

EPISTEMOLOGICAL BASES FOR A DECISION MAKING MODEL IN RURAL HOUSEHOLDS

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Abstract

This paper presents the epistemological references for a decision making model for rural households within an old/original institutional approach (Veblen, 1898). The paper draws from a previously presented *decision making model*, called EPLAV (Malevolti, 1998a), for family farms in a rural context, based on complex and dynamic relationships among “*Events, Perception, Learning, Adaptation, Valuation*”, and also among members of family, between family and environment and, finally, family and observer.

With reference to the *research tradition* by Laudan (1977), the Author, who belongs to a certain *research context*, examines different types of empirical, conceptual and methodological problems in socio-economic research. General institutional axiomatics (Ramstad, 1995), managerial axiomatics (Ansoff, 1979), expertise approach and cognitive styles, heuristics of judgement, team decisional mental models (Rumiati and Bonini, 1996), are the main references necessary to study, describe and understand the real decision making process concerning family farms, households or firms. To represent the complex system of collected family statements, data and information the Author refers to the *systemographic approach* (Le Moigne, 1977) and draws a very synthesised representation of the model.

The main aim of this research is to get to know family farm behaviour (*historical, descriptive*), as well as suggesting some strategic improvements to family farms (*normative*); a second goal is to contribute to define a “theory of firm specificity” (Zan, 1985) based on the idea that every firm is a specific case or, in other words, that every firm has its own specific axiomatics. The reference is represented by the same general (*interpretative*) EPLAV model. Finally, the EPLAV model’s validity is examined at different levels: farm, firm, groups of farms and associations, territory and policy.

Key words: Axiomatics, complexity, institutionalism, systems

Introduction

During the 52nd EAAE seminar held in Parma, we proposed a group of institutionally based tools to analyse farmers’ entrepreneurship, strategies and training needs and to suggest operative strategic instruments (Malevolti, 1998a). Now, in accordance with this IFSA workshop objective, we wish to show the profundity of the epistemological basis of our approach.

First we’ll make a short explanation of a previously presented decision making model, then we will discuss the epistemological basis of the approach, thirdly we will describe the nature of the different problems to solve in socio-economic research and, specifically, in our research application and, finally, we will draw some conclusions.

1. The family farm decision making model (EPLAV)

The family farm decision making model we presented is, in our opinion, suitable to represent the real process of the choices in time and to provide strategic suggestions to family farms, intended as households. This model is named EPLAV, i.e. “Event-Perception-Learning-Adaptation-Valuation”, as every element follows the previous one. Starting from the notion that enterprises interact with their environment and related events, we proved that it is possible to distinguish an observable cognitive process which is stimulated by perception of events and learning, and is subsequently converted into some form of adaptation. The results of which, in turn, can be measured through estimate and calculation tools. Actually, the linear appearance of this model, with a definite beginning and end, is only apparent; we should imagine a model which goes beyond this reductive approach. Concisely, we can claim that each word contains the others and each concept is deeply related with the others in representing a system of relationships which is also the language system. More precisely:

Event, means any totally or partially unexpected occurrence, punctual and continuous, internal or external to the farm which appears as a disarrangement of customary routine.

It must be noted that an “event” can be a process, a fact of in-house learning or adaptation in progress, whose influence depends on individual perception (ranging from scarcely to highly dramatic). The event can be constituted even by the perception itself.

Interviews articulated into individual questions are “events” in themselves which enter in a dialectic relationship with interviewees; this relationship can determine or determines the following system of questions and speech (this is the first aspect of the *non-neutral* relation between observer and observed people).

Perception of an event, means one’s personal opinion (in our case this is expressed under request of the interviewer) about the importance, weight and consequences of a past occurrence or of a question currently at issue. The past perception of an occurrence is likely to be different from the one which is actually remembered. Perception is in itself an immediate phenomenon of learning (I perceive, therefore I learn).

Learning, means either immediate or progressive gathering of information (quantitative and in particular qualitative), experience and general knowledge. When experienced, an event becomes a learning process, and expertise includes psychic interjection, that is to say mostly selective perception.

Adaptation, means the field of choice in conditions which are already modified or are perceived as modified, either among alternative choices or future opportunities. This could seem to be the core of the decision making, and also the more pertinent point with standard economics; actually, it is only a synthesis of learning, perceptions and valuations. In particular, adaptation is progressive learning and therefore is also an event.

Valuation, means the analysis of the results of the choices. Once again, this seems to be a privileged focus for traditional economics application. Valuation, however, is also: a special kind of learning, an event and the perception of what has already become event, and it is the basis for adaptation.

