, the third and fourth approach, (iii) *reformist* or (iv) *progressive*, are both mainly found among ‘mediating actors’ or those aiming to create dialogue among different stakeholders. Their similarity lies in the pragmatic and problem-solving tendency, with exchange among various actors being considered pivotal in bringing about

lasting change. What they differ in however, is their perspective on and engagement with both regime as well as niche actors.

(iii) *reformist approaches*

The *reformist* stance is the one most prominently reflected in the UNFSS process. It is aimed at co-creating change through multistakeholder governance and prolonged dialogue. Most UN organisations have subscribed to that standpoint, aiming at bringing together all relevant constituencies to forge partnerships that collaborate in helping to achieve the SDGs and other international agreements. In that way, the approach of reformist actors is not to solely bring about change themselves, but to pluralise it and capitalise on various change strategies being pursued at the same time. They see their own role in ‘changing the rules of the game’ and reform systemic configurations so they contribute to rather than impede food systems transformation (Wigboldus et al., 2020: 4). Whilst SDG 2 (zero hunger) is often placed at the centre of calls for action, they increasingly also stress the interconnectedness with multiple other SDGs, calling on decisionmakers in various institutions to collaborate in multi-stakeholder platforms, many of which they facilitate or participate in (FAO, 2018b; Steiner et al., 2020; UNEP, 2019). The main goal of those platforms is to broker between different approaches and visions, ‘embracing a variety of voices instead of individual perspectives’ (UNEP, 2019: 6). Eventually, the outcomes of those exchanges of ideas are meant to create symbiotic innovations, with niche proposals (often stemming from critical voices within civil society) being taken up by regime actors, triggering reconfiguration through what Geels and Schot describe as ‘adjustments in the basic architecture of the regime’ (2007: 411). Those adjustments can be varying in profundity, but accumulatively have the ability to bring about major regime changes. Actors pushing for reform often do not question the regime itself, but rather aim to use incremental changes to gear it towards more sustainable outcomes. Economic growth is considered a pre-condition, but supposedly reconfigured into a “better” version, hence the postulation of inclusive and sustainable economic growth (FAO, 2019b; UN, 2015). Examples of new proposals or adjustments elaborated and discussed extensively through proponents of this strategy include the idea of true cost and price accounting (Hendriks et al., 2021), agroecology (HLPE, 2019), and the importance of reducing food loss and waste along supply chains (Steiner et al., 2020: 42-44), with proponents being found across the spectrum of all six approaches elaborated in the comparative framework. Despite aiming to include all constituencies in its processes, co-creators have faced fierce criticism in recent years for the promotion of “multistakeholderism”¹² (Buxton, 2019). The UNFSS has been called a prime example, which despite its claims to be ‘a summit for everyone everywhere – a people’s summit’ has shown disproportionate involvement of and decisive control of power from corporate actors (Chandrasekaran et al., 2021a).

(iv) *progressive approaches*

The fourth *progressive* approach is taken by pragmatic actors who despite their often close affiliation with different movements of niche actors choose to actively engage with other mediating and regime actors to confront and reduce power imbalances in agri-food systems

¹² Multistakeholderism can be considered a new emerging global governance system that is not defined by governments debating as citizen’s representatives alone, but by seeking to ‘bring together global actors that have a potential “stake” in an issue and ask them to collaboratively sort out a solution’ (Buxton, 2019: 2). Although having the potential to be a force for good, it has been criticised for its “pseudo inclusiveness” with strong power imbalances and a lack of accountability continuing to persist (Buxton, 2019: 8).

through awareness raising and dialogue. Their strategy is to empower marginalised or sidelined actors by either representing them or opening up space for participation, ensuring that any partnerships developing out of multi-stakeholder engagements are truly inclusive. Exemplary actors like IPES-Food are keen to help ‘shape the transition to sustainable food systems’ by detecting power imbalances and systemic lock-ins that constitute barriers to food systems change (IPES-Food, n.d.). International non-governmental organisations like Oxfam International on the other hand stress that ‘at the bottom [of global supply chains,] the bargaining power of small-scale farmers and workers has been steadily eroded’, hence it aims to rebalance power and ensure more fairness and inclusion in food supply chain configurations (Willoughby and Gore, 2018: 6). Despite their critical stance towards increasing corporate power, they are less outspoken about the role of economic growth, stressing (similar to reformist approaches) mainly the importance of sustainability and inclusivity.

Interestingly though, progressive approaches have shown varying degrees of ‘progressiveness’, with some striving for a depth of change more resembling what Wigboldus et al. describe as reform (e.g. Oxfam International’s engagement with the ten largest food and beverage companies in its *Behind the Brands* campaign) to organisations like FIAN International advocating for a much more radical approach to food systems transformation through food sovereignty and agroecology (2021). In Geels and Schot’s typology (2007), progressive actors are thus left with two opportunities to steer a transition process, either contributing to regime transformation (similar to the actions of adaptive approaches) or technological substitution (a pathway taken by the sixth and last visionary approach described below), depending on the engagement they are having with niche innovations. Whilst Oxfam International is largely aiming to draw attention to the negative externalities created by regime actors, aiming to improve their conduct, FIAN International and IPES-Food are much more engaged in strengthening nice innovations like agroecology, aiming to use landscape pressures to push niches into the mainstream and help replace the existing. A recent example of the latter tactic can be found in the launch of *A unifying framework for food systems transformation* by several civil society actors (IPES-Food et al., 2021). Actors have been ambivalent about participating in the UNFSS, with their willingness to engage being confronted with concerns about a lack of inclusiveness and power imbalances throughout the Summit process (De Schutter et al., 2021).

