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Coexistence and Confrontation of Agricultural and Food Models

A New Paradigm of Territorial Development?

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Considering Transitions Through the Coexistence and Confrontation of Agricultural and Food Models: Scales, Actors and Territorial Trajectories. Introduction to Part IV

Salma Loudiyi and Claire Cerdan

Studies on the transformation of agricultural and food models and the processes of transition towards sustainability are mainly based on the framing of sociotechnical regimes. These studies have relied on these regimes to describe, analyse and support the transition trajectories, the actors involved and the innovations induced. For the most part, there is little clarity on the issues of the coexistence and confrontation of agricultural and food models engendered by these trajectories, or they are little recognised as such by these analytical frameworks. The territorial conditions during sustainability transitions, which depend on the situations of coexistence of models in these territories, are also little addressed by the scientific literature. The chapters in this part aim to contribute to the exploration of the links between transition and coexistence of territorial agricultural and food models.

In this introduction, we first review the analytical frameworks used to understand the dynamics of transition in sociotechnical systems and the way in which some research originating from transitions studies is gradually integrating the spatial dimensions of these dynamics by paying particular attention to local contexts and by placing the issue of territories at the centre of analyses. This quick review shows how the issue of coexistence is implicit in these studies and reaffirms the need to take the interplay of scales, actors and trajectories of local development into account. It also allows us to formulate two working hypotheses: one on the links between transitions and modalities of coexistence of territorial agricultural and food models; the other on the issues of governance of coexistence at the territorial level. We then present the four chapters that make up this part, which inform the formulated hypotheses and open up new questions for longer-term research.

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Analytical Frameworks for Understanding Processes of Transition Towards Sustainability in Agricultural and Food Systems

Over the last two decades, various studies on transition processes have been undertaken in order to try to understand the dynamics of socio-economic and environmental changes in new ways (Lawhon & Murphy, 2012). These studies recognise that climate change, biodiversity loss and resource scarcity, and now the health crisis, are major societal challenges (Kölher et al., 2019). To face these challenges, a growing number of analytical frameworks on sustainability transitions have emerged over the last decade to help understand how radical changes can be implemented, even while the societal functions provided by these systems are maintained (Grin et al., 2010).

A Predominance of Theoretical Frameworks Oriented Towards the Analysis of Sociotechnical Systems: Regimes and Niches

Transition is defined as a process of transformation in which a complex system moves from one state of dynamic equilibrium to another. This concept assumes the presence of a desired goal, the transition to sustainability in our case. It also assumes that a progressive path is possible: 'Transition tends not to be revolutionary in its occurrence' (Hinrichs, 2014). Finally, this concept refers to our capacity to act on the temporal trajectories. In general, these studies not only describe the processes and trajectories of sustainability transitions but examine above all the ways in which they can be implemented (Hölscher et al., 2018). The 'how to do it' question has led several authors to suggest that the transformation process is the result of the simultaneous occurrence of multiple convergent changes at different levels and in different sectors of society (technology, the economy, institutions and norms, culture, etc.).

There are several theoretical and analytical frameworks that can be used to address these transition processes. One of the most prominent is the analysis of the transition of sociotechnical systems using Multi-Level Perspective (MLP) (Geels, 2002; Geels & Schot, 2007; Smith et al., 2010). In this perspective, transitions are considered the result of interactions between three levels: (1) the sociotechnical landscape, which encompasses the environment in which society is embedded, (2) a stable sociotechnical regime, composed of rules, practices and interdependent actors who orient or constrain the actions of operators, and (3) niches, which are spaces in which more radical innovations are constructed. The transition from one sociotechnical regime to another is the result of pressures exerted by the landscape on the regime or of the progressive integration of radical innovations (new rules, new practices) into the regime. In this approach, niches (innovations) are understood as incubation spaces (Geels, 2002), places where learning processes take place and where new economic networks are constructed. They are intended to host the construction and

consolidation of alternative systems (Meynard et al., 2013). In Geels and Schot's (2007) graphic representation of the transition of sociotechnical regimes, niches tend to gradually integrate the dominant regime by evolving its different dimensions (norms, actors, knowledge, etc.). This representation underscores the transformative or non-transformative character of these innovations vis-à-vis a dominant model.

