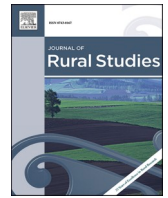


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Journal of Rural Studies

journal homepage: www.elsevier.com/locate/jrurstud

A framework for recognizing diversity beyond capitalism in agri-food systems

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ARTICLE INFO

Keywords:

Capitalism
Post-capitalism
Ontology
Alternative food networks
Community supported agriculture

ABSTRACT

Calls for agri-food system sustainability transitions abound and increasingly draw attention to the need for addressing deeply ingrained social, cultural and economic logics that drive unsustainability, and specifically political economy of the systems of provision. Yet, the analytical conceptualization of diversity with regards to capitalism in agri-food systems remains limited. This paper fills this gap by proposing and illustrating a framework for recognizing capitalist, alternative capitalist, and non-capitalist configurations in enterprises, co-operatives, associations, and other socioeconomic entities in agri-food systems. The framework is informed by poststructuralist theories of capitalism and development, as well as by other analyses and critiques of capitalism rooted in relational understandings of society-in-nature. It entails the following dimensions: (a) ontology: space, time, human nature, logic of relation; (b) economic relations: enterprise, labour, economic transactions, Property, finance; (c) relation with the State: participation in regulation and legitimation; (d) knowledge. The application of the framework to cases of community supported agriculture (CSA) shows the coexistence of capitalist, alternative-capitalist or non-capitalist elements in CSA initiatives. Distinct CSA initiatives show different configurations of the framework's elements. In some cases, configurations changed over time as a result of tensions between actors, or between the CSA and its context. The uncovering of these dynamics proves that the framework can be a valuable tool for recognizing diversity beyond capitalism in a given food initiative.

1. Introduction: diverse agri-food systems

Capitalist industrial agriculture is widely recognized as being socially and environmentally unsustainable (Buttel, 2006; Weis, 2010; Woodhouse, 2010; IPES FOOD, 2016). As Jones et al. (2010, p.93) declaimed, industrial agriculture has driven a dramatic increase in food production and availability for large populations, as well as a range of other negative impacts:

[...] destruction of biodiversity and environmental service systems [...]; problematic economic/social/biophysical characteristics such as labour exploitation, disease risk, animal welfare issues; unequal relations of power within large corporate food chains; the quality of the food produced in terms of taste, human health, nutrition; excessive levels of waste and carbon footprints; and forms and levels of consumption in relation to 'illnesses of modernity' such as obesity and heart disease.

Calls abound for an agri-food system sustainability transition (e.g.,

Oliver et al., 2018). As policy approaches for the decoupling of ever-increasing economic activity and environmental impacts repeatedly prove to be unfeasible (Jackson, 2016; Hickel; Kallis, 2019; Parrique et al., 2019), the debate on sustainability transitions can greatly benefit from expanding the spectrum of 'spaces of possibility' for economic dynamics. In this context, a growing number of transition and sustainability scholars have drawn attention to the need to address the deeply ingrained social, cultural, and economic logics, that drive the unsustainability of food provision systems and shape their political economy (Brand, 2016; Feola, 2020; Newell, 2019).

Some of the most insightful political economy analyses of agri-food systems have resulted in the development of notions of 'food regimes'. Notably, McMichael (2009, p.163) referred to capitalist industrial agriculture as 'the corporate food regime,' and suggested that understanding this concept is 'a key to unlock not only structured moments and transitions in the history of capitalist food relations, but also the history of capitalism itself'. As such, McMichael (2009) argued that food systems cannot be considered to be external to capitalism, as they both

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<https://doi.org/10.1016/j.jrurstud.2020.10.002>

Received 3 April 2020; Received in revised form 26 June 2020; Accepted 2 October 2020

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reflect and reproduce capitalist elements dominating in particular historical periods. [Friedmann \(2005\)](#) similarly proposed the term ‘corporate-environmental food regime’ and elaborated that capitalist industrial agriculture deepens two key pillars of capitalism, namely commodification and capital accumulation ([Wallerstein, 2011](#)). This food production model is also characterized by logics of ‘enhanced productivity per worker, plant and animal’ ([Weis, 2010](#), p.315), which is fundamental for sustaining the capitalist economic growth imperative ([Sachs, 2006](#)).

Notions of food regimes are helpful as characterizations and bases for the analysis of capitalist agri-food systems; however, the related studies tend to stress the dominance of agri-food systems driven by capitalist industrial forms of food production and consumption. A different body of literature recognizes the coexistence of both ‘conventional’ (i.e. capitalist) and ‘alternative’ food networks (AFN) ([Goodman et al., 2012](#)), thereby countering common narratives of corporate agri-food dominance and revealing the overall diversity of this food system. As [Cameron and Gordon \(2010, p.6\)](#) showed, ‘capitalist and alternative capitalist enterprises such as ALDI or local coffee shops [...] participate in non-market transactions; conversely, non-capitalist enterprises, such as [...] the community gardens employ waged workers and engage in market transactions’. Such research reveals that for a minority but growing share of farmers and consumers, engagement with food from production to consumption has long been characterized by various possible configurations of conventional and alternative practices and networks, including farmers’ markets, community supported agriculture, urban gardening, and food self-provisioning and exchange, among others ([Grey, 2000](#); [Allen et al., 2003](#); [Venn et al., 2006](#); [Smith and Jehlička, 2013](#); [Goodman et al., 2012](#); [Gritzas; Kavoulakos, 2016](#); [Watts et al., 2018](#)).

Following [Gibson-Graham \(2006\)](#) and other poststructuralist perspectives ([Harris, 2009](#); [Cameron and Gordon, 2010](#); [Trauger and Passidomo, 2012](#); [Gritzas and Kavoulakos, 2016](#); [Rosol, 2020](#)), we interpret the variations in and between agri-food systems as an expression of a diverse food economy characterized by diverse configurations of capitalist, alternative-capitalist, and non-capitalist elements. This approach entails identifying and exploring the complexity of the performed economy as well as various configurations of capitalist and non-capitalist elements in different types of socioeconomic entities (enterprises, cooperatives, associations, food initiatives, etc.) ([Turker and Murphy, 2019](#)) with the aim to ‘disarm and dislocate the naturalized hegemony of the capitalist economy and make space for new economic becomings’ ([Gibson-Graham, 2006](#), p. 60).¹

However, the analytical conceptualization of diversity with regard to capitalism in agri-food systems remains limited. The diverse economies scholarship focused on economic relations (e.g. [Gibson-Graham, 2006](#)) and subjectivity ([Healy et al., 2020](#)), while other studies and frameworks have attempted to capture additional dimensions of capitalism by singling out specific elements such as non-capitalist modes of evaluation (e.g., [Lee, 2000](#); [Barron, 2017](#)), non-instrumental relations ([McCarthy, 2006](#)), and non-utilitarian subjectivities ([Galt et al., 2014](#); [Trauger; Passidomo, 2012](#)). A coherent, comprehensive framework for empirically recognizing socio-ecological diversity in agri-food systems beyond capitalism remains lacking.