3.1.3 Niche Actors

The final two approaches are both attributable to niche actors, namely taking a (v) *radical* or a (vi) *visionary* stance. In Giménez & Shattuck’s (2011) framework they fall in the category of global food movements counteracting corporately driven regime configurations. Similar to the regime however, also with niche actors an additional approach is added to the framework (that of a visionary approach) to account for variance among them. The most pertinent difference can be considered the way in which niche actors engage with other actors.

(v) *radical approaches*

Different to the visionary approach, the *radical* one fiercely opposes the conduct of regime actors and critically follows the engagement of mediating actors with corporations. It is the approach most prominent amongst actors that have fiercely criticised the UNFSS ever since its announcement in October 2019 and eventually decided to call for a boycott (Chandrasekaran et al., 2021a; ETC Group, 2021; LVC, 2020a). A change strategy embodied by many TAMs like LVC as well as human rights and environmental organisations, it features slogans like ‘Sow the seeds of struggle and resistance, and cultivate our rights!’ that are aimed

at mobilising masses behind the call for food sovereignty as a radical response to corporate dominance and the concomitant crises prevalent in global food systems (LVC, 2020b). Central to their demands is a rights-based approach as elaborated in the UN Declaration on the Rights of Peasants, with climate and environmental justice featuring prominently in their calls. The depth of what representative actors are calling for is a complete ‘change of the game’ (Wigboldus et al., 2020), redefining the principles that govern global food systems and eventually transform them as part of a broader societal transformation.

Capitalism is considered ‘a parasitic system’ and a common enemy to all people, with its growth addicted nature only leading to ‘a higher concentration of wealth, income and profits’ (LVC, 2020b). The main mode of operation is therefore to confront regime actors and create a critical mass that recognises and supports the political struggle that smallholder farmers, agricultural workers, rural women, and indigenous communities are facing. In Geels and Schot’s typology, their approach is most likely to be found in a transition pathway of ‘de-alignment and re-alignment’, meaning that they are dependent on larger landscape pressures (long term ones like climate change and short, sudden shocks like the COVID-19 pandemic) to provide them with the opportunity to break through and replace the existing regime (2007: 409). A prerequisite for such a transition to occur however is that niche innovations have developed sufficiently (ibid.), a premise whose fulfilment needs to be ascertained in relation to emerging concepts like agroecology, for which LVC and other social movements have been advocating for years (Borras et al., 2008; LVC, 2020b). Whilst it has also gained traction among other approaches characterised in this framework, recent policy reports like that of the HLPE on *Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition* only consider it one of multiple innovative solution approaches (2019).

(vi) *visionary approaches*

The last and final approach existent in the food systems transformation discourse is that of being *visionary*, which applies to actors focussed at simply performing the kind of change they are envisioning, often paying limited attention to wider social and political discussions at the international level. Consequentially, they have been little involved in international events like the UNFSS. Such actors come in diverse shapes and sizes and are found all over the world, often operating outside conventional food system arrangements. From thousands of smallholder farmers and consumers interacting through alternative food networks (e.g. community supported agriculture) to citizens using their combined agency to change the food choice in their municipality, their collective force has the power to shape transformation processes. Their main concern is about creating alternatives to the prevalent regime, with slogans like ‘Using business as a force for good!’ indicating that successful business and economic growth should be seen as a means to an end and not the end itself (Riverford Organic Farmers, 2019). Driven largely by (business) ethics and moral values, they consider themselves progressive trailblazers that can steer change by showing what is possible. Principles include co-production, solidarity, transparency, balance, shared responsibility and economically and socially fair production, processing, and marketing options (Kropp et al., 2021: 7). They want to materialise and live change rather than making ambitious calls without substance, and proactively experiment with innovative business models as well as their relation to profit. Economic growth is not considered a goal in itself, but rather part of a balancing act with trust, sustainability and resilience.

An interesting example of an actor with a visionary approach is Riverford Organics Growers, the biggest vegetable box scheme in the United Kingdom with over 50.000 weekly deliveries of local, organically produced produce. Being employee owned since 2018, Riverford Organics claims that it wants ‘to do better than vague claims and greenwash’ (2019:

3), recently becoming a certified B Corporation¹³ with considerable attention on its social and environmental performance. As Clarke et al. point out, examples like Riverford Organics indicate that at times ‘the space of organic food production and distribution is neither the small, local, counter-cultural farm nor the large, transnational, corporate firm’ (2008: 219). A similar example can be found in the Dutch organic shop chain Odin, which through its cooperative business structure includes the more than 14.000 members (and simultaneous consumers) directly in its financing (Odin, n.d.). As Odin states on its website, ‘money is a tool with which we can achieve our ideals’, with the goal being ‘healthy and fair food for everyone. Now and in the future. That’s what we call profit’ (ibid.).

Such examples are niche innovations that can gain scale and emerge within the regime, waiting for the regime to get into crisis through large and/or sudden landscape changes that can help them replace the existing regime through what Geels and Schot call ‘technological substitution’ (2007: 409-410). Vegetable box delivery schemes like that of Riverford Organics have seen unprecedented increases in demand during the COVID-19 pandemic, further bolstering their sustained growth and position vis-à-vis conventional vegetable suppliers (Laville and Smithers, 2020). The goal is that actors lose faith in the regime, giving preference to niche innovations that provide responses to different landscape pressures. The depth of change such actors are able to bring about will eventually depend on the endeavours and steadfastness of visionary actors themselves and the extent to which they either confront or assimilate into the regime, leading to either an optimisation or full transformation pathway.

