

Diversity in family farming:  
Theoretical and empirical approaches to its many forms

Jean-Michel SOURISSEAU, Pierre-Marie BOSC, Sandrine FREGUIN-GRESH,  
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### ***Rethinking Development Working Paper Series***

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### List of abbreviations and acronyms

AMIRA	Multidisciplinary research group working on the improvement of investigation methods in rural Africa
DAFF	Department of Agriculture, Forestry and Fisheries (South Africa)
ERAF	French Africanist Rural Economics
FAO	Food and Agricultural Organisation of the United Nations
GMO	Genetically Modified Organism
IASC	International Association for the Study of the Commons
SRL	Sustainable Rural Livelihoods

## Foreword

This working paper is part of a collective investment of CIRAD researchers to the 2014 International Year of Family Farming (IYFF). As such, it contributes to the 2014 IYFF by promoting broad discussion and understanding of family farming and its evolutions.

The goal of the IYFF is to reposition family farming at the center of agricultural, environmental and social policies in national agendas by identifying gaps and opportunities to promote a shift towards a more equal and balanced development. It aims to raise the profile and understanding of family farming and smallholder farming by focusing on its significant role in eradicating hunger and poverty, providing food security and nutrition, improving livelihoods, managing natural resources, protecting the environment, and achieving sustainable development, in particular in rural areas.

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<b>Abstract</b>
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The transformations occurring in family-based agricultural structures are raising questions in the academic and political worlds. The questions being asked span the history of agricultural representations over the last century. The ways of perceiving and representing the different forms of agriculture relate to these transformations. Family farming has acquired an international legitimacy but is presently being questioned by agricultural evolutions in developed countries, as well as in developing or emerging countries. The Sustainable Rural Livelihoods (SRL) approach enables a global comprehension to be formed of the agricultural entity as a constituent of an activity system that has become multi-sectorial and multi-site, relating to market and non-market regulations. The relative significance and the nature of the mobilized capitals led us to schematically present six organizational forms of family agriculture in New Caledonia, Vietnam, Mali, South Africa, France and Brazil. Lastly, a more generic characterization, which our proposed agriculture representation framework outlines, is presented and raises further methodological challenges.

# **Diversity in family farming: Theoretical and empirical approaches to its many forms**

## **I. Introduction**

We are witnessing today a resurgence of debates on the roles, position and importance of agriculture in meeting global food, economic and environmental challenges. Most of the debates focus on the most appropriate production structures for taking up these challenges. Consequently, characterizing and understanding forms of agricultural production<sup>1</sup>, their strategies and efficiency, entail renewed methodological challenges.

At the same time, despite recognition of the very great diversity that typifies the forms of agricultural production grouped under the term “family agriculture”, the latter is often simply defined in opposition to other forms, notably entrepreneurial, based on wage earners and private shareholders. If, as an initial approximation, one considers that the family farm results from the combination of a production unit and a family unit, whose operations are derived from specific objectives and functions (Lamarche, 1991; Ellis, 2000), it is possible to consider that the diversity of the types of family agriculture is linked first and foremost to their environment. The way in which the dialectic combination between the economic unit and the social unit is operated, in specific natural, social, economic, political and technological contexts, would thus influence the differentiation of family forms of agricultural production.

These family forms of production have evolved over time, as the contexts into which they fit have changed. Some forms have disappeared; others have emerged. Today in the countryside of the world, with the reconfiguration of town–country relations linked to downstream concentration and the increased barriers to entry into globalized markets, activities are being diversified, pluriactivity is more than ever a reality and new forms of mobility have appeared, and have proved to be essential factors for explaining the decline or, on the contrary, the perpetuation and rooting of family farms in the rural environment.

In a rapidly changing context, one of the existing methodological and conceptual approaches, the “Sustainable Rural Livelihoods” (SRL) approach, promoted by British Cooperation and used by numerous international development agencies, such as the FAO, can be used to take into account environmental changes on several scales, along with the changes observed in family forms of production. It can be used to study structural changes at production process level, but also the diversity of practices and the position of agriculture within complex activity and income systems.

Taking another read on the historical changes in the characterization and analysis of forms of agricultural production, we propose here a way of representing the diversity of family agriculture<sup>2</sup>. This proposal is centred on the allocation and management of capital involved in the agricultural production processes and, more widely, the reproduction of domestic groups,

<sup>1</sup> Understood, at micro-economic and micro-social level, as conjunctions of all the technical, economic and social elements making up the agricultural production process.

<sup>2</sup> Our comments remain centred here on family forms of production, which rules out agricultural enterprises having lost all functioning around the family group.



and also looks at the more or less family nature of the way capital is controlled. It makes it possible to combine the SRL approach with other more heterodox approaches. The method has been tested in analytical and comparative terms through case studies in New Caledonia, Mali, Vietnam, South Africa, France and Brazil, arising from the empirical research of the authors.

We put our case in four parts. The first part proposes a selective take on the main approaches and schools of thought that have historically contributed to characterizing changes in agriculture. The second part presents the major features of the SRL which will be used in the third part, based on six case studies, to illustrate the contrasting family forms of agricultural production. Lastly, to sum up, a final part endeavours to discuss the lessons learnt and the prospects offered by taking a wider SRL approach.

We hope, in this work, to have avoided two main snags. Firstly, we keep away from an evolutionist vision of the changes. We emphasize how the social and political context induces or influences the way researchers and academics propose to represent<sup>3</sup> peasants, farmers, or agricultural entrepreneurs – we shall see that the terms matter! Consequently, we do not attribute any particular value to one model or another; we note and explain its existence. We also keep away from a determinist vision of the same changes, insofar as the diversity of the trajectories of change in agriculture at global level argues in favour of taking that diversity and the accompanying forms of organization into account. This is one of the major assets of this sector of activity which, whilst being in regression in terms of the number of people involved and its influence in the macroeconomic aggregates of western nations, remains the main provider of jobs and incomes at global level. The diversity of agro-ecological situations, and also the diversity of complex relations between farmers and societies, means that one cannot reason in terms of a single model, be it for the types of structures to be promoted or for the types of trajectories to be encouraged (Van der Poeg et al., 2009; Losch et al., 2011).

Our contribution to the debate seeks primarily to be methodological. It seeks to provide a representation tool that is flexible enough to adapt to the diversity of situations, but also robust enough to enable a comparison. As farmers on a continent scale are marked by the diversity of conditions in the physical environment and the specificity of national sectorial trajectories, the representation tool needs to be able to adapt to that diversity. The links established between the world's farmers, and increasingly the competition between them, argue in favour of a common analysis framework that enables comparisons to be made on a strict methodological basis. In an increasingly interdependent and interconnected world, the localization of investments or effects on the environment do not produce effects limited to the locality in which they are made. Consequently, it is important to have a standardized tool making it possible to grasp all these effects, whilst adapting to the diversity of the situations mentioned<sup>4</sup>.

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<sup>3</sup> We do not deal in detail with the way categories of representations are taken on board by the political world. However, it is an issue that underlies this article and is sometimes explicitly mentioned, notably through the review of current schools of thought and the case studies.

<sup>4</sup> Merely taking one example of diversity: the tomato concentrate production sector involves specialized North American family farmers, backed up by high-tech cooperatives; family producers in southern Italy employing more or less legal migrants; or a private company located in the valley of Senegal with the obligation to use local workers for some tasks. The representations of these forms of agriculture need to make it possible to compare them in terms of the resources they use, but also the effects or impacts they generate on societies, the economy, resources and the environment.

## II. Representing<sup>5</sup> family forms of agricultural production: a theoretical and methodological diversity

In this section, we review a rational selection of authors who have used different disciplines and schools of thought since the 19<sup>th</sup> century to characterize and analyse agriculture. The exercise cannot be exhaustive as the corpus is so vast. We have intentionally made a selective (hence incomplete and open to criticism) reading to show how the social, economic and political context interferes with the evolution of perceptions, and how the recent structural transformations and on-going dynamics make it essential to revise the ways in which we see forms of production.

In the context of the industrial revolution and restructuring of the countryside in the United Kingdom, and the emergence of large domains in Prussia, Marx and Kautsky, among others, predicted the inevitable transformation of small landowners into farm labourers. The future belonged to the workers and, among them, farm workers had a rightful place in the industrialization of agriculture based on the concentration of capital, large-scale livestock farming and scientific and technical progress that was beyond the reach of small landowners (Marx, 1867; Kautsky, 1900).

However, this prophesy did not come to pass, either in Western Europe or in the Soviet Union, or in the countries of the socialist bloc, where the coercive imposition of this “modernity” went hand in hand with virtually systematic elimination of the peasantry, apart from some “pockets” of peasant resistance, as in Poland. Indeed, the theses of Marx came up against the economic and social realities of agricultural production: few economies of scale, technical progress that could be adopted by small farmers, peasant logic that was not very sensitive to the profit margin alone, or to a return on the capital invested.

Chayanov (1925; published in English in 1966 and in French in 1990) played a decisive role in characterizing peasant economies then, by extension, family agriculture. In a precursory manner, he defined the peasant model through the links existing between production and consumption, through the use of family labour (apart from the occasional exception), the cost of which he judged not to be measurable by way of the market, and through the production of goods for use, not goods for trade. By starting with labour and completing his analysis with life cycles<sup>6</sup>, he emphasized the specificities of agricultural production, suggesting that it should not be thought of in economic terms alone, and thus explained the permanence and resilience of family forms of production.