Other complementary and equally important approaches can be used to address particular dimensions of these transitions. The technological innovation systems (TIS) approach explains how new technologies flourish using different functions such as knowledge development, market formation or legitimisation processes (Negro & Hekkert, 2008; Markard et al., 2015). Strategic niche management (SNM) approaches are widely used to analyse the emergence of innovations and the creation of 'protected' spaces (Geels & Raven, 2006; Schot & Geels, 2008). Finally, the so-called transition management (TM) approaches show how certain actors, in particular public policy actors, can shape transition processes using a set of activities, whether strategic, technical, operational or reflexive (Rotmans et al., 2001; Loorbach, 2010).

All these theoretical and analytical frameworks are based on the analysis of transition processes of different sociotechnical systems (electricity, mobility, buildings, etc.). Over the last decade, analyses of sociotechnical systems associated with agriculture and food have increasingly focused on the transformation of agricultural and food production, processing and marketing systems, and the reconfiguration of interactions and power relations between actors of these food systems (Hinrichs, 2014). Among these studies, some contributions highlight the importance of approaching the transition of food systems through a plurality of objects and complementary themes: global transition (Spaargaren et al., 2013; Hinrichs, 2014), agroecological transition (Lamine, 2012; Ingram, 2015; Levidow, 2015; Bui et al., 2016), and sustainable consumption transition (van Gameren et al., 2015; Vittersø & Tangeland, 2015). In the majority of cases, these studies mobilise MLP's theoretical frameworks. But while they envisage the existence of two well-stabilised regimes (generally the conventional and the alternative) that coexist in the same place, they do not delve into the diversity of situations, nor their specificities and variations with regard to geographical conditions or the modalities of their territorial embeddedness. Even though MLP is based on the presence of a single dominant regime, these studies help understand the coexistence of several sociotechnical regimes in the same context (Dumont et al., 2020). Several studies address the multiplicity of possible and existing trajectories of sustainability transitions. For example, El Billali et al. (2018) show that different transition pathways can be proposed or implemented for achieving food and nutrition security. They identify 'efficiency-oriented pathways' (or sustainable intensification), 'demand-restraint pathways' (or sustainable diets) or 'food systems transformation' (or agrifood transition) leading to an in-depth transformation of the entire food system. According to these authors, these different pathways reflect different visions of what is desirable and achievable in terms of practices, visions that are based on fundamentally different, even opposing, models, ideologies and values. Considering that 'food system transitions thus do not have one easy, obvious, or uncontested pathway but will be characterised by a diversity of options, approaches, places, voices, and historical contexts' (El Bilali et al., 2018, p. 13), these studies

underscore the challenges of the coexistence of different approaches, their specificities, their plurality according to the contexts in which they are placed, and, indeed, the challenges of governing the coexistence of these different models and trajectories (Bui, 2015; Bui et al., 2016).

The Emergence of New Analytical Perspectives: The Territorial Conditions During Transition Processes

Despite the important advances in MLP-based research, a few authors (Lawhon & Murphy, 2012; Murphy, 2015) have shown some of its limitations. These limitations include the focus accorded to technological artefacts in these studies or to certain actor categories that shape transitions (leaders, innovators, scientists, government agents, to the detriment of consumers or workers, for example); an approach, seen as 'naive', to the spatial dimensions of transitions towards sustainability (i.e. different scales and spatialities); and the avoidance of analysis of the power games between actors.

The geographical dimension has indeed long been ambiguous and even misunderstood in MLP analyses. The three MLP levels (niche, regime and landscape) are often implicitly aligned with specific territorial boundaries (Raven et al., 2012; Truffer et al., 2015): regimes tend to be presented as national characteristics; sociotechnical landscape dynamics equated with those of international scales; and niches are often equated with sub-national or even local scales. Thinking of national contexts as key elements in which regimes and niches are located, while important, does not capture the territorial differentiations and complex interdependencies that result from different forms of institutional embeddedness in territories (Lawhon and Murphy, 2012). Coenen et al. (2012) add that it is essential to examine more closely the socio-spatial struggles that lead a regime or niche to spread beyond its initial boundaries. In the same perspective, the processes of scale articulation and trans-scalar relations (relations and interdependence between actors located at different scales, circulation of models, transnational networks), which could allow us to understand how these scales trigger or prevent transitions of sociotechnical regimes, are little addressed. According to Lawhon and Murphy (2012), MLP would benefit not only from being more sensitive to the role of geographical factors but also from being more responsible by recognising the power relationships factor as very important in guiding or hindering transition dynamics.