3.2 The Importance of Language in the Transformation Discourse

Before assessing the different approaches to food systems transformation from a growth-critical perspective, I consider it necessary to briefly address the important role that language plays in framing the discourse. Whilst there is a plethora of buzzwords who’s (miss)use requires close scrutiny, it is beyond this paper to assess those in detail. Rather, this paragraph is meant to provide reflections stemming from the review of selected literature outlined above that require further elaboration.

Language shapes how people perceive a problem and apprehend both the urgency and depth of change required. Interestingly, the examination of different grey literature sources revealed considerable consonance in the type of language being used by most approaches. Especially the SDGs as a normative framework to aspire have been featured prominently (COFCO International Ltd, 2020; FAO, 2018b; IPES-Food et al., 2021; Riverford Organics; WBCSD, 2019), just like the call for food systems transformation throughout most documents studied. In the light of global environmental change, calls for transformation have helped ‘describe the depth of change, but not its origin, breadth or trajectory’ (Pelling et al. 2015:115 in Blythe et al., 2018). A result of this has been the predominance of established actors in the multi-stakeholder governance of food system with values and epistemologies that reinforce the ‘lock-in’ of dominant technical and social regime arrangements, many of which can be considered causal to the current crisis (Leeuwis et al., 2021: 767-768). Likewise, it leads to what Blythe et al. point out by referring to Foucault:

¹³ Certified B Corporations are defined as companies ‘that have been certified by the nonprofit B Lab to have met rigorous standards of social and environmental performance, accountability, and transparency’ and are ‘legally required to consider the impact of their decisions on all their stakeholders’ (Honeyman and Jana, 2019: 25). Such companies are required to weigh in the interests of people and environmental considerations, meaning that there has to be a balance between profit and purpose.

The language around transformation can create what Foucault refers to as regimes of truth. In other words, policymakers can distort the language of transformation to define acceptable formulation of problems and solutions to those problems that serve to reproduce existing structures of power and domination and justify business as usual (Foucault 1980 in Blythe et al., 2018: 1213).

This problem is pivotal to the growth-driven nature of both the SDGs as well as the majority of approaches to food systems transformation, which perpetuate contradictory complementarity between economic growth and environmental limits. Before further expounding the shortcomings of this crucial yet flawed assumption in the next paragraph, this section spells out three ways regime actors use language to uphold hegemony over the food systems transformation discourse: (i) creating and disseminating own narratives, (ii) defusing and denouncing critical (niche) narratives, and/or (iii) co-opting and often watering down popular niche narratives.

(i) creating and disseminating own narratives

Whilst the increasing recognition of food and nutrition security as a complex and context-specific challenge (FAO et al. 2020) might let one assume that the productivist paradigm is a thing of the past, the neo-liberal approach outlined above has proven quite the opposite. Even though some corporate regime actors have acknowledged the more intricate nature of food systems challenges (most notably those using an adaptive approach), the obsession with “productivity” remains paramount. The framing of corporate actors having to double production and “feed the world” with innovation rooted in biotechnology and data-driven development is ubiquitous and anything but recent, with the green revolution framing of “production increases at all costs” being amalgamated with novel concerns for input efficiency and public health (ETC Group, 2021; IPES-Food-2016; McMichael, 2009). A longstanding narrative of both past and current regime actors, the prioritisation of productivity increases continues to shape and dominate policy making around the globe, with little attention to the socio-political implications, power struggles and questions of agency accompanying the rollout of corporately driven approaches to food systems transformation. Concepts like “climate-smart agriculture” reiterate the apolitical and “power blind” nature of corporate narratives (Delvaux et al., 2014). During the UNFSS, this selective and fragmented perspective became blatantly visible when the United States Department of Agriculture launched a new ‘Coalition of Action on Sustainable Productivity Growth for Food Security and Resource Conservation’ that considers increasing agricultural productivity growth ‘one of the only ways – if not the only way – to solve this multi-objective optimization problem’ (2021: 1). Such narratives reinforce corporate hegemony and a growth-centred development that diametrically oppose the social and environmental values associated with post-growth thinking (Jackson, 2009).

(ii) defusing and denouncing critical or niche narratives

A second strategy used by regime actors to shape the discourse is the denouncing of language used to counteract corporate interests. A prime example has been the ‘Alliance for Science’ launched in 2014 with funding from the Bill & Melinda Gates Foundation ‘to correct misinformation and disinformation in regard to agricultural biotechnology’ (Alliance for Science, 2021). Pivotal for the Alliance has been the representation of industry interests, the depolarisation of contestations around genetically modified organisms and the discreditation of reservations stemming from academics and civil society (Malkan, 2020). More recently, it has focussed on challenging the emerging popularity of agroecology, pointing out that it is ‘anti-science’ and ‘risks harming the poor’ (ibid.). Especially the former claim has been proclaimed persistently, with alternative approaches like agroecology grounded in traditional,

indigenous and peasant knowledge being branded as “backward” and averse to innovation and agricultural technology (Anderson and Maughan, 2021). Technology and innovation take centre stage here, with ‘top-down technological extension [being perceived] not only as a rational choice, but as a moral imperative: to refuse such technologies is to abandon the poor and marginalized to destitution and even death’ (Anderson and Maughan, 2021: 9).

(iii) co-opting and often watering down popular niche narratives.