At the turn of the 20<sup>th</sup> century, the countries of the South were gradually emerging from slavery and colonization was being transformed. Indeed, there was a gradual move from political and military control of the conquered territories, and the inventory of their resources, to the issues of development<sup>7</sup>. Agriculture was characterized by a duality of models that opposed large estates of agro-industrial crops with a patchwork of “indigenous” agriculture structured on a family basis, sometimes extended when compared to western standards,

<sup>5</sup> Couty [1987] spoke more figuratively of “ways of seeing” agricultural production.

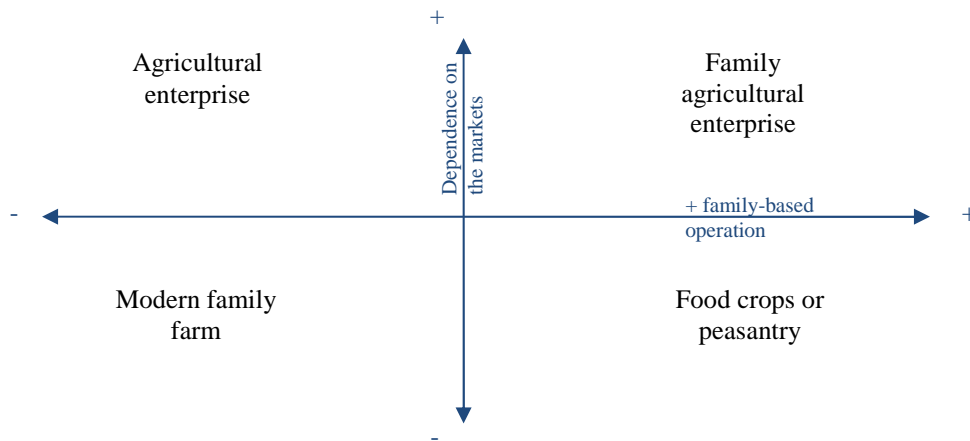
<sup>6</sup> As the labour is exclusively family-based, the composition of the family is an essential factor and it is important to take into account variations over time, from the forming of the couple to the break-up of the cell with the departure of the children.

<sup>7</sup> We refer particularly here to the political debates in France when supporters of the colonial expansion policy were pushed into admitting that the Colonies should also “bring in” income for the mainland and the State [Sarraut-Woods, 1998].

around food crops and herds. For example, in sub-Saharan Africa, the large estates operating with hired labour coexisted with small family farms in extremely contrasting situations between the countries of southern and eastern Africa (Gibbon, 2011), and those of French colonization in West Africa.

After 1945, in the context of the “thirty glorious years” of the post-war boom, rapid and deep changes occurred in society as a whole; in the countries of the North, there was a slow but sure transformation of a peasant economy into an agricultural economy. Beyond the divergences resulting from the use of different theoretical references – Anglo-Saxon anthropology and Weber on the one hand; Durkheim and Marx on the other hand – French rural sociology scrutinized the “modernization” process that was sweeping the French countryside and which led to unprecedented changes in production structures. Mendras (1976, 2000) thus responded to Aron’s ideal-type of industrial society in five points<sup>8</sup>, with that of peasant society, membership of which defined the peasant: relative autonomy in relation to the surrounding society, structural importance of domestic logic, relative autarchy, and strength of mutual knowledge within society. A member of society who lost one of these traits would be a farmer. The peasant figure thus gradually gave way to the farmer, increasingly involved in trade. Research was geared towards the modernization process, a major change at that time in history, which could only be understood if the analysis of the set of determinants shaping the economic environment were broadened (Jollivet, 2003).

This is what Lamarche (1991, p. 10) observed in his reference book on family agriculture. He defined the family farm as being an agricultural production unit where property and labour were closely linked to the family, and though it was no longer peasant-based, it drew some characteristics from the Mendras model. Lamarche’s ideal-types, based on agriculture, arise from the family nature of the operating logic and the degree to which production is dependent, notably on the markets, based on the following diagram<sup>9</sup>:



Certain French rural economists, including Servolin (1972), taking inspiration from Marxist theories, show how much the capitalist system, marked by concentration and integration,

<sup>8</sup> R. Aron’s ideal type of industrial society in five points: radical separation of enterprise and family, division of work, accumulation of capital, rational calculation and labour concentration in the work place.

<sup>9</sup> Unlike the other three, the “modern family farm”, a category defined as being a sociological entity in its own right, resembling the enterprise from a family logic viewpoint, and the peasant farm from a dependence viewpoint (p. 276), seems to us to arise from theoretical construction. Unlike Lamarche in the 1980s in Brazil, France, Tunisia and Poland, this specific combination of enterprise functioning with little dependence on the market was not found in the 6 national situations explored for this document.

comes to terms with the persistence of “small-scale commercial production”. A few years earlier, “A France without peasants” (Gervais et al., 1965) had been published, in which the authors explained the persistence of small farms as being one of the essential cogs in the smooth running of the capitalist economy. “Small” agriculture lived on by virtue of its ability to accept payment for its production factors – and notably for its labour – at below the market rates. This low remuneration for labour partly explains, alongside other cultural and social considerations, why family members gradually divert an increasing share of their work time away from the farm.

In a liberal perspective, the conception of the farm verges on that of the firm in Coase’s vision (1937), namely an entity that operates in a market where it is supposed to maximize its profit, based on rational use of its production factors. Unlike previous approaches, which based their arguments on the specificities of a given sector, making responses to market signals insufficient for explaining dynamics, farmers contribute here to the general interest, like the other stakeholders. As entrepreneurs, they seek their own interests; they are characterized by private ownership of the means of production and “freedom” of choice. This vision does not take into account history, rules and social or family relations – only the market relation, although it gradually increases in complexity.

In 1986, Singh, Squire and Strauss (1986), economists at the World Bank and Yale University, proposed modelling the behaviour of farming households via the rationality postulate using mathematical tools associated with the development of that neo-classical school of thought. The idea was to design a model where the agent had to solve two maximization programmes concurrently: i) a consumer programme (he maximizes his “utility” subject to budget constraints); and ii) an entrepreneur programme (he maximizes his profit under the constraint of factor endowment). In addition to consuming and saving, the farming household makes choices concerning the time it chooses to devote to either “work” or “leisure”. In these first models, the markets were assumed to be perfect and decisions were “separable” or recursive. There have been numerous developments since then. For example, De Janvry et al. (1991) assessed the consequences of the fact that farming households, particularly in developing countries, cope with incomplete or missing markets. This work makes it possible to pinpoint and analyse the well-being of farming households, assess the effect of different policies on agricultural production, and provide information (e.g. the elasticity of the consumption and production of farming households) for some macro-economic models, such as computable general equilibrium models. The models of farming households constructed in this way provide a conceptual framework for numerous agricultural economists. They are intended to facilitate the understanding of farmers’ production and investment decisions, depending on the needs and resources of their household. Conversely, they must explain the consumption and saving behaviour of the members of farming families, depending on their production objectives.

In quite another register, some work has focused on defining relevant observation units and their agricultural and non-agricultural contours, echoing the problems faced by development operators and Africanist researchers, for which the family farm model imported from Europe quickly ran up against its limitations (Winter, 1975). The multidisciplinary research group working on the improvement of investigation methods in rural Africa (AMIRA) thus recommended establishing a dialogue between “top down approaches”, requiring previously defined stable observation units, and comprehensive and qualitative “bottom up approaches”, in which the definition of the observation unit is a product of the survey (Couty, 1983; Winter, 1983). Two starting points, which are not exclusive, are proposed for this second type of approach. Ancey (1975) suggested beginning with decision levels, themselves identified by

the status of the individuals, within the family or within the wider social spaces. Gastellu (1980) preferred starting off from the economic functionalities of the residence, consumption, production and accumulation, to identify the communities involved and their types of organization.

By subordinating the economic dimensions to concrete actions and social dynamics, this work fits in with the criticism of neoclassical household models (Gastellu, Dubois, 1997). It participates in structuring a heterodoxy, based on the rediscovery of institutionalist principles and the development of French Africanist Rural Economics (ERAF) (Colin and Losch, 1994). Starting from methodological advances, ERAF is committed to moving away from technical and economic criteria alone, to characterizing family forms of agricultural production and assessing their performance, and to paying greater attention to structural dimensions and strategies (Yung and Zaslavsky, 1992). The latter cannot be reduced to the two principle maximization programmes (of the consumer and of the entrepreneur) of neoclassical economic theory.

The deliberations of ERAF tally with those of Paul et al. (1994) who chose to reason in terms of activity systems, starting from the premise that the approaches centred on agriculture were unable to account for family logics and strategies that were increasingly being affected by the development of non-agricultural activities. The activity system is defined as “a metasystem that includes (agricultural activities) alongside the other productive activities of the farmer and his family”. Its use is centred on the functional relations between activities, in the logic of a portfolio of activities.

Within the empirical field of French agriculture and its structural transformations, between 1970 and 1990, some work led to a questioning of the representation of the family farm model as being two Human Work Units – the farmer and his wife – of sufficient size to generate income equivalent to two comparable wages<sup>10</sup>. Whilst most publications at the time dealt with farm modernization or improving productivity, the questioning turned also to additional starting points, regarding changes in the allocation of household work time to agricultural and non-agricultural activities. Often, only the head of the farm assigned his work time, or even just part of his work time, to running the farm (Brun et al, 1970), which questions the relevance of the “family agriculture” category (Lacombe, 1972; Brun, 1989; Delord and Lacombe, 1990). The work force was then employed either in developing the heritage of the farm, through the creation of new, not strictly productive activities, or by remunerated off-farm work. Pluriactivity, although not recent (Cochet, 2011), raises the question in France (Brun et al., 1970) and more widely in Europe (Laurent, 2005), of the place of strictly agricultural activities within the set of activities developed by households. However, the interpretations of pluriactivity are also diverse, with it being seen as a result of surplus labour due to improved productivity, or of a simplification of cropping systems, or of an economic choice to reduce farming activities to the benefit of off-farm activities. The dimension and political implications of this research escape nobody in a socio-political context where a share of the legitimacy of agricultural policies, and particularly of the common agricultural policy, is drawn from the family model of agricultural production organization.