This paper fills the current theoretical gap by proposing and illustrating a framework for recognizing more-than-capitalist configurations (i.e. capitalist, alternative capitalist, and non-capitalist) in socioeconomic entities in agri-food systems. This approach makes two primary theoretical contributions. First, it provides a more holistic

understanding of economic diversity than is provided by existing theories, thereby capturing the complexity of capitalism in a manner that extends beyond its role as a form of socio-economic organization to encompass its broader cultural and political architecture. In doing so, we expand the characterization of agri-food production spaces from economic relations, which have been the focus of much of the diverse economies research ([Fickey, 2011](#)), to incorporate ontology, knowledge production, and relations with the state. Therefore, this perspective contributes to ‘a decentering of capitalism in the definition of the economy [...] so that the range of existing social experiences that are considered valid and credible alternatives to what exist is significantly enlarged’ ([Escobar, 2018](#), p.68; also see [de Sousa Santos, 2007](#)).

Second, the proposed framework helps to reveal different ways in which capitalist, alternative capitalist, and non-capitalist elements can coexist in agri-food systems beyond economic relations, and how doing so may engender tensions in given socioeconomic entities over time. Such illuminations open the floor to a more enriched perspective of sustainability transitions of agri-food systems that rely on more-than-capitalist economies—i.e. economies in which practices based on ethics of care, redistribution, and commoning, among others, can be considered to be at least as valid as organizational forms based on the ethics of accumulation. Being informed by a more expansive notion of capitalism, and consequently of diversity, than the ones adopted to date in the literature, the framework proposed in this paper can help identify multiple premises for social struggle and sustainability transitions other than those directly related to capitalist economic relations.

The paper continues as follows. We first review existing frameworks that aim to capture the alternativeness of agri-food socioeconomic entities and poststructuralist research on diverse food economies with the aim of identifying their respective limitations with regard to mapping more-than-capitalist configurations in agri-food systems. Second, we build on post-structuralist critiques of capitalism and development to design a framework for recognizing economic diversity in agri-food systems and illustrate it through an illustrative application to community supported agriculture. We then conclude with some reflections on the potential, limitations, and possible future developments of our proposed framework.

2. Potential and limitations of existing frameworks of diversity in agri-food systems

We acknowledge the contribution as well as the limits of the diverse economies literature, particularly in relation to recognizing the multi-dimensional character of community economies. Built on [Gibson-Graham’s \(2006\)](#) feminist poststructuralist critique of capitalism, the literature on alternative economic spaces and diverse economies has contributed a sensitivity toward ‘reading for diversity’; however, the literature on poststructuralist approaches to economic diversity has focussed predominantly on economic relations. Although later extensions of the framework include Property and finance ([Gibson-Graham, 2011](#)), researchers have generally overlooked the socio-ecology of diverse economies. As remarked by [Gibson-Graham \(2006, p. 219\)](#), ‘economic practices exist in complex combination with each other and with the many more dimensions of difference that could be added to this discussion, for example, ‘property and resource ownership’. As yet, we have not developed any of the implications of the diverse economy for theorizing relations with the environment and would greatly appreciate input on this issue’ (see [Miller, 2020](#), for a recent discussion). As the authors affirmed, although insightful in many ways, AFN analyses informed by [Gibson-Graham’s](#) approach have suffered from this.

Consistent with the literature on diverse economies, the scholarship on AFN has increasingly dispelled binary thinking and problematized the relational and time- and place-dependent nature of ‘alternativeness’. It is increasingly acknowledged that binary conventional vs. alternative analyses of AFN are unproductive and analytically misleading ([Jonas, 2010](#)). As [O’Neill \(2014, p.112\)](#) argued, ‘alternative and local food

¹ We employ the term “socioeconomic entity” in conformity with existing literature in this field (e.g. [Turker and Murphy, 2019](#)), but conceptualize the economy as an inextricable component of the social realm which, in turn is inseparable from, and inextricably linked to, non-human systems in complex socio-ecologies.

systems interact with the conventional food system in complex and multiple ways [...] it is not a case of “either/or”. Neither the conventional nor alternative food systems are monolithic or hegemonic (Holloway et al., 2007, 2010; DiVito-Wilson, 2013), but rather involve diverse assemblages of actors, relations, and belongings (Levkoe and Wakefield, 2014; Lamine et al., 2018; Rosol, 2020), and the relations between alternative and conventional system are often fluid over time (Sonnino and Marsden, 2006; Feagan and Henderson, 2009).

Although the AFN literature has developed various frameworks to characterize distinctive elements and identify typologies, such approaches fall short of capturing diversity in relation to capitalism (Rosol, 2020). One important shortcoming of these theories is that they tend to focus only on a limited number of analytic dimensions. For example, Holloway et al. (2007) and Renting et al. (2003) concentrated on production-consumption relations in AFN, whereas Si et al. (2015), built on Whatmore et al. (2003) to highlight food features (e.g., healthy, local, seasonal) and relationships among stakeholders (e.g., political, small-scale). Feagan and Henderson (2009) suggested examining how alternative arrangements (CSA in this case) relate to the industrial food system (e.g., replication, modification, subversion) and narratives that underpin AFN philosophy. Other detailed analyses of AFN have emphasised single issues such as value (Albrecht and Smithers, 2018), moral aspects (Leiper and Clarke-Sather, 2017), or civic bonds (Poulsen, 2017). Therefore, Watts et al. (2005) early call for more multidimensional understanding of alternativeness, which was recently renewed by Rosol (2020), remains valid.

Second, existing frameworks have little analytical power when it comes to systematically recognizing economic diversity in agri-food systems because they are usually developed through an inductive process (from the empirics to the theory/framework) and are rarely informed by analyses of capitalism. For example, Forssell and Lankoski (2015) identified a rather large set of common characteristics of AFN on the basis of a literature review rather than a fundamental theoretical understanding of capitalist economies and their diversity. An exception to the inductive trend is Chiffolleau et al. (2019) proposed framework, which builds on new economic sociology, convention theory, and social and solidarity economics principles with the aim of better describing AFN, including development challenges and modalities; however, it neglects the question of whether and how AFN’s characterizing elements configure in non-capitalist configurations.

3. A framework for recognizing diversity beyond capitalism in agri-food systems

3.1. Illustrative cases

While the paper’s contribution is theoretical, in the following subsections we describe the framework and illustrate its application through selected examples of community supported agriculture (CSA), which is a specific form of AFN. AFN can emerge as deliberate responses to unsustainable, unhealthy, unjust outcomes of conventional agri-food systems or exist as ‘quiet’ social practices that contribute to building the social fabric of local communities (Smith and Jehlička, 2013). Not all AFN are non-capitalist assemblages. Diverse in scope and form, AFN constitute ‘alternative,’ ‘local,’ and/or ‘quality’ systems of food production and consumption that have captured growing market quotas (Goodman et al., 2012). AFN are widely considered more sustainable than conventional networks (Forsell and Lankoski, 2015; Schmitt et al., 2017), and they generally re-embed food in its biophysical, social and cultural context, redistribute value, and articulate new forms of political association and market governance, which often includes the reconnection of socially or geographically distant actors along the agri-food chain (Whatmore et al., 2003; Goodman et al., 2012).

CSA ‘seeks to reshape the nature of buying and selling agricultural goods by forming alliances between farmers and consumers. The goal is to cover the true costs of production by dividing them fairly among the

end consumers of the products, factoring in the costs of environmental stewardship and fair returns for labor’ (Ostrom, 2007, p.1). CSA commonly features short supply chains, a direct relation between consumers and producers, and organic food production. Prioritization of food sovereignty over capital accumulation makes community supported agriculture an interesting approach for comparison with conventional capitalist ways of doing and organizing.