A final strategy that has proven popular among regime actors in light of mounting evidence on the shortcomings of industrialised agri-food systems has been the co-optation of language previously used to call to attention these very shortcomings and the (conscious) ignorance and misconduct of corporate actors. As already outlined above, the increase in awareness among consumers has resulted in a plethora of CSR commitments and concomitant greenwashing attempts, with most corporate actors describing their own conduct as “sustainable”, “responsible” and “inclusive”, to name a few of the attributes used to varnish their image. Likewise, also approaches like agroecology previously denounced are re-evaluated and twisted to suit corporate narratives (Alonso-Fradejas et al., 2020; Anderson and Maughan, 2021). The earlier mentioned Alliance for Science recently participated in a webinar hosted by the United States government entitled *Reconciling Agroecology and Biotechnology*, which reveals the recognition of and subsequent responds to agroecology gaining traction in international policy making (World Food Prize Foundation, 2021). An arranged marriage like this is likely to water agroecology down to a merely technical approach, ignoring its deep roots in social and environmental justice. The most prominent co-optation of language by regime actors in the discourse however has been that of “food systems transformation” itself. As the comparative framework has indicated, there are serious doubts about the legitimacy that claims of transformation among different propositions in the discourse – especially those of regime and mediating actors – hold. The next paragraph will carefully scrutinise these claims, tapping into both STS and SES perspectives and eventually combining them through a post-growth perspective.

3.3 Challenging the Hegemony of Growth & Reclaiming the Validity of Transformation

Having presented six different approaches to food systems transformation prevalent in the ongoing discourse, it has become apparent that most of them are likely to fail in spurring transformative action and help move food systems onto a truly sustainable and inclusive path. As already indicated above, such a path would have to navigate between planetary boundaries on the one hand, and a social foundation of basic needs (like sufficient, safe, and nutritious food) on the other. The concomitant juggling act has been well illustrated by Raworth in her popular doughnut-shaped visual framework resembling a safe and just operating space for humanity (the outer boundary forming an environmental ceiling based on Rockström et al.’s nine planetary boundaries (2009), the inner boundary being comprised of a social foundation of critical human deprivations) (2012). The 17 SDGs have tried to encapsulate those social and environmental goals as comprehensively as possible, with 14 socio-economic goals being complemented by three environmental goals (SDG 13, 14 and 15). As Randers et al. point out however, trying to realise the former will undoubtedly put pressure on the latter, with extraordinary action being necessary to reconcile social and environmental development goals within planetary boundaries (2019: 12). According to their simulation model, more economic growth – a fundamental and cross-cutting basis of the SDGs – will not help achieving satisfactory results, with advancement on some (social) SDGs

only able to happen at the cost of reduced satisfaction of other (environmental) ones (Randers et al., 2019: 10-11). Such critical reflection is echoed by various scholars arguing that due to the contradiction implicit in the term, sustainable development can be considered an oxymoron (Eisenmenger et al., 2020; Hickel, 2018; Spaiser et al., 2017).

If the SDGs are considered to be the normative foundation for any food systems transformation to work towards, something that the UNFSS Scientific Group (von Braun et al., 2021) and most of the approaches outlined above suggest, this inevitably means that economic growth is considered a fundamental yet flawed foundation in transition processes towards more sustainable and inclusive food systems. What the majority of regime and mediating actors assume is that a decoupling of growth-based development from its intrinsically unequal and environmentally destructive impact is possible, an assumption that is increasingly deemed unfeasible and insufficient considering exacerbating climate change and ecological breakdown (Hickel and Kallis, 2019; Keyßer and Lenzen, 2021; O'Neill et al., 2018; Parrique et al., 2019; Randers et al., 2019). As a recent report of the European Environmental Bureau concludes:

The conclusion is both overwhelmingly clear and sobering: not only is there no empirical evidence supporting the existence of a decoupling of economic growth from environmental pressures on anywhere near the scale needed to deal with environmental breakdown, but also, and perhaps more importantly, such decoupling appears unlikely to happen in the future (Parrique et al., 2019)

Such conclusions are certainly not new, with voices challenging the growth-oriented nature of sustainable development being as old as the concept itself. Meadows et al. already forecasted in 1972 that eliminating the negative outcomes of our economic activity would require a divorce with the growth paradigm (Meadows et al., 1972). Likewise, also ecological economists like Georgescu-Roegen (1971) and Daly (1991) have enhanced understanding of the economy being merely a subsystem confined by a social system and ultimately the biosphere, with natural resources being irreversibly degraded when undergoing economic activity. What is different though is that their theorisation and subsequent establishment of the interdisciplinary field of ecological economics has brought forward a variety of growth-critical currents that continue to gain evermore traction in light of climate change and persistent resource depletion.

For food systems transformation, this represents a fundamental trade-off in which a pursued 'win-win' situation of both continuous economic growth and environmental sustainability is unlikely, if not impossible, to appropriately guide transformation towards strong sustainable food system outcomes. Consequentially, the majority of approaches to transformation: (i) *neoliberal*, (ii) *adaptive*, (iii) *reformist* and to a certain extent (iv) *progressive* do not actually suggest a depth of change (Wigboldus et al., 2020) that can be considered transformative, but rather suggest incremental changes that keep current regime configurations in place. Their co-optation of the transformation narrative cements the overall support for radical change, but blurs the lines between what can or cannot be considered transformative and what not. A general tendency is the postulation of any novelty or minor change as either "innovative" or "transformative", a trend increasingly visible among regime actors as a way to spur endogenous renewal and keep radical (and truly transformative) niche innovations at bay. As Geels points out by recalling the stable character of configurations: 'Innovation [or change] in existing systems and regimes is mostly incremental and path-dependent because of various lock-in mechanisms' (2019: 189). Such technical, socio-political, and institutional lock-ins have also been observed in relation to corporately controlled food regimes/systems (IPES-Food, 2016; Leeuwis et al., 2021, Vanloqueren and Baret, 2009).