This pluriactivity issue has also been highlighted by the work of rural historians, who relativize the sometimes universalist scope that some would like to confer upon the family household centred solely on agriculture: according to Mayaud (1999, page 21), in the 19<sup>th</sup>

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<sup>10</sup> It is this vision that was written into the institutional and political plan of the agricultural orientation laws from 1960 to 62 [Buchou, 1975].

century, as much as in the 18<sup>th</sup> century, the exception was not pluriactivity but monoactivity. A comparison of Dutch and French agricultural strategies clearly shows that pluriactivity, far from being an anomaly as regards the household model with two players, is a major social and economic fact in some of the most efficient agricultural economies (Van der Ploeg et al., 2009). This research reveals how complex the typological exercise is when one seeks to understand the diversity of situations and one moves away from conventional dualisms: no fewer than ten types have thus been defined, based on criteria accounting for the place and functions of agriculture in varied combinations, making it possible to describe the livelihoods of rural people. It thus shows that agriculture undoubtedly still plays an important role, albeit strongly interlinked with other non-agricultural activities that contribute to the employment and earnings of rural people. If we widen the focus to agriculture in the South, we can hypothesize without too great a risk that a pluriactivity situation is dominant worldwide and that we need to adapt how we look at these ways of “doing” agriculture.

The migratory factor and its consequences for rural societies thus upturns the representations of space and *terroir*, but also the nature of relations within the family group and between families. Following the precursory work by Amselle et al. (1978) on town–country relations, research multiplied in the 1990s on links between roots and mobility in the societies of the South, challenging the myth of peasant sedentarity and immobility (Skeldon, 1990). The geoeconomics of town–country relations (Chaléard and Dubresson, 1999) and of interdependencies organized around the mobility of people, exchanges and income transfers (Peemans, 1995) developed at the same time as the surge in analyses in terms of archipelago economies linked to the globalization process (Veltz, 1996). It was other relations that were being woven between family units, agriculture and the elsewhere, towards which part of the family work force was moving; the size of the amounts transferred in the form of remittances shows the economic weight of these new relations.

In the 1970s and 1980s, research in the agricultural development field focused on systemic modelling of farm functioning and on establishing typologies of agricultural activity “in the service of action” (Brossier, Petit, 1977). One group of typologies, often based on national statistics, relied on variables of structure and on the nature and modalities of production combinations. A second was based on the projects and situations of farmers using farming system analyses. A third was based on farm trajectories reconstructed from surveys (Sébillotte, 1976; Capillon and Manichon, 1979). Within this affiliation, typologies were established on the basis of agrarian system diagnoses, characteristic combinations of a cultivated environment, production instruments, a resulting way of artificializing the environment, social division of labour between agriculture and other sectors, exchange relations, ownership and strength, and on the whole set of ideas and institutions making it possible to ensure social reproduction (Mazoyer, 1987).

The institutionalist schools of thought mentioned above for their closeness to French Africanist Rural Economics (ERAF), but also the neo-institutional schools of thought, were, for their part, gradually turned by research in Europe to perceive a broader agricultural and rural economy. These extensions made it possible to specify the link existing between agricultural units and with their natural, social, economic and political environment, through rules, standards, organizations and collective action. We mention only three significant examples: the taking into account of collective action, the analysis of the commons and the contributions of the “transaction costs” school of thought.

Understanding collective action is a means of going beyond the mere individual framework of the production unit in order to understand certain collective dynamics that give rise to

profound agrarian transformations (modernization of agriculture, representation and protection of interests, etc.). In this perspective, the contributions of authors in reference with Commons (1934), who qualified collective action as “liberation and expansion of individual action”, are essential. The recent Nobel Prize winners in Economics, Ostrom and Williamson, urge us to pay attention to coordination rules and methods in two essential fields when reasoning on the sustainability of agricultural systems. Ostrom (1992) and the school of thought of the International Association for the Study of the Commons (IASC) showed the importance of the rules established and applied by communities which endow themselves with the institutions required to ensure they are respected. Williamson and the neo-institutionalist school of thought showed that commercial transactions cannot be limited to the abstraction of the meeting of supply and demand in a magic place called “market”. The relations woven around a transaction have a cost (search for information, removal of uncertainty, creation of confidence), and these transactions themselves are regulated by market institutions. And if we consider that one of the purposes of agriculture is to place goods and services on the market, how, in a follow-on from Polanyi’s work, should we deal with the non-commercial aspects of agricultural activities that are of the same essence as its commercial dimensions, which contribute to explaining the functioning and longevity of productive systems (Groupe Polanyi, 2008)? These schools of thought make it possible to consider “the immaterial” that is located beyond the scale of the farm, but which is embodied in the organizations and the institutions that fashion the room for manoeuvre of family farms.

The notion of *livelihoods*<sup>11</sup>, which has been mediatized through its adoption by different think-tanks (Institute of Development Studies, Overseas Development Institute) and by British cooperation, can be used to develop renewed approaches to the different forms of agricultural production. The “Sustainable Rural Livelihoods” (SRL) framework sets out to consider the functioning of domestic groups in all their dimensions, integrating pluriactivity, sustainability and non-commercial aspects (Chambers and Conway 1991). The approach, which is often judged all-encompassing and difficult to implement in a concrete manner (Farrington et al., 1999), breaks with the idea of starting from technical-economic practices, and recentres the process on the capital endowments of domestic groups which mark the limits of *functioning*<sup>12</sup>. The non-commercial aspects are obtained by measuring social capital and by an understanding of well-being taken from the work by Sen on *capabilities*<sup>13</sup> (Sen, 2000). Sustainability is considered by measuring natural capital, which incorporates its use and reproduction in the concept of performance, but also by the capacity for resilience and resistance to pressures outside the capital structure (Scoones, 2009); a place is given to the institutional dimension of development, with the analysis of structures and processes facilitating or restricting access to and the use of capital (Ellis, 2000).

The recent period, characterized by food, environmental and financial crises, has seen the emergence of new ways of seeing agricultures, notably on a scale of elementary production units and regarding the ways in which they are connected to local territories and the world. The intrusion of financial capital from outside the sector (pension funds, sovereign funds, or hedge funds) tends to disjoin capital holders: those who mobilize technologies and those who have land rights (Afrique Contemporaine, 2011). This phenomenon renders the logic of

<sup>11</sup> This term is difficult to define (*the means of gaining a living* [Chambers, Conway 1991]; *the activities, the assets, and the access that jointly determine the living gained by an individual or household* [Ellis, 2000]).

<sup>12</sup> *Functionings* as meant by Sen [2000]: eating enough, being in good health, being happy, remaining worthy in one’s own eyes, taking part in community life, etc. The vector of these *functionings*, combinations of states and actions, participate in defining the accomplishment of an individual.

<sup>13</sup> Understood as being different combinations of opportunities and fields of possibility open to an individual; the notion goes beyond *functionings*, by including what it would be possible to achieve or do.

differentiating between different forms of production more complex. For instance, Hervieu and Purseigle (2011) have emphasized the recent emergence of new forms of family agriculture: one “*specialized*, segmented and highly professional; the other *societal*, which dissociates agricultural labour and working capital from heritage and land management”. The same authors also estimated that corporate agriculture was becoming diversified, depending on the level of fragmentation and public intervention in its capitalistic forms, and also that defensive forms of agriculture called *subsistence* or *relegation* agriculture were developing. In Europe, the last two, which have notably arisen from the employment crisis in the West, escape from the usual frameworks of public policy construction and from the categories of rurality analyses.

Does what is happening in the agricultural sector not need to be repositioned within a wider, increasingly commercial logic, based on the growing mobility of the different types of capital, for which the remuneration strategy would seem to be made possible by this disjunction process? Might what Petit (1975) did not envisage be in the process of becoming reality? “It is essential for the survival of the enterprise that this profit be positive when these production factors are mobile, i.e. when it is possible to provide them with remuneration equal to the market price, possibly outside the enterprise. One can see that this might not be the case with agriculture, where the mobility of production factors is far from perfect”.

This journey through the literature, taking a historical path, shows that the representations of forms of agricultural production are regularly undermined by reality and need to be adjusted. Support for some “industrial” forms of agricultural production organization at the end of the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> century by the Marxist school of thought tended to cast peasant or family forms into the dark. Later, during the “Thirty Glorious Years” of post-war boom, observations in industrialized countries, then in developing countries, focused on agriculture modernization processes. Too much importance was accorded to the dynamics of specialization and intensification, to the detriment of more composite forms combining agriculture and other non-agricultural rural activities which, historically and structurally, however, were the norm. The emergence of the SLR<sup>14</sup> approach in the 1990s might therefore correspond to recognition that the specialized and intensified agricultural model – corresponding to the outcome of a modernization process strongly backed by the public authorities – which the expertise of the North and the elites of the South projected onto the rural communities and agricultures of the South, did not correspond and were likely never to correspond to the realities of the South. The current period seems the right time to us to adapt and renew the tools for understanding agrarian realities.