These criticisms have led to recent studies in the geography of sustainability transitions (Raven et al., 2012; Hansen & Coenen, 2015; Longhurst, 2015; Murphy, 2015; Truffer et al., 2015; Binz et al., 2020), which seem to pursue the issues of coexistence of models without, however, naming it as such. This is an emerging field in which the geographical dimension of transitions is addressed through a research effort on three key elements (Truffer et al., 2015): the socio-spatial anchoring of

transitions, their multi-scalarity, and the integration of power relations. The socio-spatial anchoring of transitions is aimed at identifying the territorial conditions that are favourable (or unfavourable) to processes of transition towards sustainability. In particular, it is a matter of understanding the territorial inequalities associated with the transition processes (which spaces are favoured and which are disadvantaged). Taking the multi-scalarity (i.e. the articulation between different geographical scales and organisational levels) into account makes it possible to see how innovations emerge in different spaces, how these spaces interconnect and how actors situated at several different scales interact to disseminate these same innovations. Finally, these two dimensions lead to a third, which has to do with the unequal power relations in sustainability transition processes. According to the authors, the effects of these processes must necessarily be considered. This implies paying attention not only to the 'losing' and 'winning' actors, and to the interacting models, but also to the voices and interests of the actors who are part of these models, i.e. to the modalities of coexistence of different models resulting from these transition processes.

These authors' research perspectives are currently centred on geographical inequalities and the spatial variability of transition trajectories and their impact. They focus on two contexts in particular: urban transitions and transitions in developing countries but do not yet address the transition processes of agricultural and food models (Binz et al., 2020). However, these different contributions point to the need to analyse the territorial conditions and factors of these transition processes towards sustainability and their effects on a plurality of territories by verifying how the transition processes of food systems produce new modalities of coexistence of these same models at different scales. To further this reflection, we pose two working hypotheses that we examine in the light of the four contributions in this section. The first is that the coexistence of agricultural and food models can be the condition and the result of transition dynamics at work in food systems. What factors are the triggers for these transitions? What are the relationships between actors that drive or hinder these transitions? What territorial conditions encourage or constrain these processes? What are the future horizons expected by the different coexisting agricultural and food models? What paradigms, values and standards set them apart? Our second hypothesis is that, given that transition processes vary according to territories, their scales, their social and spatial configurations and their trajectories, the coexistence of models can be understood and governed at the territorial level. What are the effects of transitions on the conditions of interaction between agricultural and food systems in a territory? What are the new forms of coexistence produced and at what scale? Which actors are involved and what is the nature of their links and/or interactions (passive co-presence, tensions, synergy, complementarity, etc.)? What are the forms of public action, governance and support that enable a diversity of actors and systems to be committed to the same territorial development horizon, while respecting their singularities?

Transition Processes and Coexistence of Agricultural and Food Models in Territories: The Case Studies

We introduce here the three case studies that make up this part and indicate their common and complementary features. A fourth, panoramic chapter provides an original analysis for understanding transition trajectories of agroecological models, especially from the point of view of their diversity and operationality.

In Chap. 11, Claire Lamine considers the hypothesis that coexistence, understood as the presence of different agricultural models, both 'alternative' and 'conventional', in the same territory, produces processes of hybridisation and controversies. They contribute to the legitimisation of ecologised models and, consequently, to the processes of ecological transition, insofar as the transformation of visions, norms and relations between actors is concerned.

Her analysis of the south of France's Ardèche department is based on the coexistence of conventional and agricultural models, the coexistence of different rationales within agricultural activity, and the territorial coexistence of initiatives within the 'territorial agrifood system', an analytical category that allows the author to examine the territorial conditions of the transition processes and the ecologisation of agriculture. Her work highlights farmers' individual trajectories towards organic farming according to three rationales, all of which show forms of combination and hybridisation in the exercise of agricultural activity. These combinations and hybridisations are observed at the level of production methods (organic, non-organic), production choices (diversification or not) and marketing channels (short and long). They are all part of forms of collective functioning (traditional, new, informal), with farm viability as their goal. Her approach through the different categories of actors and their initiatives reveals the conditions for the emergence of new development models and the recomposition of the agrifood system. This system is the result of a plurality of individual and collective projects of agricultural and non-agricultural actors in a territory, concerning both specific products and more ordinary food products. There are conventional agricultural actors who invest in projects to qualify and structure agri-chains, which illustrate the processes of recomposition and re-differentiation within conventional models of deriving value from local production. For their part, alternative agricultural networks advocate and implement other collective initiatives (e.g collective sales points in short chains). Finally, other initiatives originate from new actors, such as local authorities and civil society actors, who choose to address agricultural and food issues in their territory. Their objective is to offer healthy and local food to all, including to the most vulnerable. All these projects and actors contribute to the recomposition of a territorial agrifood system.