With calls for more innovation ubiquitous in the current discourse (e.g. Anderson and Maughan, 2021; Barrett et al., 2020; den Boer et al., 2021), a problem persists in the way that regime and mediating actors assume ‘that “green” innovations are intrinsically positive’, often failing to address ‘how much sustainability improvement they offer and if this would be sufficient to address persistent environmental problems at the speed required’ (Geels, 2019: 189). Likewise, they tend to suffer from what Feola et al. have described as an “innovation bias”, i.e. they overemphasise having to come up with something new and subsequently neglect the ‘deconstruction and disarticulation of existing socioecological configuration’ (2021: 2). According to them, this is not considered a unique problem of studies on food systems transformation, but on theorisations and articulations of sustainability in and around STS and SES in general (ibid.). What the food systems transformation discourse thus requires is a rigorous reflection on the role of innovation as a panacean solution in transition processes on the one hand, and more insights on how current regime configurations can be deconstructed to foster sustainability transformation on the other.

Post-growth thinking actively tries to dismantle such configurations not only by challenging the neoliberal and growth-based economic development model that has (and is continuing) to shape human activity, but also by providing concrete alternatives of achieving prosperity through sufficiency, solidarity, and care (Gerber and Raina, 2018; Göpel, 2016; Hickel, 2021, Jackson, 2009; Kothari et al., 2019; Wiedmann et al., 2020). Notwithstanding the considerable differences amongst post-growth approaches in whether or not a post-growth economy necessarily also implies a post-capitalist economy¹⁴, one thing is certain: the economic system needs considerable reconfiguration away from overconsumption, absurd inter- and intra-country inequality and environmental destruction of unprecedented scale. Instead, it should work to improve human welfare by distributing the outcomes of economic activity more equally, keeping such activity within the planetary boundaries and centring its outcomes around well-being rather than affluence (Wiedmann et al., 2020). Likewise, it should repair what Marx termed the “metabolic rift”, the detachment of social production from its ecological foundation (McMichael, 2009: 161). In short, it requires transformation through an “unmaking” of existing, unsustainable configurations (Feola, 2021).

Approaches critical to infinite economic growth recognise the complexity inherent in SES and STS systems in general and agri-food systems in particular, meaning that they are aware of the difficult trade-offs involved in shifting or reducing (unnecessary) consumption (rather than just greening it). As Hickel puts it: ‘Let me be clear: none of this will be easy. We would be naïve to think otherwise. And there are still difficult questions to which we don’t yet have all the answers. No one can give us a simple recipe for a post-capitalist world’ (2021: 244). Whilst trade-offs are omnipresent in food systems and the pursuit of the SDGs (Valin et al, 2021), Göpel indicates that next to better understanding trade-offs, it might also be possible to overcome them if goals and processes were to be changed (2016: 132). What such a change of goals and processes could look like in relation to food systems transformation will be elaborated in the next chapter based on a number of concrete examples that indicate how post-growth thinking can foster profound transformation.

¹⁴ See Gerber and Raina (2018) and Wiedmann et al. (2020) for a more comprehensive comparison.

Chapter 4 Entry Routes for Post-Growth Theory

Central to this fourth chapter is the elaboration of concrete entry routes for post-growth thinking to long-lasting ramifications for the direction ongoing discussions around food systems transformation are heading into. Whilst it is beyond the scope of this study to provide a comprehensive overview of where post-growth thinking has potential leeway, I provide a number of concrete examples I consider most relevant and likely to have lasting impact on the way food systems can be altered towards outcomes of strong(er) sustainability and social justice. I conclude by highlighting how those examples could gain more influence in the future.

4.1 Envisioning a New Food Regime

As the previous chapter has shown, the pursuit of continuous economic growth continues to be central in most approaches to food system transformation, despite its pivotal role in pushing multiple indicators outside the safe and just operating space for humanity (O'Neill et al., 2018; Randers et al., 2019; Wiedmann et al., 2020). Pursuing new agri-food systems with planetary boundaries and critical human needs in mind (Raworth, 2012) would therefore inevitably have to constitute a break with the economic growth paradigm. Whilst progressive regime and mediating approaches might incrementally improve the social and environmental performance of agri-food systems, they are unlikely to pave the way for a new food regime. The vested interest and involvement in the subsistence of various lock-ins makes regime actors unsuitable to guide change, different then proclaimed by regime actors themselves. Such actors are not likely to disappear from one day to the other – to the contrary, they will do everything in their power to maintain their hegemonic status – but recent developments like the increasing usage of climate litigation against corporate interests and elaboration of comparatively ambitious policy proposals like the *European Green Deal* with its aligned *Farm-to-Fork strategy* have shown that the influence of regime actors is tameable.

However, it is likely that neither governments nor courts will steer the change necessary for profound transformation unless pressured by social movements and engaged citizens. The European Green Deal for example is still embracing green growth through economic growth decoupled from resource use (European Commission, 2019). Niche actors therefore have a pivotal role to play in pushing for food regime change. With approaches more radical in nature, their success will likely depend on the pressures that landscape changes like climate change, biodiversity loss and unexpected incidences like the recent COVID-19 pandemic put on the regime. Failures of the regime to deliver will ultimately mobilise greater masses, a development that is the emergence of a strong global climate movement over the last years has impressively shown. Whilst *visionary approaches* are actively building alternatives in the interstices of the current system – at times on a quite large scale as the example of Riverford Organic Growers has shown – *radical approaches* continue to assert pressure on the regime through mobilisation and campaigning. In order to succeed however, TAMs require some further thinking and theorisation on their position in relation to other institutions like markets and the state, as multiple scholars historically close to the food sovereignty movement have shown (Edelman et al., 2014). Part of Edelman et al.'s critical, yet constructive reflection has also been the observation that the role of economic growth has been insufficiently addressed by TAMs, with little attention given to what 'difference [...] food sovereignty makes within broader political-economic transformations' and what 'impacts and implications [...] food sovereignty holds for transitions to a post-petroleum, post-growth and/or post-capitalist society?' (Edelman et al., 2014: 913). As Geels and Schot

point out, if one innovation is not yet sufficiently developed, multiple niche innovations start competing (2007), something that can be observed in relation to agroecology (an approach pivotal to LVC and other social movements), which is only considered one of many innovative solution approaches in international policy making (HLPE, 2019; Anderson and Maughan, 2021).