In the following section, we shall explain in what way the SRL approach seems to us to be suitable for taking into account and integrating the different dimensions that appeared in the different work we have just described: pluriactivity, non-commercial dimensions, relocation of individuals, etc. Indeed, taking into account these dimensions does not tally with the dominant perception of specialized and almost exclusively commercial agriculture in developed countries. However, the realities of the North, and of the South, involve more complex logic, which the modernized and specialized farm model alone cannot be used to describe. An objective observation of agricultural realities therefore leads us to reconsider our “ways of seeing” the agricultural and rural sector as a whole.

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<sup>14</sup> Reasoned in a perspective of poverty alleviation referring to all the activities developed by rural households which do not rely exclusively on agriculture.



### **III. A flexible and integrative approach to the representation of family forms of agricultural production: the Sustainable Rural Livelihoods approach**

The SRL (Sustainable Rural Livelihoods) approach focuses on domestic structures and capital endowments. Such as it was briefly described earlier, it seems, through its integrating nature, to be compatible with many of the approaches mentioned in our bibliographical review. The SRL approach and its variants initially set out, on a microeconomic level, to construct a methodological set of rural poverty measurements likely to provide leads for public action in poverty alleviation. They started out from the limits of the frameworks available at the beginning of the 1990s, seen as focusing on the production of goods and of commercial value, overlooking pluriactivity and adopting restrictive measurements of well-being.

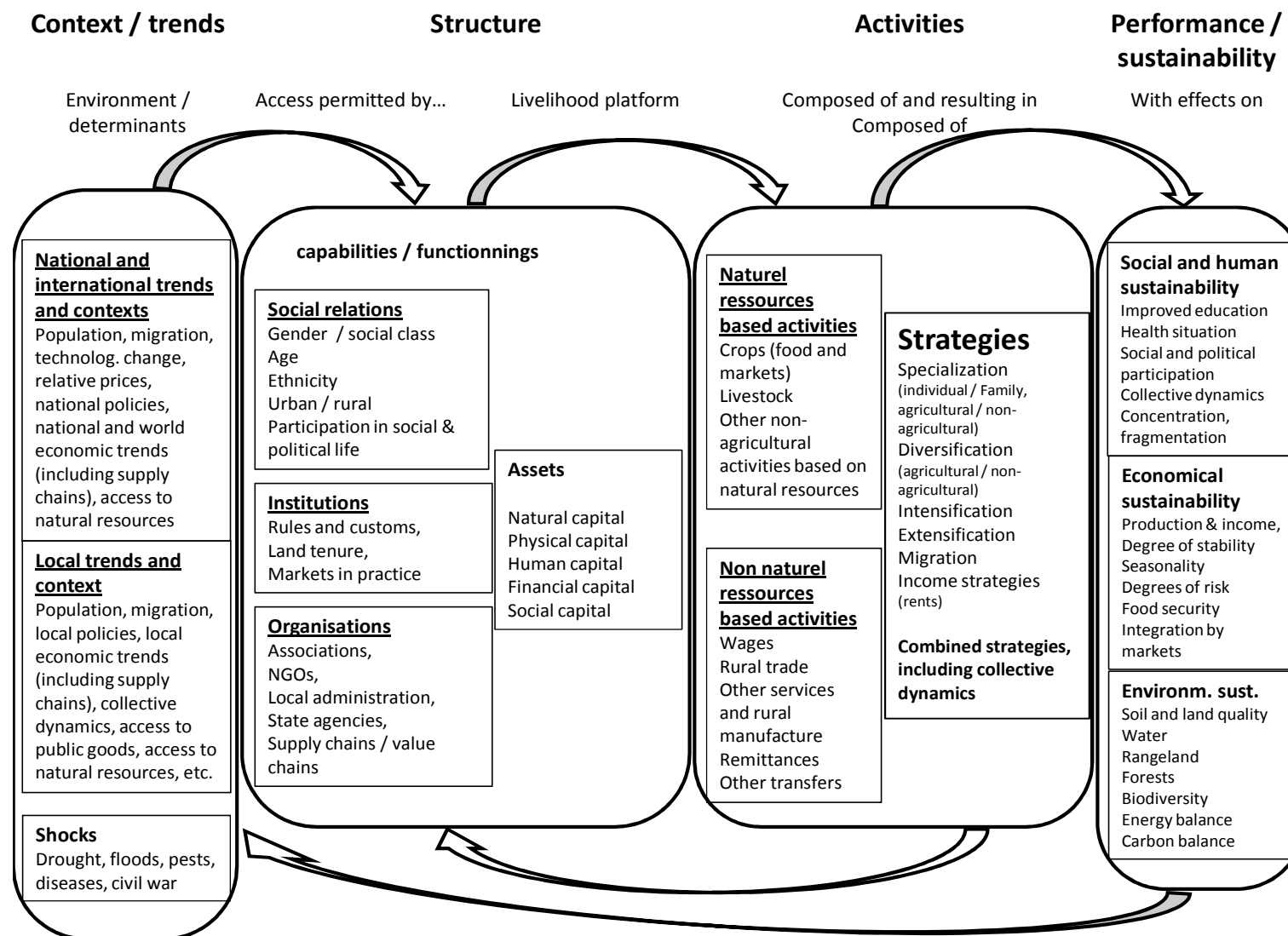
In its formulation by Chambers and Conway (1991), the approach centres on three concepts. *Capabilities* define combinations of *functionings* that an individual might implement, depending on what that individual can aspire to do or be (*doings* and *beings*) (Sen 2000); they have more to do with the effective free choice and action of individuals than with what they truly possess. Equity is not only a relative measurement of income distribution; the distribution of assets possessed by domestic groups needs to be looked at, but also the opportunities open to them, and their *capabilities*. Sustainability is understood as being the maintenance of a standard of living that does not alter the level and quality of domestic assets, opportunities and *capabilities*.

These three concepts are based on the endowment of these groups in tangible assets (pertaining to stocks and physical resources) and non-tangible assets (pertaining to requirements, claims and opportunities, and rights of access). By emphasizing the intangible nature of asset endowment, it is possible to take into account the institutional dimension, and the degree to which collective action plays a role in the use and access to resources and the facilitation of commercial operating through non-commercial logic. The assets define the result of accumulation strategies (an end), at the same time as they facilitate their maximization (a set of means). The model identifies five main categories of capital: natural, physical, human, financial and social<sup>15</sup>. The outlines, then the measurement of these different categories of capital (especially social and human capital), are subjects of controversy and call for adjudication. In our conception, wages are integrated into human capital; we accept that some livestock production practices can be assimilated to savings, and we have written land into natural capital.

The SRL approach has been widely used to assess public policy projects (Farrington et al, 1999), to fine-tune, formalize and quantify typological approaches incorporating pluriactivity and non-commercial activity (Leege, 2003), and to analyse viability and poverty (Bebbington, 1999); it is important to specify the adaptations needed for it to be used in a more global, comprehensive perspective of a break-up in the forms of family agriculture and the dynamics involved.

<sup>15</sup> Human capital and social capital have both tangible and non-tangible dimensions.

Figure 1: Summarized glimpse of the SRL approach (according to Ellis 2000)



Evolutionary trends and international and local contexts partly explain the different forms of production. They are also fashioned by the overall capital endowments of the domestic groups and production units, and by elements of the immediate environment blocking and/or facilitating access to those categories of capital (*capabilities* and *functionings*). The effective use of specific combinations of capital and their translation into forms of production, enable strategies to be implemented that rely on the deployment and linking of agricultural and non-agricultural activities. The performance of the forms of production and their economic, social and environmental consequences can also be assessed on several observation levels in line with the sustainability challenges. Performance can be extrapolated to the scale of relevant territories (depending on local configurations), and then compared with outside forces affecting its evolution.

We are not seeking here to validate the systemic dimension and logical flow that the approach underlies. However, we feel that the methodological principles guiding the analysis of domestic structures (the middle two boxes of figure 1), are useful to our argument. The measurement and qualification of capital endowments and the conditions for gaining access to them indeed appear to be important elements for representing diversity in the forms of agricultural production. In addition, we broaden the approach by specifically considering the capital called upon from outside agriculture, and especially by qualifying the family nature, or not, of the way the different categories of capital are managed. This broadening makes it possible to integrate pluriactivity and mobility in the representation of the forms of production.

The representation method is applied in the same way to contrasting forms of production, in different contexts. It is a matter of ensuring the comparison between these forms, not in terms of performance, but in terms of structure and strategy, agricultural production and, more widely, reproduction. We put forward the hypothesis of a continuum between the two ideal-types of the peasant farm and the agricultural enterprise (Lamarche, 1991). The method presented here must make it possible to position each form of production along that continuum.

#### **IV. Representing the diversity of family forms of agricultural production: case studies**

We now propose to look at how the SRL approach, broadened in this way, can be used to describe some forms of family agriculture that are contrasting and illustrative of a multi-faceted, diverse and complex reality. Six case studies are presented, which we feel are illustrative of certain structuring evolutions and sufficiently far from each other to show the integrating nature of the conceptual framework.

These case studies concern some forms of family agriculture encountered in different countries. However, these cases are only segments, taken from the extreme national diversity based on strategic criteria (France, Brazil, South Africa), community criteria (New Caledonia) or geographical criteria (Mali, Vietnam); they in no way represent the totality of family agricultures in their respective countries.