Existing CSA initiatives are highly diverse and include commercial as well as non-profit enterprises, reliance on various combinations of wage labour and volunteers, and various assemblages of ‘scientific’ and practical or traditional knowledge. Such a broad range of configurations serves the purpose of exploring the applicability of the proposed framework to recognize diversity in agri-food systems. We used Scopus to search for articles incorporating the terms ‘community supported agriculture’ or ‘CSA’ in the title and narrowed down the search to articles based on one or more case studies to ensure access to richer data. We ultimately selected 24 case studies of CSA initiatives from the literature. These cases serve the purpose of providing data to illustrate the proposed framework and are discussed in four vignettes in the remaining parts of this section. However, these selected cases neither represent the entire diversity of CSA nor the development of CSA over time, and do not provide the empirical basis to draw general conclusions about CSA, which is not the aim of this paper.

3.2. Premises

To reiterate, this paper makes a theoretical contribution by proposing a framework for recognizing diversity beyond capitalism in socio-economic entities (enterprises, cooperatives, associations, food initiatives, etc.) of agri-food systems. Our approach rests on the following premises. First, following DiVito-Wilson (2013), we aim to inform readings of diversity in agri-food systems as performative economies on the ground rather than in any abstract form. Therefore, the framework neither assumes nor supports the idea that any given scale (e.g., local), social logic (e.g., cooperation), or form of exchange (e.g., market) is a priori better or worse than others. In addition, our approach does not imply that food initiatives are motivated by a deliberate desire to counter, resist, or oppose capitalism, even when they constitute non-capitalist configurations.

Second, the framework is grounded on the notion of configuration, whereby food networks are seen as socioeconomic entities in a particular arrangement or pattern of capitalist, alternative-capitalist, and/or non-capitalist elements. This approach supports a non-binary conception of diversity, such that differences are not assumed to be situated along a continuum between two incompatible extremes but rather to emerge from diverse arrangements of elements.

Third, our approach is consistent with and inspired by recent ‘scholarship [that emphasises] the generative capacities of what agri-food scholars do for enacting novel political, ontological, and normative practices’ (Carolan, 2013, p. 413). Thus, this paper aims to support engaged social science by providing a needed analytical tool to support researchers in ‘reading for difference’ and challenging imaginaries and practices of sustainability, sovereignty, and justice within and beyond agri-food systems (Harris, 2009; Carolan, 2013; DiVito-Wilson, 2013; Tornaghi and Van Dyck, 2015; Moragues-Faus and Marsden, 2017; Sarmiento, 2017).

3.3. Recognizing diversity beyond capitalism

Capitalism is defined in this paper as a historically specific form of social and economic organisation that is based on four key principles: 1) private ownership of the means of production; 2) the imperative to pursue financial gains through production and the market; 3) the transformation of labour into a commodity; and 4) owners’ control of the value generated through production (Gallino 1993; Harvey, 2006, cited in Feola, 2020; also see Fraser, 2014). Gibson-Graham (2006,

2011) translated these pillars of capitalist economic relations into five dimensions, namely capitalist enterprise, wage labour, private Property, mainstream financial markets, and transactions based on principles of financial commensurability; however, they recognized that a multiplicity of other forms of alternative- and non-capitalist economic relations exist and remain largely disregarded by the formal capitalist economy, which yet depends on them for social reproduction (Fraser, 2014). The scholars used the iceberg as an allegory to illustrate the hidden diversity of economic relations, explaining that

‘what is usually regarded as “the economy”—wage labor, market exchange of commodities and capitalist enterprise—comprises but a small subset of the activities by which we produce, exchange and distribute values [The image of an iceberg] opens up conceptions of economy and places the reputation of economics as a comprehensive and scientific body of knowledge under critical suspicion for its narrow focus and mystifying effects’ (Gibson-Graham, 2002, p. 1).

Following this logic, we argue that the principle of the iceberg expands to another important aspect of capitalism, namely its comprehensive cultural and political architecture (Gregory, 2000). Culturally, capitalism permeates and shapes individual and collective identities and relations beyond the economic sphere. The foundation for economic and power relations within capitalist systems is laid by a particular ontology or set of ‘the assumptions about the kinds of beings that exist and their conditions of existence’ (Escobar, 2018, p.23). Escobar (2018) argued that capitalism is underpinned by Euro-modern ontology, which posits an external (non-human) nature, atomized, ‘rational’ human beings, and an instrumental logic of relation with the non-human world. This ontology translates into the most fundamental dynamics of this economic model—the imperative of capital accumulation achieved by the means of the externalization of social and ecological costs, the lowering of labour costs, the enclosure of resources in processes of accumulation by dispossession (Glassman, 2006), and the search for surplus value through the commodification of human and non-human life spheres (Harvey, 2006). To disentangle the complex notion of ontology, we break it down into four fundamental categories of space, time, human nature, and human-non-human relations. Drawing on Escobar (2018), we suggest that relational ontological categories represent an alternative to capitalism and can be recognized in socio-economic entities as they are reflected in discourses and practices.

As a political architecture, capitalism rests on state structures (nationally and at lower administrative levels) that participate in its reproduction in periods of both stability and crisis (Fraser, 2014). We acknowledge the role of the ‘capitalist State’ to enable and reproduce capitalist economies, and we follow Jessop (2007) and Brand (2016) in considering the state not as a neutral entity but rather as a ‘strategic field’ (Poulantzas 2002, cited in Brand, 2016, p.11), which reflects and mediates capitalist power relations through regulation, discourses, and material resources. According to this view, ‘the structures and actions of the State and modes of governance cannot be explained by themselves but rather through the consideration of social practices and forces, the (changing) social context’ (Brand, 2016, p.512). Socioeconomic entities do not function independently from the state; rather, they influence forms of governance and regulation by engaging in participation in capitalist, alternative-capitalist, or non-capitalist ways. At the same time, socioeconomic entities seek legitimation from the state. Due to the state’s dependency on continuous economic growth for its stability (Jessop, 2002), legitimation in capitalist modernity is primarily based on contributions to the formal economy, thus overshadowing sources of legitimation based on non-utilitarian rationalities.

Knowledge is another essential component of the cultural and political architecture, as systems of knowledge production have been a primary condition for the establishment and expansion of capitalism (Moore, 2015). Knowledge production systems refer to the structures, including power relations, and social relations that are mediated by

knowledge production and circulation and define what type of knowledge is considered legitimate and who has legitimacy to produce it. Historically, capitalist food regimes have marginalized rural communities and indigenous cultivars and knowledge (Friedmann, 2005), promoting scientific knowledge that has enabled the control, measurement, and quantification of human and non-human nature and thereby supported the expansion of the commodity frontier for the appropriation of cheap nature and resolution of capitalism’s crises of underproduction and concomitant rising raw materials costs (Fraser, 2014; Moore, 2015; Escobar, 2018). Nonetheless, alternative and non-capitalist modes of knowledge production persist and allow for a diverse set of actors and types of knowledge to shape economic reality (see below).

The framework can be visualized as in Fig. 1 to reflect this layered understanding of capitalism. Fig. 1 illustrates the framework as structured into four dimensions, namely ontology, economic relations, relations with the state, and knowledge production. Each dimension relates to a series of defining elements, each of which relates to a guiding research question (Table 1) and can be variably configured in a given socioeconomic entities.

By providing a multidimensional understanding of diversity beyond capitalism, the framework allows to identify multiple spaces for sustainability transformation in enterprises, cooperatives, associations, and other initiatives and organizations in agri-food systems. In the remaining parts of this section, we introduce each of the framework’s dimensions and elements and illustrate them through examples of community supported agriculture (CSA) (vignettes 1–4).