This in turn suggests the need for alliances of various actors that can help move both niche innovations and general post-growth thinking forward. As Wright concludes in relation to spurring a societal transformation beyond capitalism, none of the three strategies for transformation he has identified (ruptural, interstitial or symbiotic) will be able to bring about transformation on its own (2010: 370-371). Instead, it must be a combination of interstitial and symbiotic strategies coupled with partial ruptures (e.g. civil disobedience) that can help in the project of social empowerment (*ibid.*). In food systems, that requires a stronger collaboration between visionary approaches (showing that another world is possible) and those of progressive forces (stabilising the institutional basis for niche proposals), with radical ones continuing to lay bare the shortcomings of regime proposals whilst mobilising masses behind alternative visions. On certain topics, even reformist approaches might help gain space and traction for niche proposals to obtain prominence among a wider audience. Transforming food systems will require alliances that go beyond the previously mentioned multistakeholderism (Buxton, 2018), with grassroots actors being the ones defining and democratising the multilateral food governance agenda (Canfield et al, 2021b; McKeon, 2021).

Likewise, timing is considered crucial for value-based and emancipatory niche proposals to gain traction. Geels and Schot describe it as niches building up internal momentum that is waiting to be unleashed at the right moment once the regime is facing crisis through sufficient landscape pressure (2007). The timing and whether niche propositions are fully and competitively developed will determine whether a de- and re-alignment path or actual regime substitution is happening (*ibid.*). In a similar fashion, also Wright reiterates the importance of timing. As he puts it: ‘Interstitial strategies, of course, may ultimately be dead-ends and be permanently contained within narrow limits, but it is also possible that under certain circumstances they can play a positive role in a long-term trajectory of emancipatory social transformation. (2010: 327). In Gramscian terms, social movements of niche actors (like TAMs) together with visionary and progressive forces can play a counter-hegemonic role in reclaiming food governance spaces and successfully challenging the dominant, growth-driven narrative pushed by regime actors (Canfield et al., 2021b; Kropp et al., 2021, McKeon, 2021).

The following sections will explore three potential entry routes for post-growth thinking to shape the current discourse around food system transformation. Whilst by no means exhaustive – the diversity of potential avenues for post-growth thinking constitutes a study in itself – those three examples are selected due to their topicality and the opportunity they provide substantially shaping the ongoing discourse.

4.2 Health, Nutrition & The Problematic Role of Advertisement

A first important consideration in post-growth thinking is that of well-being, with a central demand being the consideration of appropriate indicators beyond economic growth to measure and guide ambitions for a better future. As this relationship constitutes a whole

debate in itself¹⁵, this section will focus on a specific aspect of welfare that is increasingly pertinent in the food system transformation discourse: health and nutrition. As Dixon illustrates by using a food regime analysis, concomitant to the transition from one food regime to another has been the fundamental shift in human diets through a process of what she describes as “nutritionalisation” (2009). This process comprised ‘the co-option of nutrition science to extract surplus value and authority relations from food’, leading to a largely class-based dichotomy between healthy diets for affluent consumers and highly processed foods with high calorie contents for poorer populations (Dixon, 2009: 322). Next to this intra-country development, also between countries a divide has been visible, with a predominance of rising overnutrition (or obesity) in some countries contrasting a relative prevalence of under- or malnutrition in others (FAO et al., 2020). Whilst recognising the complex interplay of cultural, economic, geographical and political factors when assessing food and nutrition security, it is impossible to see its development in isolation from the rise of corporate actors in influencing the configurations of agri-food systems (McMichael, 2009; IAASTD, 2009; IPES-Food, 2016).

As Marion Nestle powerfully exposes in her book *Food Politics: How the Food Industry Influences Nutrition and Health*, the food industry has made it a chief objective to encourage people to eat and drink more – more food, more frequently, and in greater amounts – regardless of how it affects their health or well-being (2013). This attitude, forced by a downward facing spiral of having to generate more sales and subsequent profits year in year out in a highly competitive and market environment, is diametrically opposed to post-growth objectives of simpler and sufficiency-oriented lifestyles (Wiedmann et al., 2020). Hickel’s work on *Less is More* exposes the principle of competition at all costs as a toxic trait of neoliberal capitalism, with advertisement having lifted consumption from a perfunctory act to one in which the human psyche is manipulated to consume goods previously deemed unnecessary (2021). A prime example of this is ‘the shift away from plant-based diets towards higher per capita consumption of animal-based foods, oils and fats, processed sugars and processed carbohydrates’ (Dixon, 2009: 322).

Looking especially at the former, industrial livestock production is central to the earlier mentioned grain–oilseed–livestock complex, with Weis (2013) indicating that from environmental destruction to pollution and GHG emissions, it is a crucial sector in steering the globe towards a sixth mass extinction and climate breakdown. This claim is echoed by the EAT-Lancet Commission, indicating that the environmental impact of red meat production combined with the health risks associated with its excessive consumption requires a global halving of its consumption (Willet et al., 2019). Claims of sustainability from regime actors like the previously mentioned JBA S.A whose very existence is based around this intrinsically unsustainable complex are heavily prominent in advertising messages to consumers around the world, with China and other Southeast Asian countries historically low in meat consumption being strategically identified as new markets to venture into (2020: 26).