##### ***Maintenance of a peasant agriculture with a low apparent economic contribution: Kanak identity-based agriculture in New Caledonia***

New Caledonia is marked by a dual agricultural trajectory. This archipelago, with 250 000 inhabitants, was annexed by France in 1853 to set up a convict prison there (closed down in the 1930s), to exploit its mining resources and to develop an agricultural colony based on exports. The agricultural potential of the colony rapidly proved to have been over-estimated, but it justified a land grab with the indigenous Kanak population being confined in land reservations. It was not until the 1980s and the end of the pro-independence struggles, through a compromise guaranteeing the emancipation of the country, that a far-reaching reform took place to rebalance land tenure between the Kanak and the descendants of the settlers (the Caldoches). Thus, until recent times and despite some significant but dispersed advances, Kanak agriculture, tapping into age-old practices and knowledge, was reduced to defensive and survival logic, centred on the food and identity functions of agricultural production, in confined spaces, on the fringe of the economic circuits. Conversely, a Caldoche agriculture cornered all the public aid in a logic of modernization, based on the French model, substantially adapted to local conditions.

Although diverse, the forms of Kanak agriculture have numerous traits in common (Gaillard, Sourisseau, 2009).

Land, which is rarely irrigated, is customarily “acquired” by way of a bundle of ancestral laws, partially formalized under the land reform launched in the 1980s. Indeed, subject to a duly demonstrated link to the land, the reform returned to the Kanak clans the lands previously taken over by the Caldoches, which thus reverted back to the domain of “customary” lands. Land thus carries a strong symbolic and political weight, by marking the link with the origins of the clans and as a physical marker of the achievements of the

pro-independence struggle. Thus, natural capital includes a paramount non-commercial dimension.

Labour is primarily manual, provided by the domestic group. It amounts to the main production cost (non-financialized) in crop management sequences that require few purchased inputs. The quality of infrastructures and of the health and education systems has also guaranteed to the Kanak domestic groups a high level of human capital over the last 20 years.

The cropping systems, organized around a basic set of tropical tubers, are diversified in both species and varieties. The finesse of the know-how, arising from a long adaptation to plots of dire quality inside the reservations arising from the confinement, would seem to be tending to fade, to the benefit of a simplification of practices. Nonetheless, agricultural social capital, geared towards community membership on a tribe and clan scale (extended family), remains decisive in the production process. It enables the circulation of varieties and of innovations, whilst at the same time securing access to land.

There is little physical and financial capital, but these are rarely pooled or externalized. Sales are rare and limited to short circuits in which mutual knowledge appears more decisive than contractual commercial relations.

These types of agriculture have seen some changes, still at their edge, reflected in a decrease in the diversity of varieties, use of small-scale irrigation, light motorization and innovations to render work less laborious. Be that as it may, the structure and domestic integration of the types of capital that support the activity give it undeniably a peasant nature in the Mendras sense (1976). One fundamental difference with the peasant ideal-type lies in the strong connection of the domestic group with general society through wage-earning, whose share in total income is over 70 % (Bouard, Sourisseau, 2010). Thus, human capital is highly mobilized outside agriculture.

Agricultural statistics tend to minimize the quantities that Kanak agriculture produces and the aid arrangements seem poorly adapted to assist them, particularly as the economic prospects of the sector are well below the opportunities offered by the mines and the administration. Yet, all Kanak families living outside the bush villages and Nouméa farm a field, and although the plots are small, it would be wrong to assimilate agriculture to a leisure activity or to predict its disappearance. In a context of severe economic inequalities, the share of food self-sufficiency would appear to exceed 30 % for households living in tribes, which would seem to have incomes 2.5 to 3 times lower than households not living in tribes (ISEE, 2010). At the same time, agriculture is still an essential prerequisite for voicing and gaining recognition in the local political arenas, and an element of security in complex activity systems.

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***Resilience of large domestic groups and of “traditional” agriculture in a context of diversification by emigration: the North of the Kayes region in Mali***

Mali currently has a little under two rural inhabitants for one urban; in 1961, that ratio was eight rural for one urban inhabitant. With strong demographic growth (3.6 % per year between 1998 and 2009), the rural population continues to increase. In this context, 800 000 farms (CPS, 2008) provide a living for 8.9 million people, i.e. 78 % of the Malian population. Between the social specialization of professions, community management of resources (including land), the large size of domestic groups, and disjunction of the economic units, these farms are far from the Western ideal-type. However, social organization is evolving, with land “appropriation” and land management at farm level, a reduction in mutual assistance groups, the break-up of families and the growing monetarization of exchanges.

In a great diversity of situations, farming families in the northern part of the Kayes region develop farming systems typical of the Sahel zone. Dry cereals (millet and sorghum) occupy the major share of the cultivated areas, along with groundnut, cowpea, rice and maize (if the families have access to irrigable land). Yields are low and sensitive to rainfall. Livestock farming, which is mostly transhumant, plays a major role. Farming is manual or conducted with animal draught power. Use of inputs is marginal; seeds are produced on-farm; product sales are low (under 20 % of annual agricultural gross product, according to Samake et al. (2008)).

In this region, which is subject to severe climate events and the natural resources of which are fragile and difficult to develop, livestock farming, the main physical capital of the families, plays an important role and is one of the elements of differentiation between farms; it is both a place of accumulation and a place of production. Social capital, one of the driving forces of the strategies of families seeking social recognition and recourse in the community, has little influence over commercial agricultural production; there are few professional organizations facilitating access to the market and impacting production. Migration is a very old practice, which escalated at the beginning of the 20<sup>th</sup> century, notably towards Senegal to grow groundnut (short migration). Emigration to France grew in importance in the 1970s, notably under poor climatic conditions and with the need for labour in the former colonizing country (Daum, 1993). Transfers of funds by emigrants who have succeeded are an integral part of family group resources for consumption, but also for investment or for diversification of economic activities. Thus, financial capital, which is decisive in this context of poverty, largely depends on emigration, hence on human capital endowments.

Work migration departures are therefore part of the strategies developed by family farm heads (Azam and Gubert, 2006). For migrations of long duration to Europe, for example, the necessary funds are often taken from agricultural income and working capital. However, the departure of a family member is a risky option. The farm deprives itself of

an asset<sup>16</sup> and success is far from automatic, owing to the current geopolitical and economic difficulties. In addition, a migration departure of long duration does not correspond to the exclusion of the migrant from the farm; people departing remain full members of the domestic group and if they return, they fully resume their place.

In a recent study, Samaké et al. (2008) showed that farms in the Diéma circle of the Kayes region are composed, on average, of 21 people, including two long-duration emigrants per family, with one of them regularly sending back funds. Emigration appears as a factor for maintaining large demographic structures. The domestic groups with migrants maintain a large number of members to minimize risks. Farms earn low incomes, on average, but those with migrants come off better: the quintile of the poorest farms is that where there is no emigrant. On the other hand, 20 % of the most well-off farms have earnings arising from transfers by emigrants that average over 60 %.

Use of human capital outside the domestic framework means that the farm's income can be improved if emigration succeeds. However, schooling and education levels remain low, and although human capital is decisive in the structural differentiation between families, it is particularly linked to the capacity to emigrate.

### ***Liberalization and development of efficient and diversified family agricultures integrated in the market: diversification in the Mekong delta of Vietnam***

Agrarian colonization under French domination led to strong land polarization in this country of ancient agricultural tradition. After 30 years of war, the country went through an episode of collectivization of production factors and State control of the supply chains. Starting in 1989, liberalization led to reforms that were accompanied by strong agricultural growth and rapid economic development.

Among the agricultural zones to have benefited from these changes, the Mekong Delta, the main rice growing zone in Vietnam, is characterized by its abundance of water, a crucial natural capital for production, by limited access to quality land (highly anthropized ecosystems, high population pressure), and by physical capital, including irrigation and drainage infrastructures, and equipment for motorization, which have been decisive in the development process in the zone. Access to equipment (motor pumps, rotary cultivators) notably enabled gains in work output and the intensification and diversification of farming systems, which are sources of income growth and agricultural development.

In this context, when the farmers of the Mekong Delta found relatively secure land tenure under liberalization (multiannual and transferrable rights of use), with the individual use of lands redistributed on the basis of the tenure existing prior to collectivization, and a

<sup>16</sup> Which is different from short-duration migrations which, for example, make it possible to reduce the number of mouths to feed from family stocks during the dry season.

more lucrative price for their agricultural production, they were able to consolidate their rice growing activities (Le Coq and Trebuil, 2005).

Nevertheless, a differentiation between family farms soon came about, depending on the initial land endowment (area and type of soil), the financial capital, and the social capital. The social capital was greatly marked by migrations to towns linked to the development of manufacturing industry. In addition, with the strengthening of a more well-off urban class and the opening of the borders, new fresh product supply chains (horticulture, animal products) developed, offering diversification possibilities that were more lucrative than rice growing.

Thus, some farmers implemented strategies for land extension and diversification, or even for specialization in these more profitable supply chains (Le Coq and Trebuil, 2005). Those producers, who were characterized by limited land capital (under 3 ha), growing physical capital (motorization and plot development), a relatively high human capital due to the literacy effort, and sometimes major social capital (producer organisations) (Yamazaki et al, 2001), were able to make use of the achievements of the green revolution (Le Coq et al, 2004) and diversify their agricultural production with high technical-economic efficiency, enabling Vietnam to become one of the main exporters of rice and agricultural products in the world.