3.4. Ontology

Time. The notion of time that prevails in capitalist modernity is predictable, homogenous and linear, which suits the maximization of economic productivity (Kolinjivadi et al., 2020), and enables temporal ordering along a unique scale and the associated production of non-existence—e.g., notions of ‘pre-modern’ and stages of societal development (Gibson-Graham, 2005). Such ordering underpins notions of linear

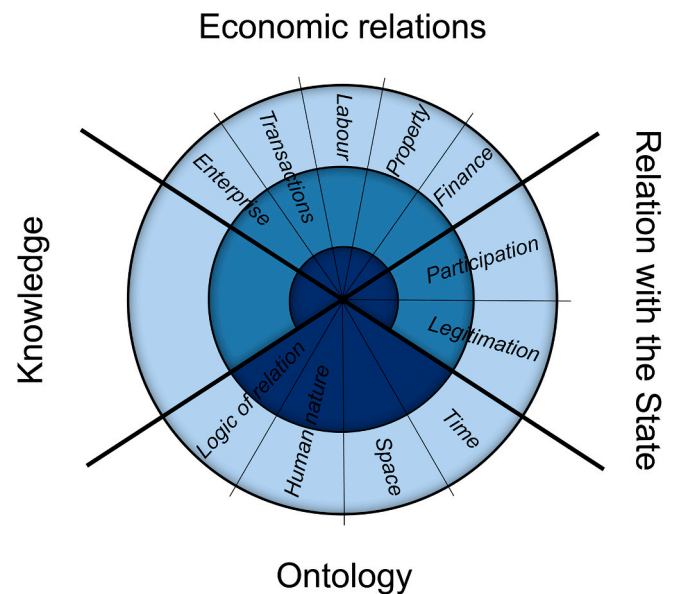


Fig. 1. Visualization of the framework for recognizing diversity beyond capitalism. The dark blue colour in the centre denotes the capitalist mode, and medium and light blue denote alternative- and non-capitalist modes, respectively. This visualization can be used to map the configuration of elements that characterizes a given enterprise, cooperative, food initiative or other such socioeconomic entities in agri-food systems. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

Table 1
Framework for recognizing diversity beyond capitalism in agri-food systems.

Dimensions	Element	Guiding question
Ontology	Time	How are these elements constructed, negotiated and performed?
	Space	
	Human nature	
Economic relations	Logic of relation	Who appropriates and manages the surplus?
	Enterprise	
	Labour	
	Transactions	
	Property	
Relation with the state	Finance	How is labour compensated?
	Participation in regulation	How is commensurability negotiated?
	Legitimation	How is access to Property structured?
		How are the activities funded?
Knowledge		What is the form of participation in regulation?
		What is the basis of political legitimation?
		How is (which) knowledge produced?

and—in principle—endless progress. Time in capitalist modernity is accelerated in processes of dynamic stabilization associated with—again, in principle—endless appropriation and accumulation (Rosa et al., 2017). Such a fundamental conception of time is performed in agri-food systems, for example, in the acceleration of production to fuel economic growth (capital accumulation), streamlined food consumption practices ('fast' food), and the value-laden ordering of agri-food systems, whereby industrial, high-tech agri-food systems are declared to be 'forward' and other systems are compared to those based on their monocultural productivity metrics. Linear, endlessly unfolding, accelerated time is also reflected in the elimination of seasonality in food provision through spatio-temporal arrangements that ensure supplies from other regions of the world and/or technology to achieve refrigeration and the 'extension' of the growing season (Castree, 2009).

In diverse economies, the above ontology can coexist with relational ontology and associated notions of time. As Bastian (2019) described, other notions of time are often revealed by the ways in which, for example, collectives involved in grassroots sustainable economies 're-tell time' by (i) practicing long-term thinking, (ii) critiquing growth over time, (iii) slowing down, (iv) cyclical temporalities, and (v) increased discretionary (i.e., 'free') time. Thus, while notions of 'slow' time have been also employed to convey ideas of a sustainable balance with nature in agri-food systems (Petri, 2005), relational ontologies entail more than a slowing down and rejection of the acceleration of everyday life. They rather entail temporalities that, as discussed by Bastian (2019) and Kolinjivadi et al. (2020), are set in contrast to the predictable, homogenous and linear representations of time for economic productivity in multiple ways. An important distinction between Euro-modern and relational ontological perceptions of time relates to directionality; according to the latter, a community existing through time includes ancestors as well as present and future generations. Macy and Johnstone (2012) argued that people living within this larger temporal context perceive themselves as existing within a far wider timescape that opens new sources of solidarity and support.

Space. The dominant notion of space in capitalist modernity is 'flat,' that is, universal and homogeneous (abstract space), and as such unlimited and open to the expansion of 'capitalist techniques [...] for the appropriation of uncommodified nature in service to advance labour productivity' for the creation of surplus which knows no borders (Moore, 2015, p.59; also see Harvey, 2001). Geographical expansion of the market economy is necessary for the survival of capitalism, as it constantly requires 'spatial fixes' in the form of 'openings for fresh accumulation in new spaces and territories' (Harvey, 2001, p.25). Such an understanding of space establishes a 'logic of the dominant [global] scale' and produces the local and particular as a 'non-credible alternative to what exists' (de Sousa Santos, 2004, cited in Gibson-Graham, 2005, p.5). Abstract space relates to notions of substitutability (e.g., of capital), and commensurability (exchange value). In agri-food systems,

this conception of space is performed, among others, in cash-crop monocultures and the expansion of spaces of appropriation and the commodity frontier (e.g., Cardona et al., 2016; Diaz-Moreno, 2016).

However, relational notions of space can also be observed in diverse agri-food systems. These ontologies acknowledge that space and the spatial relations they engender are socially produced and given meaning by people. Space is not abstract or absolute, but rather the product of diverse material and discursive practices that in turn actively shape social relations (Lefebvre, 1991; Sonnino and Marsden, 2006). Relational notions of space in agri-food systems are reflected in material and discursive practices that emphasize, rather than the local-ness *per se* (Born and Purcell, 2006), the rootedness, embeddedness and richness of space, the relations (human and non-human) that co-produce it, and the notion of spatial limits not as a constraint, but rather as a defining element of systems that are historically, culturally, and ecologically situated (for example, see Petri (2005) on the 'slow food' discourses and Clammer (2019) on the *Satoyama* systems in Japan).

Human nature (subjectivity). Capitalist modernity is rooted in an understanding of human subjects as rational, self-interested, and utility-maximizing (Siebenhüner, 2000; Becker, 2006; Swader, 2013). Often called *Homo oeconomicus*, this perspective of human nature involves (i) a choice situation with exogenously given and determinate preferences that apply to goods and services that are produced, consumed, and exchanged; (ii) self-interest (personal, or more broadly familial); (iii) outcome orientation, i.e., care about social interactions only insofar as they affect final consumption and wealth; and (iv) a rate of time preference that allows individuals to allocate consumption over time in a consistent manner (Gintis, 2000, p.312). This model of human nature 'provides the ideological basis for market economies regulated by decentralized decisions of individuals on the basis of egoistic motivations' (Siebenhüner, 2000, p.17).