In view of the role of advertisement in manipulating consumer choices, it is disturbing to see that during the UNFSS process, solutions to malnutrition have been largely portrayed as a matter of consumer choice (Clapp et al., 2021). What is needed instead is much more rigorous national efforts to curb the power of advertising in general and that of unhealthy and unsustainable products like red meat towards youth and other vulnerable groups in particular (Willet et al., 2019). There are a wide range of post-growth proposals on how to do so, from quotas on total ad expenditure and prohibition of psychologically manipulative methods to banning advertisement from public spaces like schools (Hickel, 2021: 215). The increasing awareness on the detrimental effects of advertisement on human and planetary

¹⁵ For a more comprehensive elaboration on this important topic, see Büchs and Koch (2017).

health is a good sign, but more significant and collaborative efforts are needed by niche actors (especially consumer protection groups and social movements) and mediating actors (policymakers and legislators) to contain and repress excessive growth and consumption-based advertisement of detrimental products.

4.3 A Paradigm Shift through Agroecology

As IPES-Food postulated in its first major report *'From Uniformity to Diversity'* (2016), nothing less than 'a paradigm shift from industrial agriculture to diversified agroecological systems' is needed. A contested statement back then, agroecology is increasingly recognised as a promising approach to radically transform agri-food systems (Anderson et al., 2019; HLPE, 2019; IAASTD, 2009; IPES-Food, 2016; Poux and Aubert, 2018). Whilst climate-smart agriculture and most other approaches promoted by corporate actors are only considered part of an incremental transition centred around sustainable productivity increases, agroecology is perceived as having a much more transformative vision 'focused on improving ecological and human health and addressing issues of equity and governance' (HLPE, 2019: 15). In doing so, agroecology combines efforts of regenerative, culturally sensitive and place-based forms of food production with the political dimension of tackling power imbalances prevalent in agri-food systems and raising concerns about justice, equity, democracy and co-creation (Anderson et al., 2019). As Anderson et al. point out, 'Agroecology, with its emphasis on ecological processes, low external inputs, co-production with living nature, the agency of food producers and eaters, and autonomy from elite and corporate power sharply contrasts with incentives, policies, programs, rules, and norms of the dominant regime' (2019: 5). Consequentially, agroecology has been closely associated with TAMs like LVC and their core principle of food sovereignty, which centres around peasants' rights and a locally grounded vision of food systems (Borras et al., 2008).

The deeply political and ecologically grounded nature of agroecology as defined by grassroots movements and proponents of food sovereignty has considerable overlap with the values and visions of post-growth advocates (Roman-Alcalá, 2017). Next to the especially pertinent socio-political aspects of (rural) emancipation, deepened democracy and solidarity shared by both camps alike (ibid), another important contribution of agroecology is the way it perceives the closure of agroecosystem cycles and their deliberate and carefully considered independence from external market dynamics and resources as an indispensable component of agricultural sustainability (González de Molina et al., 2019: 22). In using the term "Agrarian Metabolism" to describe 'the exchange of energy, materials, and information that agroecosystems perform with their socio-ecological environment', González de Molina et al. point out that agroecology offers an important perspective on biophysical flows within and out of agroecosystems, being closely concerned with those biomass and energy stocks that do not leave the system (2019).

A study on the Agrarian Metabolism of Spain's agri-food system in the year 2000 revealed a highly inefficient system in which not only the production stage, but also other food system activities were highly energy intensive and inefficient when it comes to energy convergence (Infante Amate and González de Molina, 2013). In calling for a "sustainable degrowth", the authors showed that 'for each unit of energy available in the form of food, 6 units of energy have been consumed in its production, distribution, transportation and preparation' (2013: 30). Such findings are substantiated by a recent study lead by FAO staff, which indicates that cumulative pre- and post-production emissions are close to overtaking agricultural production and land use as the largest contributor of GHG emissions stemming from agri-food systems (Tubiello et al., 2021). Their rapid growth is largely by expansion of supply chain processes like food processing, transporting and retailing as well as waste

disposal and input manufacturing (especially fertilizers) (ibid.). Place-based and circular agroecological systems based on sufficiency and resilience offer great potential to shape a food regime that is moving beyond a blind adherence to economic growth and affluent overconsumption. It can offer a pathway for a sound agri-food systems in line with biophysical limits and a guidance for what degrowth advocate Serge Latouche called ‘the strategy of the “4 Rs”’: re-territorialisation of production, re-localisation of markets, re-vegetarianisation of diet, and re-seasonalisation of food consumption’ (2006, as cited in Infante Amate and González de Molina, 2013: 127-128). Poux and Aubert have taken up those principles in comprehensively sketching what an agroecological Europe in 2050 could look like (2018). Whilst widespread among niche actors, also mediating and even some regime actors have started incorporating agroecology into their communication, reconciling it with their incremental reform proposals (Alonso-Fradejas et al., 2020; Anderson and Maughan, 2021). Similar to Anderson et al. (2019), I argue that for agroecology to be recognised for its transformative potential, it will require collective action by niche actors building and amplifying political power to resist co-optation and reiterate the true values it holds.