### ***Supply chain restructuring and family agriculture destructuring: examples of “strategic partnerships” in South Africa***

Seventeen years after the end of apartheid, the agriculture of South Africa still displayed high duality. On the one hand, 40 000 large “commercial” farms on private lands were highly efficient, thanks to which they controlled the markets. On the other hand, 300 to 400 000 “small” farms and 4 million “subsistence” micro-farms (DAFF, 2010), marginalized during apartheid, generated limited agricultural production and were unable to keep going without sources of off-farm income (Eastwood et al, 2006; Anseeuw, 2004). The post-apartheid reforms, mainly involving the endowment of natural capital (land reform – restitution, redistribution and reform of land tenure), had contributed little to erasing the contrasts: under 6 % of formerly white lands had been redistributed (Anseeuw and Mathebula, 2008) and small black farmers still had little access to water and irrigated areas. In non-white agricultural zones, land tenure remained uncertain, under mostly communal land management.

Recently, however, in this context of failed reform and political reorientation towards new development models, these farmers have been undergoing a recomposition; their capital endowments are evolving, as are their capital access, management and control methods. As part of the positive discrimination policy introduced by the current government, some “strategic partnerships”<sup>17</sup> have in fact seen the light of day to stimulate black small-scale agriculture. These “partnerships” correspond to contractualized

<sup>17</sup> Official name given by the South African Government.



alliances, including beneficiaries of land reform, private agro-industry and government (Derman et al, 2006; Davis and Lahiff, 2011). On the one hand, agro-industry controls production and commercial management on a basis of maximizing commercial profitability and efficiency, and minimizing transaction costs. Agro-industrialists, therefore, manage production, directly or indirectly, totally or partially, on the scale of a large unit (the plots of the beneficiaries are assimilated to a single production unit similar to a large “commercial” farm). Financial capital is mainly provided by the agro-industrialists (and may be completed by public backing) (Fréguin-Gresh and Anseeuw, 2012). Natural and human capital is provided to the agro-industrialists in return for preferential access to the salaried jobs offered by the company. For its part, in addition to helping the agro-industries and beneficiaries of land reform to form these “partnerships” through mediation, the government takes part in endowing the small black farmers with physical capital (basic infrastructures, and agricultural equipment for production and storage) and in human capital (training and capacity building). To strengthen the social capital drained by years of discrimination, the small-scale producers are encouraged – sometimes obliged – to group together in cooperatives, but these are more often sources of disputes rather than of collective action.

These “strategic partnerships” seem to strengthen the proletarianization of small black farmers, who have not been able to benefit from the post-apartheid reforms and whose role is all the more marginalized, in that the markets, which are demanding in terms of norms and standards, tend to exclude them from the most lucrative supply chains. This type of contractual agriculture relies on the unchallenged dogma dominating large-scale entrepreneurial agriculture, the efficiency of which lies in commercial profitability and not in economic efficiency and social equity. Indeed, this situation subordinates small farmers to the agro-industries in new vertical integration processes. The latter profoundly modify the representations that producers have of agricultural activity proper (Anseeuw et al., 2011) and gives rise to new processes of destructuring in South African family agriculture.

### ***Emergence of societal forms pooling capital and off-centring the role of the family: examples in France***

Since the “Thirty Glorious Years” of the post-war boom period, the efficiency of French agriculture has greatly improved in terms of production volumes and value. From a food importing country at the end of World War II, France is now one of the leading agricultural powers. The most recent period of this transformation seems to indicate changes in the family perception of production (La Documentation française, 2007).

On the one hand, the increase in French agricultural productivity has paradoxically gone hand in hand with a certain generalization of pluriactivity. For farms that have chosen to diversify, the capacity building of farmers also involves non-agricultural activities. In many cases, human capital is, therefore, mostly used outside agriculture, with the main player even sometimes working part-time off-farm. The degree of training for agricultural

workers has also increased, through continuing education and training, owing to the increased requirements as soon as young farmers start out, with players entering agriculture from other sectors of the economy.

On the other hand, some major restructuring has taken place, resulting in the emergence of societal forms of production, which currently account for a quarter of the farms inventoried (137 500 in 2005). In these forms, capital management is taken out of the hands of the domestic group: physical capital is pooled (totally or partially) and human capital is assigned on the basis of increased specialization and technicality in relation to the tasks to be accomplished.

These forms make it possible to pool the costs arising from the use of outside hired labour, which satisfies labour requirements on the farm and which helps to strengthen a way of life tuned to urban rhythms, by delegating tasks that are considered to entail constraints that are barely compatible with family lives. In some cases, it is even possible to see the relocation of the home in relation to the farm: agriculture as a way of life is tending to give way to agriculture as a profession with a work timetable and a relationship with work that come closer to the other sectors of the economy.

Natural capital can be substantially improved – at least theoretically – through the pooling of capital, which may make it easier to meet environmental standards in technical and economic terms. Financial capital may increase through economies of scale enabled by better rationalization of work, but their management nonetheless remains close to that of the respective family cells.

Societal forms of production are now “accompanied” by legal measures through the Agricultural Orientation Law of 2005-2006, which challenges the unique nature of the family farm model.

### ***Entrepreneurial dimensions of family agriculture: corporate agriculture in Brazil***

Agriculture in Brazil is dual and opposes forms of entrepreneurial production (800 000 production units), farming most of the land, firmly inserted in international trade, and with more numerous family forms (4.4 million units) geared towards the domestic market and self-consumption, farming only 24 % of the land. This duality is the outcome of a historical process marked by the centrality of export agriculture in the socio-economic formation of the country and the persistence of the heritage of a colonial model based on the plantation economy, slavery and patrimonialism. Brazilian family agriculture thus developed in the geographical, social and economic gaps of export agriculture and has been restricted by land tenure and wage rules that were unfavourable to it (Baudel Wanderley, 2009). Today, family forms of production are extremely diverse and reflect the wide range of natural, physical, human, financial and social capital combinations

resulting from the natural and economic context and agrarian history. One of these different combinations is corporate agriculture.

This corporate agriculture results quite broadly from European migratory movements, primarily Italian and German, at the end of the 19<sup>th</sup> century. It developed in the States of southern Brazil and quite largely escaped the colonial reference. Unlike the other family agriculture arrangements, this type of agriculture benefited from the process of agricultural modernization in the second half of the 20<sup>th</sup> century and greatly contributed to the extension of the agricultural frontier, sometimes turning into entrepreneurial agriculture in the virgin lands of the West (Cerrados) and North (Amazonia) (Cazella et al., 2009).

Corporate agriculture is the result of a capital accumulation process over several generations. The land is privately owned, passed down by inheritance, or acquired by playing, within a framework of generational migration, on the price differential between the agricultural frontier and the original zones. The use of irrigation and heavy mechanization is frequent (Zanoni and Lamarche, 2001).

The cropping systems, using agricultural inputs, high-yielding varieties and GMOs, are often organized around one or two key plants, typical of the production region: sugarcane and fruit (orange) production in the São Paulo region, soybean in the South, West and in Amazonia, cocoa in Amazonia, coffee in the Southeast region, but also animal production integrated in the agro-industry of the South. Food crops are reduced compared to the most widely existing family forms of production, and are confined to a simple garden. The disappearance of orchards, food crops (rice, cassava, and beans) and small-sale livestock farming is often seen.

In the southern and south-eastern zones of the country, pluriactivity is common, as is dual-employment within the household, with the wife often having an off-farm activity. The children often continue their studies or are involved in other sectors of activity. In the São Paulo region, it is common for households to have a dual residence, on the farm and in town. The use of hired labour, especially temporary, is the rule. These farmers are well established in the commercial circuits and frequently call upon private technical services provided by downstream companies or the organizations to which they are affiliated.

In Rio Grande do Sul, where this type of agriculture structures coherent economic territories, farmers are part of a dense cooperative fabric involved in supplying, marketing and processing products, but also in credit and water management. This territorial structuring movement is further strengthened by the existence of privately run community agricultural universities, which train the agriculture professionals and agricultural elites. It benefits from excellent links in the union and political world, enabling it to become one of the main initiators of the emergence of family agriculture as a socio-political sector and actively take part in the construction of differentiated policies at federal level specific to the family subsector, notably in the field of rural credit (national programme to strengthen family agriculture) or in agricultural insurance (Family Agriculture Insurance).

Corporate agriculture, therefore, lies at the interface between family agriculture and entrepreneurial agriculture. Its transformation is being brought about through the combination of financial capitalization enabled by rural credit – bank or cooperative – with the development of social capital acting at the different levels of governance: the production region, federated State and federal State. The human capital has evolved, the family links have been transformed with the lesser involvement of family members in agricultural production and the rural diversification of activities. The natural capital has been globally maintained, given the absence of any obvious degradation of the soil and water availability.

## **V. Representing the diversity of the forms of agricultural production: towards a conceptual framework?**

In this final section, we seek to position the six forms of agriculture briefly described<sup>18</sup> within the range of possible configurations in the dialectic between production unit and social unit, between a family farm and an enterprise (cf. above and (Lamarche 1991)). This means sketching out the formalization of a representation method that can be used to judge the distance of the observed forms from the ideal-types described in the literature, based on robust criteria applicable in all situations. This method – which we test and put forward for debate through this working document – is based on synthetic and multidimensional representations, inspired from the SRL approach.