Relational notions of human nature foreground the predisposition of humans to reciprocate and cooperate, to create rather than just to profit, as well as to consider interests of larger societal groups rather than just self-interest (Siebenhüner, 2000, Ferraro and Reid, 2013). Among these alternative notions of human nature, *Homo sustinens* stresses that human nature is rooted in social and ecological rationality and emotional relationships, learning and creativity, as well as in moral responsibility and intrinsic motivation (Siebenhüner, 2000). In agri-food systems, such non-utilitarian relations and subjectivities are often expressed (Grasseni, 2014; Trauger; Passidomo, 2012); however, they often need to be renegotiated, and can be eroded in the face of multiple market pressures and institutions designed to incentivize self-interested, and utility-maximizing behaviour (e.g., Galt et al., 2016, 2019).

Logic of relation. The prevalent logic of relations in capitalist modernity emphasises domination (Shiva, 1993; Escobar, 2018). Domination entails the separation of mind from body and of human from non-human (i.e., the creation of rational thinking subjects at the top of the rank of existing entities) and relies on a 'monoculture of classification that distributes "populations according to categories that naturalise [d] hierarchies," thereby producing non-existence in the form of inferiority and subordination' (Gibson-Graham, 2005). Domination extends to human and non-human subjects at different scales and is reflected at the individual (such as slavery), as well as collective level (e.g., historical domination through imperialism and colonialism for the extension of the capitalist frontier and appropriation of 'cheap nature'; Moore, 2015). Consistently with a construct of human and non-human nature as quantifiable and interchangeable, domination underpins the appropriation and commodification of human and non-human labour (Fraser, 2014; Moore, 2015). 'Systematic expulsions (of people from their territories, or nonhuman species from the biosphere, of local economies from the economy, of the poor from society through massive incarceration) have become the central logic of global capitalism' (Sassen, 2014, cited in Escobar, 2019). This fundamental Euro-modern logic of relation is performed in agri-food systems, such as in the control of biophysical cycles and genetic manipulation.

In diverse economies, logics of domination can coexist with relational logics of relations, which rest on interdependence, re-connection, commoning, caring, sharing, and continuity (Escobar, 2019). A ‘more-than-human world’ is among the terms that describe a complementarity, a co-fabrication, a ‘working together’ between ‘bodies (including human bodies) and (geo-physical) worlds.’ (Whatmore, 2006, p.603). Escobar (2018) called this logic of relations non-dualist or relational. Systematic domination and expulsion give way to non-hierarchical relations in which individuals and communities, humans and non-humans are entangled and mutually supportive. For example, permaculture design principles apply this perspective by placing cooperation and community spirit at the core of operation (King, 2008; Hathaway, 2016; Rhodes, 2017; Henfrey and Ford, 2018), which entails that natural balance within existing ecosystems is respected and human interventions try to mimic natural relations and patterns within a given system (Ferguson and Lovell, 2014).

3.5. Economic relations

In a diverse economy, there are capitalist (e.g., private unincorporated firms, public companies, multinational firms), alternative capitalist (e.g., state enterprises, socially responsible firms, non-profits, producer/consumer cooperatives), and non-capitalist (e.g., communal, independent) enterprises in which the ownership, production, and distribution of surplus are organized in distinct ways (e.g., surplus is appropriated by the business owner in a private unincorporated firm or shared among the co-operators in a communal firm).

Differences between these economies are manifested in varying types of labour and ways of compensating it. Capitalist or wage labour can range from unionized labour retributed through a protected wage plus benefits to seasonal or temporary labour retributed through unprotected wages. Alternative paid labour includes, among others, cooperative wage (mutually agreed among cooperative members) plus a share of the

Vignette 1: Ontological categories in community supported agriculture

Time. In the majority of CSA initiatives, farmers intentionally respect seasonal cycles, thus performing non-homogenous and cyclical notions of time. However, it is not unusual to observe cases in which farms implement permanent greenhouse structures to extend seasons and homogenize time (Nost, 2014).

CSA initiatives are usually also characterized by slow rhythms. As one CSA member explained, ‘During the summer pick-ups, after putting the vegetables into my basket, I often sit under the huge, shady trees and share ideas with other members about food, family, life or environmental problems or watch children playing and members coming and lining up at the registration table waiting their turn to tick their names. Most of them do not seem to be annoyed that the members at the beginning of the queue and the farmer get into lengthy conversations [...] We seem to be part of a growing minority who chooses slowness over speed’ (Kis, 2014, p.285). Such temporal de-celeration is further manifested in non-intervention into natural plant rhythms and metabolisms, as well as the respectful attitude towards time needed to perform activities on the farm with due care. Rather than ‘stretching’ or ‘accelerating’ time in order to increase efficiency and accommodate new members, some farmers ask newcomers to join a waiting list while also educating existing customers about quantity and quality of the ‘slow’ food that can be produced on farms (Nost, 2014; Bloemmen et al., 2015). Such practices sometimes generate tensions, and some CSA farms perceive a contextual pressure to grow (e.g., by increasing the numbers of potential members), which impacts the pace of farming operations. CSA initiatives may become too large too soon, with increasing numbers of members lacking in farms and sufficient resources to sustain them (DeLind, 1999; Hayden and Buck, 2012).

Space. CSA initiatives are generally deeply embedded in their social and ecological local context. The ‘local-ness’ of food and the embeddedness of CSA informs ideas of food freshness and safety, which farmers usually feel responsible to deliver. Farmers also tend to respect local climate conditions for growing fruits and vegetables. Nevertheless, some CSA initiatives interpret their embeddedness in a more flexible manner, and farmers may procure additional food supplies to complement their own from nearby or more distant farms whose practices they know and trust. This is another source of tension among some CSA actors; for instance, Nost (2014) recounted that one farmer was very sceptical of the idea of sourcing produce from an auction because he would likely be unable to tell his customers how and where it had been grown.

Human nature. CSA initiatives accommodate a variety of subjectivities. Nost (2014) described a CSA initiative in which a farmer and volunteers who were driven by the pursuit of personal benefit and oriented toward profit maximization perceived sharers’ expectations and schedules as additional complications. As a result, the farmer decided to discontinue the CSA component and target restaurants for food sales because ‘they pay better and they involve fewer individuals’ desires and tastes to manage’ (Nost, 2014, p.158).

Farmers documented in Kis’ (2014) case study had a different rationality; they did not primarily aim to make profits, but rather to enjoy life on the land. The core group of this CSA explicitly rejected egoistic and consumeristic behaviour driven by utility maximization; rather, notions of gift giving and risk sharing were promoted, and the types of products that could be bought and sold on the farm were limited according to those principles. Another CSA scheme was initiated by farmers as ‘a way of healing our soils and our souls’ (DeLind, 1999, p.5). According to the people starting the farm, ‘vegetables were the “calling card” to bring local residents to an active awareness of each other, their ecosystem, and their food system’ (DeLind, 1999, p.4). However, this case also illustrates that within any given AFN, different actors may represent varying subjectivities, which in turn may result in tensions. For example, in the case discussed by DeLind (1999), one member refused to share excess vegetables with another family because then ‘she’d be paying too much for her vegetables’. The CSA initiators had failed to transmit their community spirit to some individuals, who rather perceived themselves as consumers and demanded convenience and value for their money.