Claire Lamine's chapter shows how the coexistence of agricultural models can trigger transition processes through those of recomposition and internal re-differentiation. It highlights, in particular, how territorial conditions (e.g. territorial identity or local food consumption habits) are levers of differentiation of transition processes (put in perspective with respect to the dynamics of another territory studied by the author: Biovallée).

In Chap. 12, Emmanuelle Cheyns and Nora Daoud analyse the transition of food systems and the coexistence of models through the fine grain of citizen participation in local purchasing groups by studying the daily practices of their members and their consequences on interactions with agriculture. These authors' proposal complements our analysis of the coexistence of agricultural and food models by exploring the modalities of collective action and solidarity, located on the fringes of the State's sphere of influence and at a distance from market instruments.

These two authors suggest that behind each agricultural and food model, patterns of engagement can be identified at the fine scale of individuals and collectives. The latter help explain the mechanisms of the coexistence of agricultural models, which take different forms: tensions, associations, and new ways of 'doing things together'. The authors invite us to explore the geography of everyday practices and to reflect upon radical breaks and modalities. For some of these citizen groups, the issue is no longer of simply revamping forms of supply but of positioning themselves through breaks with the market and by building or 'making' communities. The coexistence of agricultural and food models then seems to become difficult, insofar as coexisting would mean recognising other contested models and tolerating their rationale and validity. From an MLP perspective of transition, these purchasing groups can be understood and analysed as spaces of innovation, and the authors seek to determine the changes induced by these collective approaches. In their chapter, the engagement regime concept mobilised to address the functioning of purchasing groups goes beyond the simple description of shared regimes and values by underlining the tensions they generate and the different modalities of coexistence and solidarities within proximity spaces they lead to. The approach through these transitions, away from the official arenas, contributes in its own way to a transformation and a transition that takes into account a vulnerable public and producers who are sometimes outside the ambit of support mechanisms and the current agricultural models.

In Chap. 13, Guillaume Duteurtre and his colleagues respond to the dual hypothesis formulated above: transition processes generate situations of coexistence of agricultural and food models, and these very situations of coexistence, if we analyse them through the prism of long trajectories, themselves induce transition processes. Territorial, socio-political and economic conditions shape and orient these trajectories. This chapter sheds light on the modalities of governance of these transition processes and of the situations of coexistence, in the case of Vietnam, of agricultural models associated with dairy farming and its industrialisation.

The authors use the MLP framework to explain the multiplicity of the trajectories of this agricultural system, in which several models exist due to transition processes that span the long term. The abandonment of the collectivist economy in the country and subsequent farming reforms supported the development of a family farming model in the 1990s. But the melamine crisis in 2008 and the emergence of social demand for healthy and safe products triggered reforms that, this time around, supported more intensive and industrialised forms of agriculture, giving rise to commercial farms and mega-farms. The transition processes induce, as we hypothesise, not only new models but also a plurality of models and trajectories that imply forms of coexistence in a territory. Importantly, this chapter not only offers initial

insights on the governance of these transitions (through national reforms) but above all it sheds light on the explicit willingness of public actors to recognise the issues of coexistence of the agricultural models that local authorities are trying to 'manage'. Land is used as a lever to govern this coexistence (access to land is controlled by the State through redistribution mechanisms), as are construction and sometimes the imposition of local partnerships between farmers, firms and local authorities, and the production of standards and conventions. Compromise, as a form of coexistence, goes hand in hand with the production of sense around the usefulness, necessity and importance of the agro-industrial model (provision of material resources, knowledge production, creation of employment in traditional dairy basins). These forms of coexistence also result in tensions, which highlights the changing nature of forms of coexistence when economic or health crises strike. This probably reflects the fragile and eminently political nature of the governance of coexistence models when it is carried out by local authorities. As the authors note, the issue of the drivers and mechanisms of this coexistence within local territories still needs to be addressed through a detailed analysis of the dynamics of land and financial capital, and their implications for the terms of this coexistence and its governance.