### *Representation of the capital combinations called upon in agriculture*

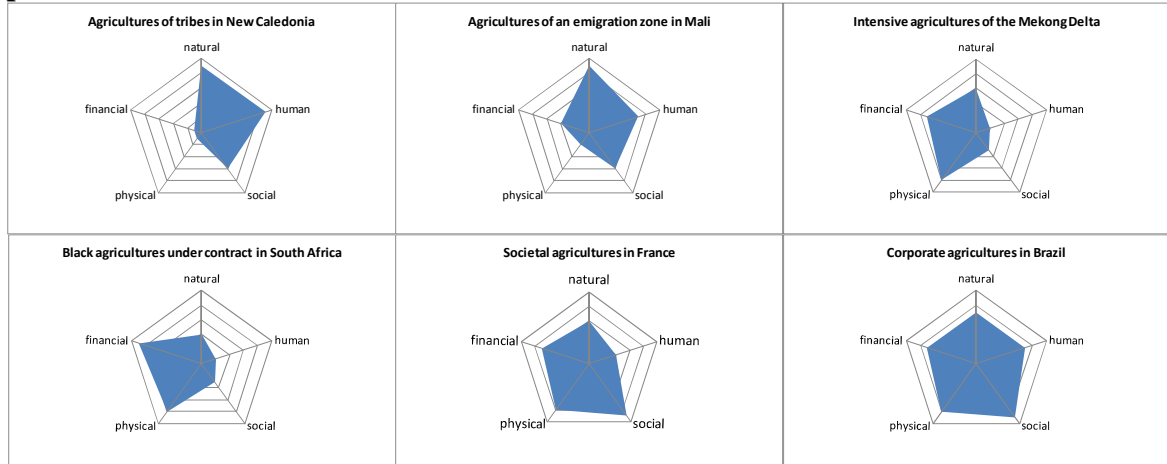
The capital combinations brought into play for agriculture (within the full logic of the SRL approach) illustrate and explain the structures and practices involved in agricultural production and product use. They define some forms that are more or less labour or physical capital-intensive, more or less integrated in the different markets, calling upon non-commercial coordination to varying degrees. The peasant farm, mainly geared towards feeding the domestic group, based on an identity concept of agriculture, is especially endowed in natural, human and, to a lesser degree, physical capital. The enterprise ideal-type, a form of production seeking to maximize sales and returns, is based on major endowments of financial, physical, human (in terms of outside hired labour) and social capital (professional and institutional networks).

The different combinations are shown in a star diagram giving the relative weights (via a subjective scoring system ranging from 1 to 10) attributed to each type of agricultural capital, independently of its absolute value. The three case studies reveal contrasting situations.

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<sup>18</sup> Remember that these forms of agriculture are particular cases chosen, among others, within national situations, but they do not represent all the forms encountered in each country.

**Figure 2: Respective importance of the 5 types of capitals called upon in agricultural production**



By definition, the graphs only account for the financial and physical capital endowment values indirectly, and relatively to the other capitals. The former two are very low in value in New Caledonia and Mali (little equipment and few infrastructures, few opportunities or problems in raising financial resources), as opposed to intermediate levels in Vietnam and South Africa (equipment and infrastructures provided by the government or by the agro-industrialists, but difficulties in gaining access to financial resources, notably from private banks, which require major guarantees, beyond the means of small farmers), and high in France (due to professionalized and societal forms, hence pooling) and in Brazil (where the situation is bordering on entrepreneurial agriculture).

The Kanak agriculture of New Caledonia is primarily based on natural and human capital involvement, which largely dominates over the low physical or financial investments. Apart from the importance of land and the symbolic act of production in the relationship between man and nature, it is especially the human resources of the domestic group that contribute to the product, with possible use of social capital existing in the close vicinity in the form of mutual aid. Consequently, it is logical that production is mainly intended for family consumption and non-commercial exchanges (including the social recognition of producer families).

In the case of Mali, production capacities rely on the abilities of producers to take advantage of fragile natural resources under severe edapho-climatic constraints; family labour and empirical knowledge (human capital) and social capital take on great importance. However, the weighting for these two types of capital is relatively less high owing to migrations.

Unlike the Caledonian case, the situation described in Vietnam shows an example of “classic” agricultural intensification. This intensification calls for physical capital (inputs, equipment) and financial capital (credit) with a certain degree of natural capital

“consumption”, with the protection of natural resources not being a great concern of the producers engaged in these processes, which also marks strong integration in the product market.

Along the same lines, the South African case illustrates the development of vertical integration of family production by an agro-industry primarily calling upon physical and financial capital with a view to developing commercial production, based on an entrepreneurial model that has proved its worth in terms of maximizing profits and making use of public aid within a political framework of positive discrimination in favour of black small-scale agriculture.

In France, human capital tends to be a lesser investment in agriculture, at the same time as it is gradually becoming organized on more of a hired labour type basis<sup>19</sup>. The societal forms – at least theoretically due to economies of scale – are definitely more able to manage the relationship with the environment by pooling efforts to respect norms and standards and change practices, and thereby use less natural capital (less degradation). They somewhat resemble hybrid types of logic between enterprises, cooperatives or associations, which greatly rely on and tend to strengthen social capital in sectorial and professional systems of logic. However, this agriculture also involves a non-commercial logic through the coherence and duration of collective actions which have culminated in the mobilization of national and European public support.

Lastly, the corporate family forms in Brazil bring into play physical capital and financial capital to establish an agriculture that is well integrated in the commercial circuits, but whose efficiency also results from the endowment and use of social capital seeking to have a favourable impact on its economic environment, but also on its political and institutional environment (training, and direct and indirect public support).

### ***Representation of the capital combinations called upon outside agriculture***

For each situation, and in line with the same arbitrary principle of relative measurement, we represent the forms of capital brought into play from outside agriculture. It particularly means illustrating the weight of pluriactivity and mobility. These dimensions enter into the usual characterization of ideal-types in the literature as context variables, and especially to judge agricultural practices; we fully integrate them here in the representation of strategies, because they are an essential outcome of them and because they also explain the diversity of family forms of production.

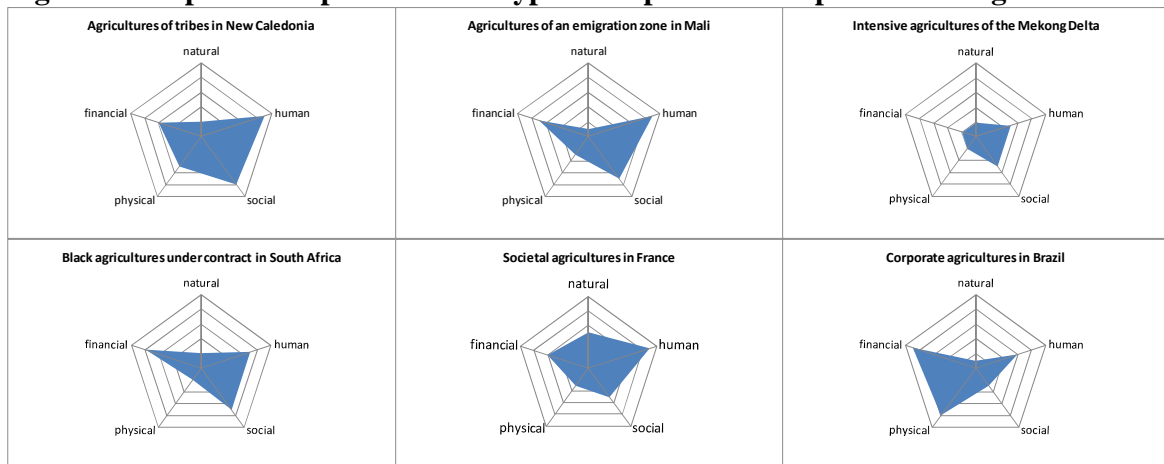
The peasant ideal-type is not mobile and is primarily devoted to agriculture. However, we postulate that their membership of their local community is little changed if they use work and social capital outside agriculture, by restricting themselves to non-commercial

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<sup>19</sup> Even though we exaggerate the issue slightly here for methodological reasons, it is not uncommon to hear the new generations of farmers aspiring to a life style more in phase with that of wage earners (that is nothing new), and put it into practice (that is newer).

activities within that community. Likewise, mobility in extended family networks (even long distance), reproducing community logic in an elsewhere, does not break with the peasant nature. The entrepreneur ideal-type is specialized, but although it is pluriactive and mobile, it will preferentially call upon physical and financial capital to maximize commercial profitability, reproducing the capitalistic intensity of agricultural production.

**Figure 3: Respective importance of 5 types of capital called upon outside agriculture**



Along the same principles as for the types of “agricultural” capital, the different combinations of “non-agricultural” capital thus measure how domestic strategies deviate from the agricultural activity, through pluriactivity and/or mobility. Some differences are also found in terms of the overall estimated value of the physical and financial capital.

The Malian and Vietnamese situations offer the lowest values. The South African case is intermediate: in fact, small farmers are not specialized in agricultural production, or they even become wage-earners of the agro-industrial enterprise which almost totally incorporates all stages of the supply chain; in terms of financial resources, these small farmers still largely depend on sources of outside income, particularly public social aid intended for the poorest households. In the Caledonian situation, the development of a Kanak entrepreneurship is recent, and wage-earning remains largely favoured for diversification. The French and Brazilian cases, with major contrasts within each situation, reflect considerable physical and financial investments outside agriculture.

In New Caledonia, the Kanak domestic groups are, therefore, integrated in a privileged way in the job market through the human capital invested in wage-earning. Although the situation has been favourable overall for two decades, job seeking is also a matter of interpersonal relations, often facilitated by family links. Be that as it may, although social capital is paramount in seeking a wage, the weight of obligations in relation to one’s clan may prove a handicap for developing enterprise activities, be they agricultural or non-agricultural (Godin 2009).