Logic of relations. Generally an important priority for CSA initiatives, reconnection to nature is reflected in a range of forms of ecological farming to ensure harmony within natural cycles and soil regeneration. For instance, Kis (2014) reported that farmers in a CSA scheme perceived themselves as parts of nature, not as its ‘lords’. Accordingly, they strived to maintain relationships between human and non-human entities in a gift-giving cycle. In another case reported by Feagan and Henderson (2009), farmers used horses to avoid fossil fuel consumption and maintained rare breeds of livestock and poultry, although the CSA members were largely disconnected from the farm and perceived food as a commodity. The same relationship dynamics were observed in human-to-human interactions; when farmers tried to build and preserve sharing and community aspects, even the most supportive members demonstrated very limited involvement. A similar conflict was described in Cameron’s (2015, p.61) case study, in which one interviewee explained that ‘Sometimes I think that the challenge is that people don’t want to understand that it’s a community enterprise project. They would rather that it was a business and then they wouldn’t have to contribute anything more than money.’ However, Cameron (2015) also encountered volunteer members who eagerly contributed their time to the cooperative.

profits, in-kind retribution, reciprocated labour, and indentured labour, which is retributed through food, lodging, and a stipend. Finally, as Gibson-Graham (2006, p. 62) stressed, ‘the most prevalent form of labour over the world is the unpaid work that is conducted in the household, the family and the neighbourhood, or the wider community.’ Such non-capitalist labour includes family care, housework, and volunteering, among others, and is generally not remunerated in monetary terms, but rather compensated ‘in the form of love, emotional support, protection, companionship, and a sense of self-worth’ (Gibson-Graham, 2006, p. 62).

Varying economic systems can also be distinguished by their transactions and ways of negotiating commensurability. Characterized by rules of economic commensurability, capitalist or market exchanges can range from ‘free’ markets ruled by the ‘laws’ of supply and demand to regulated, state protected, or monopolistic markets. In contrast, alternative market transactions tend to be ruled by social commensurability in the form of producer-consumer, community, or trader agreements, such as ethical fair-trade markets, local exchange trading systems, alternative currencies, barter, and informal markets. Non-capitalist forms of exchanges are enacted through selfless and often unidirectional transactions such as gift-giving or donations.

Diverse economies entail distinct kinds of Property and ways to access it. Private property with restricted access (e.g., factories and food laboratories, intellectual property rights) coexists with alternative property schemes in which access is open within socially defined boundaries (e.g., state-managed assets, customary land, or community land trusts) as well as fully open access (the atmosphere, international waters, open source computer codes). The latter type is usually most hidden in the formal economy, as doing so allows for the externalization

of costs through ‘the internalisation of spaces necessary for capital accumulation. The atmosphere, for instance, must be put to work as capital’s unpaid garbage man’ (Moore, 2015, p. 72).

Finally, mainstream market finance represents another key pillar of capitalist economic relations. Capitalist finance is enacted through private banks, insurance firms, derivatives, and other private financial services. Conversely, the alternative market mode is represented by state and cooperative banks, credit unions, community-based financial institutions, and micro-finance schemes. In non-market modes, finance is secured through donations, family lending, interest-free loans, and other instruments that are community-based and do not require engagement with formal financial institutions.

3.6. Relation with the state

In a diverse economy, there are capitalist, alternative capitalist and non-capitalist forms of *participation in regulation*. In the capitalist mode of regulation, the state ensures ‘free’ markets, Property rights, and contracts, and the existence of a complex of institutions for organizing capitalist appropriation, commodification, production, exchange (Brand, 2016). Socioeconomic entities in the agri-food system act mostly as adopters of state regulation. They may not engage in the production of regulation except through established liberal democratic channels of representation (including lobbying and industry or sector associations at national or lower administrative levels).

In an alternative capitalist mode of regulation, we observe a diversification of regulatory frames. A larger number and more diverse range of actors are involved in creation of rules and regulations that extend beyond state legislation, such as voluntary practices and standards (e.g.,

Vignette 2: Economic relations in community supported agriculture

Enterprise. CSA can involve a range of enterprise forms. CSA schemes often revolve around privately owned farms; however, differentiation exists concerning the degree to which workers and subscribers are involved in decision-making, ranging from farms that do not have any ‘core groups’ (Cox et al., 2008; Schnell, 2013; Nost, 2014), to farms with strong member participation in activities such as workload distribution, crop selection, and event planning (Kis, 2014; Nost, 2014). Other forms of ownership are represented through farmer cooperatives (Sharp et al., 2002), mixed forms of juridical persons, such as a farmer and an association (Bloemmen et al., 2015). For example, Food Connect Brisbane CSA is registered as a not-for-profit company but operates as a cooperative in which shares are exclusively held by workers (Cameron, 2015).

Labour. There is often a mix of different labour arrangements in CSA initiatives. The farm owners usually negotiate with subscribers to determine sufficient remuneration for the former to support an acceptable quality of life. In many cases, owners obtain help from volunteers who either work for free or receive compensation in the form of fruits and vegetables or a credit toward a box (Cameron, 2015). Hayden and Buck (2012) reported a case in which all members were required to volunteer as part of the CSA scheme; however, their responsibilities were not strictly defined and their time spent on the farm was dedicated more to social interactions than doing physical work. In other cases, subscribers or members can do ‘workshifts’ in order to pay less for a share (Cox et al., 2008; Shi et al., 2011). Interns, family members, hourly and seasonal workers represent additional work-forces on some farms.

Transactions. Market transactions are always present on CSA farms, as they operate within the larger market system. In some cases, CSA initiatives serve as marketplaces for other local producers (Sharp et al., 2002; Nost, 2014), or they may complement shares with their own products (Hayden and Buck, 2012). However, CSA schemes do not normally clearly fit into the conventional understanding of a market transaction. CSA members usually pay in advance and often carry the risk of crop failure (Cox et al., 2008; Bloemmen et al., 2015). In some cases, farmers accept reduced share prices in order to create an inclusive community or offer shares free of charge to low-income support organizations and community members (Hayden and Buck, 2012; Nost, 2014). Gift-giving also takes place in a form of free ‘extras’ such as berries or flowers (Hayden and Buck, 2012), and some CSA initiatives rely on alternative local currencies, which configures yet another form of alternative capitalist transaction (Cox et al., 2008).

Property (and resources). The dimension of property is rarely empirically investigated in studies of CSA. Cameron (2015, p.57) explained that CSA farms are often situated on privately owned agricultural land and rely on privately held knowledge of farmers as well as ‘open-access ‘property’ including insects, water, and even seeds and soil that move and flow across the landscape.’

Finance. The majority of CSA farms secure their operations through community-based funding—i.e., members of the scheme pay shares that cumulatively cover the salaries of the farm’s employees, materials procurement, and other essential costs. Thus, CSA farms do not have to depend on financial market volatility. Cox et al. (2008, p.209) described a case-study in which this financing approach was instrumental in the choice of farm type: ‘the grower who had instigated the scheme explained that his original plan had been to start a more traditional organic farm. However, when it proved difficult to secure financial support for that he, and a small group of supporters, decided to use a CSA model as a way to get backing.’

ecolabelling, fair trade labelling). Such diversification of the regulation regime remains by and large legally inscribed within and politically and economically functional to the existing accumulation regime.

In a non-capitalist mode of regulation, we observe the existence of parallel governance arrangements that challenge the dominant regulation regime. A range of socioeconomic entities claim political agency within and beyond the existing governance regime. They claim the right to form political rules and create or contribute to new, non-conventional forms of political participation institutions at national, regional and/or local level, such as food councils, food charters (Hardman and Larkham, 2014), deliberative democracy (Roman-Alcalá, 2017), which may or may not be recognized by the state. These institutions potentially destabilize the existing regulation regime and its corresponding accumulation scheme.