4.4 Solidarity, (Re)commoning and the Politics of Collectivity

Historically, the reciprocal influence between capitalism and the development of globalised food systems has been accompanied by processes of dispossession and subsequent accumulation of rights and resources in the hands of powerful actors (Friedmann and McMichael, 1989). Equally, tangible (e.g. land, water, seeds, forests) and intangible commons (knowledge, cultural heritage, etc.) have undergone a long trajectory of enclosure and dispossession from peasants, Indigenous peoples and other rural communities (Vivero-Pol et al., 2019). A development continuing up to today, it has fundamentally shifted the configuration of agri-food systems around the world. Whilst the process of land grabbing has received considerable attention in the scholarly literature, not least since the steep increase in land acquisitions following the financial crisis between 2007 and 2009 (e.g. Borras and Franco, 2009; White et al., 2012; Zoomers, 2010), much less emphasis has been put so far on studying processes of commoning or recommoning as ways of reclaiming previously privatised and commodified spheres of food provisioning. Whilst exceeding the frame of this paper, it is nonetheless important to touch upon this important intersection of post-growth thinking and propositions of collective management, shared responsibility and/or benefit sharing increasingly gaining traction among a wide array of niche actors (Kropp et al., 2021; Nelson and Edwards, 2020; Vivero-Pol et al., 2019). As Vivero-Pol et al.’s comprehensive review on food as commons points out, the idea of communing in relation to food spans disciplines and organizational as well as geographical scales, from gastronomy, traditional knowledge and principles of care to transition towns, national policies and open source data or knowledge (2019). Increasingly, such ideas are gaining traction among consumers around the world, with community-supported agriculture projects, urban farming, collectively owned stores like the previously mentioned Odin cooperative and solidarity networks for less well-off fellow citizens receiving increasing attention, especially since the start of the COVID-19 pandemic. As Nemes et al. conclude after having studied alternative and local food systems in 13 countries since spring 2020, progressive niche actors have been able to face disruptions caused by COVID-19 and increase their visibility considerably (2021: 598). Despite bearing great potential, those niche proposals however present a serious bottleneck, namely its dependency on getting consumers on board. Without their interest in any of the three entry routes for post-growth thinking outlined above – the case for nutritious and more plant-based food, agroecology and the demand for solidary and

jointly managed food spaces – food regime change is unlikely to occur any time soon. Gaining their trust and support for growth-critical ideas is thus to a challenge for post-growth proponents to overcome.

An important point that Gerber raises in this regard by specifically referring to degrowth advocates: [they] should be wary not to fall into various versions of the “agrarian myth” and base their alternative models on naïve ideas about “peasant economies”. Proponents of critical agrarian studies and radical ideas like those outlined above on the other hand should be ‘careful not to endorse the pervasive “myth of growth”’ (2020: 236). What I consider important is that the movements for radical niche propositions and post-growth ideas should more closely collaborate with each other, building on where the two narratives converge and synthesize efforts to challenge the current food regime. Doing so will require consideration of three specific points of attention: (i) counteracting efforts by regime actors to dilute and co-opt the transformative potential of their propositions, (ii) actively forge alliances and foster collaboration between progressive, radical and visionary approaches to build both a critical mass of food systems actors (including consumers) as well inclusive and democratic spaces for their ideas to gain further traction and (iii) expand research on the political economy/ecology dimension of growth in agri-food systems and the subsequent response that truly transformation niche proposals like agroecology can provide, thereby building a stronger evidence base on which collaboration between the niche actors and post-growth advocates can rely.

5. Conclusion

As Friedmann has pointed out in her reflection on the future of food regime analysis, ‘a rich literature on transitions is emerging which is barely in conversation with food regimes’ (2016: 684). This study has highlighted the increasing relevance of critical transformation research for the discourse around food systems change by pinpointing the different ways the transformation framing is being used and misused by various actors prevalent in agri-food systems. By more closely analysing the transition pathways, transformation strategies and depth of change underlying their approaches, I have shown that food regime actors largely contribute to a reinforcement or optimisation of existing configurations, hardly living up to their bold claims of being the trailblazers of change. Whilst claims of sustainability and inclusivity are increasingly echoed, especially among adaptive approaches heralding a future decoupling of their environmental pressures from economic growth, their unattainable proposals have shown to hamper and decelerate rather than amplify profound transformation.

Mediating actors have proven to be more ambitious in reforming agri-food systems, but are failing to adequately address the corporate power underpinning current food regime configurations (Clapp et al., 2021). The subsequent perpetuation of lock-ins and growth-centred reform proposals equally limit the scope for transition pathways to adequately address the convergence of multiple complex and interrelated crises encumbering agri-food systems and the planet as a whole. Those impacted most by the effects of climate change and environmental destruction have been sidelined in the implementation of grand reform proposals like the UNFSS. With the majority of niche actors being absent during the so called “people’s summit”, circulated proposals have largely ignored post-growth visions.

Niche actors on the other hand have grasped the inherently conflicting nature of “green growth” proposals and have either rallied around defying them through public campaigning, or have occupied and interstitially expanded what Wright calls ‘the spaces and cracks within [...] dominant social structure[s] of power’ (2010: 322). All over the world, many promising examples of alternative visions – of which this study has been able to mention only a few – are flourishing in the cracks of a growth-based food regime, with growth-critical visionaries setting an example of the future they are envisioning (Kothari et al., 2019; Kropp et al., 2021; Nelson and Edwards, 2020). While the dominant structures are being stricken by crises, conceptions of another tomorrow are growing. Whilst unlikely to bring about change in isolation from larger processes of food governance and consumer preference shaping agri-food systems around the world, I have shown that truly transformative visions find resonance among various other approaches aiming to bring about change. Forging (unusual) alliances, reclaiming language and continuing to reveal the contradictory nature of growth-based development is crucial in achieving ‘prosperity without growth’ (Jackson, 2009). In specifically addressing the commonalities and mutual relevance of concerns for food systems transformation on the one hand and the relevance of growth-critical theory for the visualisation of another, better future, on the other, I have hopefully pointed to fertile ground for future research and collaboration among actors willing to imagine and actively work towards a new food regime in a post-growth world.

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