In Mali, the migratory strategies are based on human capital (limited in terms of education and training), with social and financial capital serving to pay for the cost of migration.

On the other hand, in Vietnam, the different types of capital are concentrated on agricultural work (specialization or diversification) with recourse to off-farm wage-earning for the production units that do not enter into these dynamics.

In South Africa, family producer inclusion policies in “partnerships” with agro-industrialists paradoxically strengthen the move to wage-earning (entrepreneurial development model of the large white commercial farms) and development under constraint of forms of collective action.

In France, the family societal forms rely on strategies involving combinations of human (through labour), financial and social capital, while calling upon natural capital for activities to expand beyond the agricultural activity (farm holiday accommodation and processing).

In Brazil, the corporate farmers may use some of their physical and financial capital in non-agricultural activities, or invest with a view to generating rents, from trade, craftsmanship, real estate and other forms of investments. The domestic groups also have access to some paid activities of one of the members, notably in the field of qualified jobs, unlike in Mali where training levels are a limiting factor for gaining access to better-paid jobs.

It seems that it is in the Brazilian case that the types of pluriactivities engaged in least affect agricultural dynamics, which approach those of the enterprise. In the French and Brazilian cases, they go hand in hand with a distancing from the peasant ideal-type, by greatly affecting allocation of the labour and social capital factors.

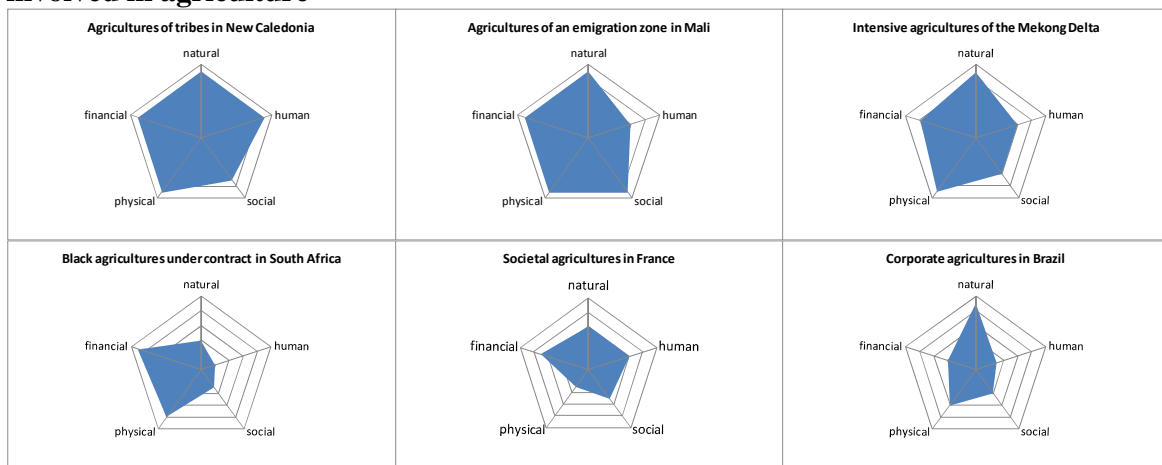
### ***Representation of the family nature of the possession and management of the different types of capital called upon in agriculture***

Lastly, perception of the family nature of the possession and management of the different types of capital called upon in agriculture lies at the heart of our expansion of the SRL model. In the peasant ideal-type, the different types of capital are entirely held and managed by the family group, in a relative autarchy. In the case of the enterprise, all the types of capital escape family management and are available on an open and perfect market.

In order to represent this family or non-family trait, the star graphs assign to each type of “agricultural” capital a “score” ranging from 1, if the family is deprived of management, to 10 if management is exclusively family-based.

The agriculture of the Kanak tribes in New Caledonia, which is primarily non-commercial, relies on a strong hold of the family group on all the types of capital called upon in agriculture, whether substantial (human and natural) or not (financial and physical). As we have seen, that control has its counterpart, in terms of putting the brakes on commercial integration, with the strength of social relations being divided between the household and extended groups (clans and tribes). We are typically in a situation of a peasant form of production.

**Figure 4: Relative degree of control by the family sphere of the 5 types of capital involved in agriculture**



In the emigration zone of Mali, the domestic group controls the capital called upon for agricultural production. The community rules, notably on land tenure, acknowledge the individual, but the family retains the appropriation and management of labour capital and its peasant nature. Distancing from the peasant farm occurs via mobility, but also by a partial weakening of the agricultural social capital through its externalization towards associations that are sometimes structured on a large scale.

Strong family control is seen again over all the capital structures in the case of Vietnam, with partial recourse to the social capital linked to the development of producer organizations, but at very different levels of physical and financial capital, unlike the situation in New Caledonia and Mali.

The South African case shows a strong contrast, in that most of the physical and financial categories of capital fall outside the control of the family group (provided by the agro-industry or by public aid), with family control over the natural capital and the social capital greatly marked by the domination of outside players (groups imposed by the public authorities and agro-industry).

In the French societal forms, the family group tends to fade before the need to coordinate the different areas of work engaged in. This coordination fragments and externalizes the control of a share of the sets of capital (particularly physical capital) to collective bodies, with domestic control being reduced to the area of work for which the farmer is

responsible. We, therefore, have differentiated forms of coordination, of a peasant nature for the different areas of work, and of a more standardized “cooperative” nature along the lines of the entrepreneurial model for the farm as a whole.

Lastly, Brazilian corporate agriculture relies on a greater integration in the markets and this is reflected in the types of financial and physical capital that are less controlled by the family, in line with rules that largely escape domestic arbitration. In addition, these farms use hired labour and call upon social capital that relies on sectorial and professional relations that lie largely outside the domestic circle. What most brings these farms close to the peasant model is their relationship with land tenure, but this may rapidly slacken and be recomposed in externalized systems of commercial logic, notably by turning to land hire.

## VI. Conclusion

The representation method proposed here, adapted from the SRL approach, offers some simple and accessible schematizations of types of agriculture, despite their being very different. It thus makes comparisons easier and enables diagnoses, observations and original analyses on a rural household and farm scale.

The effort to characterize and weight the different indicators by type of capital acts as a checklist, by leading one to take into account all the elements making up the capacities and strategies (agricultural or not) of the domestic groups. Qualification of all the types of capital (including differentiation of the capitals within the five major groups isolated), appears of particular interest, not only for characterizing agricultural practices, but also the different pluriactivities and mobilities (notably perceived through the use of human and social capital), that are known to be structuring. In order not to lose the complexity of the processes at work, the method offers the advantage of combining several complementary approaches.

Through a set of weightings, the different representations proposed lead one to take into account the interrelations between the different capital endowments, which often explain the strategies. Together, they make it possible to fine-tune the two-dimensional differential criteria of family agricultures in the vision notably of Lamarche (1991), between the peasant farm and the family farm. The SRL approach adds the notion of capabilities to the principle of the cross-over between dependence on the markets and dependence on the family (cf. above), and integrates the question of economic units and functions (notably production, consumption and residence), commercial and non-commercial dimensions, and can be used to reposition the performance of farms in their institutional environment.

Although it facilitates the differentiation between family forms of agriculture, the representation method does not propose typologies. It does not seek to group the forms of production by major type; it sets out rather from the principle of the existence of an infinity of possible situations. Easily placing types of agriculture within the space of the possibilities helps to avoid the classic failings of typologies: being too rigid and restrictive, or reducing diversity according to a small number of criteria when reality is much more complex.

Lastly, the degree of family withdrawal from the management of the five types of capital involved in agriculture measures the fragmentation of agricultural operations, of responsibilities, and of the distribution of the wealth produced. That withdrawal, which is generalized but partial, leaves room for new forms of coordination and new players, which cannot be understood without going beyond the strict framework of the farm and of agricultural production. It is a decisive element for understanding and accompanying the changes in family agricultures.

However, this very largely exploratory model will have to be fine-tuned, which presupposes taking up some real research challenges. Among those challenges, assessment of the different types of capital, especially human capital and social capital, appear central.

The “how to evaluate” raises questions. How can human capital be assessed depending on the types of abilities acquired or used, depending on their origin (empirical knowledge or more formalized knowledge) (Carpenter et al., 2004)? How can it be measured and, thereafter, how can it be compared to the other types of capital and how can extremely different national or local situations be compared, other than by listening to those involved? Clarifications and arbitration will be necessary, which will call for some major selection work and undoubtedly some experiments.

Changes of scale also remain a problem. For example, the proposed method primarily accounts for the social capital attached to the individual and his or her domestic group, by measuring what the latter draws, for himself or herself, from collective action; all in all, it says little about the degree of individual commitment in the supply chains and territories, and is not very explicit about these more global levels of analysis. It would be important also to look at the capital attached to a given productive sector or a territory of membership, highlighting more the interrelations existing between the different levels of social capital construction and expression. This comment is valid for all the capital measurements.

Lastly, using this representation method to investigate structural changes also presupposes defining time steps and limits, in order to distinguish between what relates to structure and what relates simply to cyclical mechanisms. What is at stake here is the correction of a recurrent criticism made of the SRL approach, or in any case, its uses: its static nature (Farrington, 1999).

Thus begins a chapter of work that sets out to make this representation method more robust and even more integrative, by multiplying the case studies and going into them in greater depth. Such an initiative follows on naturally from the empirical work described here, with a view to adapting “our ways of seeing” family agriculture in order to monitor its dynamics.

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