In a diverse economy relations with the state are also established and maintained through *political legitimation*, or the positioning of socioeconomic entities vis a vis the state's political project, which in turn constitutes the historically concrete accumulation regime. In capitalist modernity, legitimation is often primarily based on the contribution to 'the economy,' which is deemed to exist in its own terms (Escobar, 2018), such as through the generation of employment, financial contribution (taxes), commitment and contribution to perpetual economic growth as a metric of societal progress, and the increase of overall production/effectiveness and productivity/efficiency (Jessop, 2002).

Yet, there are other modes of political legitimation that can be observed in agri-food systems. Alternative capitalist modes of political legitimation prize the contribution to 'the economy'; however, other bases of legitimation also exist, such as the contribution to ecological conservation or social inclusion (e.g., through the employment of labourers from disadvantaged social groups).

Non-capitalist modes of political legitimation background contributions to 'the economy' and possibly challenge the existence of a separate economic 'sphere' and emphasize contributions to broader societal well-being, cohesion, and sense of purpose, which are often manifested in more specific, non-economic contributions to the state project. In fact, non-capitalist political legitimation is a mode of positioning socioeconomic entities vis a vis the state's political project that may directly or indirectly challenge the latter's primacy in maintaining a capitalist accumulation regime.

3.7. Knowledge

In a diverse economy, there are capitalist, alternative capitalist and non-capitalist forms of *knowledge production*. The capitalist mode of knowledge production is largely centralized and circulation is unidirectional. Research and development (R&D) centres or universities (both public and private) are the main locations for the generation of knowledge, whereas farmers are targeted as 'consumers of inputs and recipients of externally designed solutions' (Weis, 2010). Profit drives knowledge production; as Buttel (2006, p. 218) argued,

[r]esearch is mostly related to the imperative to increase productivity in a context of monoculture, intensification and livestock confinement. The R&D process becomes highly oriented to solving the immediately experienced technical problems of large-scale, capital-intensive producers ... These technical solutions superficially solve or control these problems without addressing their root causes in ecological (or social) unsustainability.

In the capitalist mode, scientific knowledge is considered the superior (and in fact only) acceptable form of knowledge (Moore, 2015), and the stratification of knowledges is manifested in social hierarchies, at the top of which are the 'experts' in specialized academic fields (Escobar, 1995).

In an alternative capitalist mode, we observe more distributed and networked forms of knowledge production, coupled with an overall unidirectional knowledge circulation (from producers to consumers). This structure rests not on an oligarchy of experts, but rather on a multiplicity of such actors in more distributed, horizontal structures, which implies less marked power relations and enables the production of different types of scientific knowledge. Knowledge production can be driven by profit or other purposes, such as rural development.

Co-production is a key element of non-capitalist knowledge production modes; scientific knowledge is a public good (Weis, 2010), and therefore the barriers between knowledge producers and users are blurred, as are the boundaries of knowledge ownership. Co-production may take the form of 'open' knowledge, which precludes knowledge commodification. Distributed knowledge production is bi-directional and non-hierarchical, and it involves more (and possibly more diverse) sites and actors, including those who are not scientific experts,

Vignette 3: Relations with the state in community supported agriculture

CSA has been rarely studied through the lens of relation with the state proposed in this paper; therefore, there is little empirical evidence to illustrate the dimensions.

Participation in regulation. A case study of CSA in Belgium (Bloemmen et al., 2015) illustrated an effort to integrate AFN in regulatory frames. As it was illegal for CSA members to collect vegetables on the farm, the creation of a special association was necessary in order to keep the farm operating within legal boundaries. This case may be indicative of many other CSA operating across or at the boundary of existing legal frameworks. In another case, support from official quarters was indispensable to the smooth functioning of the farm operated by a CSA initiative in China; the necessary support from members of the local, district, and city governments was primarily obtained through unofficial channels of representation in the form of personal and individual ties (Shi et al., 2011). However, not all CSA farms in China enjoy similar benefits. Having no say in decision-making, they often struggle due to policies resulting in uncertainty over tenure lengths and permitted uses of farmland (Shi et al., 2011).

Legitimation. By design, CSA farms do not exclusively derive their legitimacy from economic services. Some proactively emphasize their contributions to food safety, environmental education, and leisure through the dissemination of promotional materials, online channels, or various community activities (Shi et al., 2011). However, other farms are overwhelmed by externally imposed demands for economic legitimacy and feel pressured to predominantly think about their activities in economic terms. As one interviewee reported to DeLind (1999), 'We spent far less time asking ourselves whether members (us included) understood the farm as a living enterprise and could visualize their place within it, than we did asking ourselves whether they were getting their money's worth. This was the same question newspaper reporters invariably asked us, and it was the same question the state agricultural commissioners asked when they visited the farm.'

which allows the production of different types of knowledge (e.g., scientific, traditional, and practice-based). The legitimacy of distinct types of knowledge is likely to be negotiated in processes of social learning (Brunori et al., 2010).

3.8. Visualising configurations of more-than-capitalist elements

Our application of the framework to previously documented case studies of CSA (Vignettes 1–4) illustrates its potential uses and reveals different ways in which capitalist, alternative capitalist, and non-capitalist elements can coexist in a given socioeconomic entities beyond economic relations. For illustrative purposes, Fig. 2 visualizes such coexistence in two of the selected CSA case studies that exhibit different configurations of the framework's elements.

In a case described by DeLind (1999), configurations changed over time as a result of tensions between actors as well as those between the CSA and its context. The CSA was initiated with an intention to build a community; however, the founders' deep ontological positions were constrained by external social and economic conditions and could not be fully realized in practice. As a result, the farm mostly followed a capitalist development path, and only the founders were responsible for reproducing non-capitalist forms of economic relations such as volunteering and gift-giving. In contrast, a case described by Bloemen et al. (2015) represents a successful example of translating a non-capitalist ontological perspective into alternative and non-capitalist forms of economic relations and relations with the state. However, even degrowth CSA are characterized by some capitalist elements, namely, private Property, which indicates a certain degree of compatibility between the three modes. The uncovering of these dynamics, tensions, and synergies demonstrates that the framework can be a valuable tool for recognizing diversity beyond capitalism in a given food initiative.

4. Discussion and conclusions

In this paper, we proposed a framework for recognizing diversity beyond capitalism in agri-food systems. The framework is informed by poststructuralist theories of capitalism and development as well as other analyses and critiques of capitalism rooted in relational understandings of society-in-nature. Our framework builds on and extends existing frameworks of economic diversity to foreground not only economic relations, but also ontological elements, relations with the state, and knowledge production. In doing so, this paper responds to the acknowledged need to broaden the discussion on the dimensions of difference (Gibson-Graham, 2006). In this respect, we suggest that the framework has applicability beyond agri-food systems.

We recognize that various understandings of capitalism exist and other possible dimension of difference could be proposed. However, we maintain that this framework moves a further step toward meeting the

challenge of recognizing diversity in the socio-ecological web in which economic relations are inscribed while also acknowledging the multifaceted nature of capitalism as a social, cultural, and political architecture that extends beyond the economic sphere. In doing so, the framework can help identify multiple premises for social struggle and sustainability transitions other than those directly related to capitalist economic relations. Agri-food systems' transitions beyond capitalism may leverage diversity in the sphere of economic relations, but can, and often do simultaneously leverage ontological, political and knowledge differences (Brand, 2016; Escobar, 2018; Moore, 2015).

We envision this framework as an analytical tool that can be applied to any socioeconomic entities in agri-food systems, whether 'conventional' or 'alternative,' and thus having a wider applicability than existing frameworks for the characterization of AFN, which specifically focus on distinctive elements of AFN. Our framework can be employed for either characterizing a broad range of enterprises, cooperatives, associations, food initiatives, in agri-food systems at one point in time or tracing their changing configurations of ontological elements, economic relations, relation with the state and knowledge production.