To conclude this part, Philippe Baret and Clémentine Antier propose an analytical and methodological approach to reflect on the effects of transitions and their operationality. Using agroecological transitions as a starting point, the authors defend the importance of taking the diversity of transition trajectories into account through a constructive critique of the MLP framework. Their proposal has the merit of better situating the diversity of transition situations, refining the characteristics of the different possible trajectories and their real-world implications. Starting from a model that seems to be unified (agroecology), they propose to translate it into four 'agroecological proposals' according to a dual characterisation: the extent of changes (scales, degree of integration of actors) and the modalities of this change (radical, incremental). It is a matter of clarifying and making explicit the political choices adopted when actors formulate transition projects for models, i.e. of thinking about the transition not only in terms of technical choices but also by paying attention to social, economic and cultural conditions. The authors stress in particular the need to adopt complementary, multidisciplinary and systemic approaches, while developing, at the same time, the critical and reflective dimension.

The three case studies in this part are characterised by the diversity of analytical scales used (a national scale, a meso-scale of a French institutional territory, and the 'micro'-scales of citizen collectives), and by transition modalities inscribed in differentiated historical, territorial, collective and individual trajectories. These case studies explore both the diversity of scales and that of the territorial anchorage of transition processes and their articulations. They show that the pathways of transition are not always linear, as shown by studies on transitions, and reveal, explicitly or implicitly, the challenges of coexistence of action regimes associated with agricultural models (Chap. 11, Lamine), of individual and/or collective engagement regimes associated with food consumption (Chap. 12, Cheyns and Daoud), or even, more broadly, of choices of governance of agricultural transitions at a national scale (Chap. 13, Duteurtre et al.). The theoretical and analytical frameworks used are based,

on the one hand, on multilevel perspectives, and, on the other, on engagement regimes and justification theories. They each illustrate, from a different but complementary scalar perspective, how transition processes at different scales induce situations of coexistence of models that are driven by values, actors and spaces, which in turn participate in formulating transition goals. For its part, the panoramic chapter (Baret and Antier) makes a conceptual and methodological proposal, defending the importance of thinking about transition trajectories not only from the point of view of desired goals but also from the point of view of the choices adopted at the grassroots level, while pointing out the shortcomings of sociotechnical regime frameworks. It is a chapter that uses an innovative way to show the importance of reflexive, critical and engaged analyses.

Conclusion

Reflecting on the transition in terms of the coexistence of agricultural and food models has led us to formulate a dual hypothesis on the links between transition and coexistence of models, in particular the place of territories in these processes of change. Each of the case studies sheds light on a particular dimension of the territorial conditions of a production of situations of coexistence of models. They show the factors that trigger the transitions in question, the relationships between actors situated at different scales, and lead to reflections on territorial conditions that stimulate or hinder these transition processes. However, the case studies still do not address the question of the trajectories created by these dynamics. The chapter by Duteurtre et al. is quite enlightening in this respect. The panoramic chapter by Baret and Antier also revisits the necessity of shedding light on the political visions associated with these models, which would set out the terms of governance for the coexistence of agricultural and food models.

These contributions thus open up, to varying degrees, the issue of this governance of the coexistence of models within territories from a threefold perspective.

Perspective 1: *around the spatial scales of transition processes and the production of forms of coexistence.* The scalar issue calls for an exploration of the circulation of norms, values and contents of models resulting from transition processes. The effect of the articulation of these scales on the modalities of coexistence and their governance has still to be examined. Certain scales can be mobilised to consolidate, establish and legitimise certain innovations that create tension and conflict at other scales. In this case, we speak of trans-scalar connections (Cerdan et al., 2012; Peralta et al., 2014).

Perspective 2: *around actors and the understanding of their strategies and rationales of access to resources.* The contribution of micro-level analyses is very instructive in this context for thinking about the ways in which coexistence processes are constructed in local and remote territories. The processes of domination and power relations are often poorly explored in studies on the transition of models, and, as a

result, the forms of coexistence and their social, spatial and political implications are little understood. Analyses of the governance arrangements for coexistence show us that we have to look at the renewal (or reproduction) of relations between the State, the market and civil society actors at territorial levels, and at the reproduction of structural inequalities.

Perspective 3: *around territorial trajectories in order, on the one hand, to investigate the issue of differentiated temporalities and spatialities, and, on the other, not only to grasp the effects of territorial contexts in all their complexity, but also the way they condition forms of governance of this coexistence of models.* In this way, the analysis of territorial trajectories allows us to move closer to genericity using comparative approaches.

These three perspectives inform the analysis and the understanding of the ways in which agricultural and food models coexist. The current context of health and climate crises makes it incumbent upon us to heed Baret and Antier's call to adopt systemic and multidisciplinary approaches for understanding these transition processes, approaches that are more reflexive, more engaged and politically situated. The chapters in this part invite us to do so more than ever.

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