Our application of the framework to previously documented illustrative examples of CSA demonstrates that the approach helps to reveal different ways in which capitalist, alternative capitalist, and non-capitalist elements can coexist beyond economic relations in agri-food systems and in enterprises, cooperatives, associations, food initiatives and other varying socioeconomic entities (Vignettes 1–4 and Fig. 2).

Furthermore, this framework helps to characterize capitalist socioeconomic entities that tend to dominate many agri-food systems while also enabling the uncovering of much more diverse agri-food economies than are generally depicted in food regime narratives. The resulting picture is one in which capitalist enterprises are only one form along a spectrum of possibilities. In fact, an analysis informed by this approach can show how agri-food systems are most often characterized by the coexistence of capitalist, alternative-capitalist, and/or non-capitalist elements in socioeconomic entities. This reveals already existing possibilities as well as internal tensions in given food initiatives, which in turn can stimulate empirically supported discussions concerning the desirability and implications of distinct configurations of capitalist, alternative-capitalist, and non-capitalist elements.

One potential topic related to the above regards the sustainability assessment of AFN. Although AFN are generally considered to be more sustainable than 'conventional' networks, solid sustainability assessments of the former are still lacking (Schmitt et al., 2017; Michel-Villarreal et al., 2019). Among other reasons, this has been attributed to the difficulty of mapping the diversity of AFN (Michel-Villarreal et al., 2019). We suggest that, combined with multidimensional sustainability assessment (e.g., Binder et al., 2010) in a mixed-methods approach, the application of this framework creates a basis for tracking correlations between the sustainability of AFN and the alternative or non-capitalist elements that characterize them.

Vignette 4: Knowledge production in community supported agriculture

Alternative ways of knowledge production have been documented on several CSA initiatives. For instance, Cameron (2015) described a Participatory Farmer Assessment program that encouraged farmers to learn from each other during the process of cooperation and thereby develop more sustainable agricultural practices. In a Belgian CSA, consumers and the farmer collaborated in the design of training sessions that further facilitated farm members' autonomy (Bloemen et al., 2015). A Chinese CSA drew heavily on various traditional local and international farming practices as well as scientific knowledge (Shi et al., 2011). For example, university employees and students were invited to contribute to the farm's operations and organizational matters, and domestic and international organizations were contacted to establish a strong network. As Shi et al. (2011, p.557) summarized the results of this knowledge production strategy, 'The farm enjoys access to information and a wealth of personal and relational resources through the overlapping networks. The density and diversity of Little Donkey's institutional ties, and the promise of help from many directions, contribute to the project's robustness.' In other cases, no sharing between CSA members took place (DeLind, 1999), or knowledge was unidirectionally transferred from farmers to consumers (Kis 2014; Hayden and Buck, 2012).

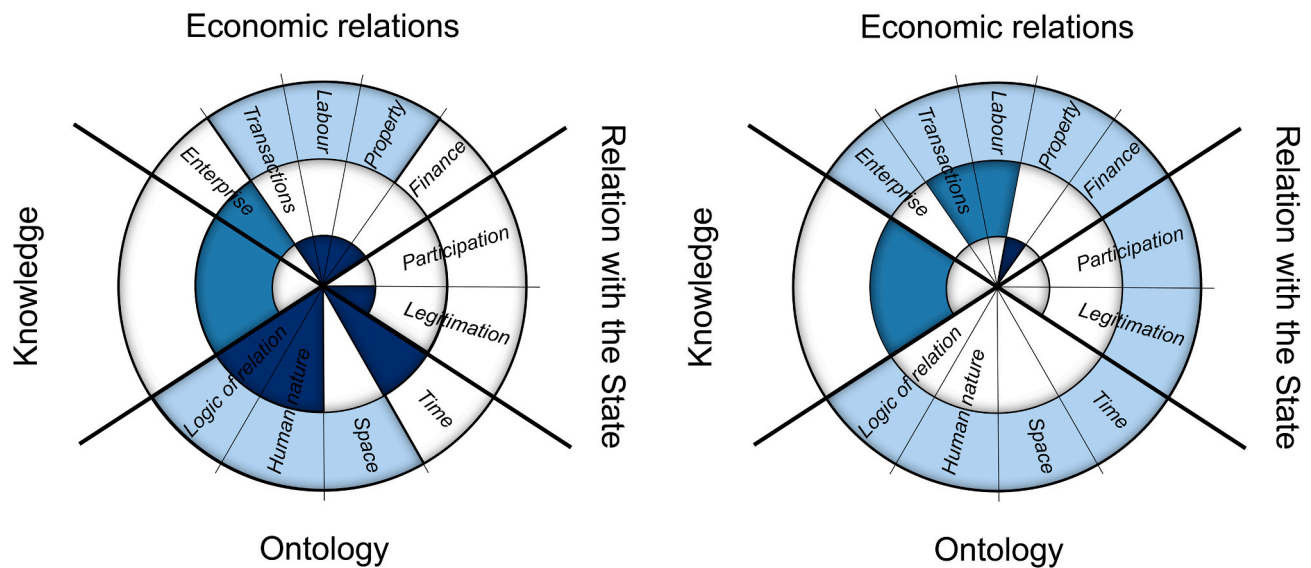


Fig. 2. Visualization of diversity beyond capitalism in the two illustrative cases described by DeLind (1999) (left) and Bloemmen et al. (2015) (right). For each element of the framework, the dark blue colour in the centre denotes capitalist mode, whereas medium and light blue denote alternative and non-capitalist modes, respectively. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

Furthermore, by revealing distinct possibilities for non-capitalist forms of being and doing, our framework suggests the possibility of multiple distinct transition pathways to non-capitalist futures. In this sense, in contrast with approaches that look for ‘silver bullets’ or the most successful ‘solutions,’ this model is consistent with an approach that recognizes and values diversity and is open to a critical discussion of the potential for the social and socio-ecological change that such diversity may bring. However, the framework does not support the understanding of how transition processes actually occur, nor does it envision which configurations of capitalist, alternative-capitalist, or non-capitalist elements in varying socioeconomic entities or diverse assemblages of such entities are more prone to evolving or generating change along any particular transformative pathway. This is a fruitful avenue for future research. In line with discussions of radical sustainability transformation in general (Buch-Hansen, 2014), such research should also take into consideration whether and how specific varieties of capitalism which exist in distinct geographical contexts matter for the configuration of capitalist, alternative-capitalist, or non-capitalist elements and their change over time.

Lastly, we believe that more research is needed to refine the framework’s categories. In particular, the theorization of possible connections and reciprocal influences among dimensions and elements remains underdeveloped. Future empirical research can identify more frequently recurrent patterns of configurations, or in other words, specific assemblages of capitalist, alternative-capitalist, and non-capitalist elements that are more likely to be performed and maintained in socioeconomic entities over time and across contexts.

Declaration of competing interest

The authors declare no conflict of interest.

Acknowledgments

The authors sincerely thank Hens Runhaar, Jenny Pickerill, Oona Morrow, Julia Spanier, Leonie Guerrero Lara, Jacob Smessaert, Guilherme Raj, Ellen Moors and Peter Driessen for their very useful comments on earlier versions of this article. This research was funded by the European Research Council (Grant 802441) and the Netherlands Organization for Scientific Research (NWO) (Grant 016.Vidi.185.173).

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