Consequently, in consideration of the ambiguity of language and concepts, the decision making appears to be the fruit of a unitary mental process that can be divided up only with great difficulty and for the sake of convenience. Besides this, there is one further difficulty; indeed, if the process itself is closed in the mind of each individual, as personal knowledge (Polanyi,1958), it is also true that the individual has relationships with other decision-makers and that the same way of relating to others and to environmental stimuli is part of the social system. Therefore, we would like to emphasise that a thorough analysis should take into account that the same events concern different structural levels or different units such as different family members, as well as co-operatives, producer associations, professional organisations, local administration with whom the agricultural entrepreneurs share common

interests. The understanding of the cultural environment is a determining factor in the attempt to explain the single decision making process.

Therefore, we claim that it is possible to work on the pseudo-linear representation of the model starting from the occurrence of the event. However, we must consider that every concrete analysis will include a large series of interconnected relationships. Another characteristic of the model to consider is its historical nature; in fact this represents the enterprise's current state resulting from a series of decisions taken in time as well as its behaviour concerning decisional problems.

The analysis that follows such a theoretical approach highlights the real determinants of decision making against the common background of entrepreneurial behaviour (of which our model is an interpretative framework). Inasmuch as each entrepreneurial unit has a singular nature, decision making evades strictly determined rules and takes on the singular significance of *creativity*. Because of the complex, uncertain and dynamic nature of phenomena, many events show *casual* characteristics; even though they are compelled by *causal* relations (cause and effect), actually they are not predictable. Events are pure opportunities that can be either seized or refused through an individual choice, which is always a creative act. Evidently, the choice is never arbitrary, also because the opportunities are frequently promoted or actively sought for through information. This implies a strong degree of uncertainty and randomness and yet choices conform to definite decision making, namely to entrepreneurial logic, which is always consistent with a few basic individual principles - real axiomatics of each enterprise. It must be added that the result of this analysis is the composite outcome of an interaction amongst individuals constituting the enterprise (i.e., the family members). In the employed systemologic elaboration, the total amount of assertions is not given by a mere addition of individual statements but consists of a coherent system of critical evaluations and shared beliefs.

For detailed results, one can refer to the above mentioned paper and the Italian original reports about a first testing of the model (Malevolti, 1997, 1998b) and about a second analysis where a group of different social researchers (an anthropologist, a family sociologist, a social psychologist and, of course, an agricultural economist) tried to study decision making and family farm behaviour, also in relation to the local rural environment (Malevolti et Alii, 1999). However, here we are briefly showing a sort of practical, operative guide to the method:

i) First stage: the inquiry (information and data collecting through questionnaires, following the EPLAV model as rough copy)

- Family and farm history
- Family members' considerations about the socio-economic scenario
- Previous main structural choices (in our specific case: new olive tree planting, vegetable garden localisation, artichoke planting etc.)
- Farm trading aspects (possibilities: in bulk for wholesale, food manufacturing factory, dairy centre, co-operative; retailing through direct channel and, in our first case, via wooden *shack* as point of direct sales)
- Marketing tools (as price fixing, label definition, establishing consumers confidence etc.)
- Shared beliefs and moral values of the family
- Farm organisation, work and family roles
- Farm and family estate; budget and control.

ii) Second stage: information and data organising (following the EPLAV model)

- All information and data collected through the inquiry is put into a corresponding chart
- Every sentence, statement, point of view claimed by different members of the family about the above topics (first stage) is organised in a complex system of synthesised phrases, enclosed in boxes, connected by arrows in logical multiple relationships. In other words,

dialectic speech during the inquiry is transformed in elementary phrases (*de-construction*) which are logically connected by arrows (*re-construction*).

iii) Remarks about the above stages

During the direct observation (inquiry) one can understand the complex world of deep and hidden relations among family members, while the use of mere economic tools will only lead to a superficial understanding. We can claim that a “strange” or specific system of discussions and compromises occurring among them determines choices, investments, rules, strategies, performances in farm business and household life. We’ll show some aspects in paragraph 2.3. Actually, with a second research, we tried to investigate the social and psychological relations among family members, but the results have not been presented yet. Another aspect is the relation between family (members) and observer; the problem is how the researcher influences the path of interviews with his or her background and personal and scientific goals or is influenced by the family, by some member of the family or by the singular situation (we said earlier that questions asked by the interviewer are the first aspect of the *non-neutral* relation between observer and observed people). The position of the observer/analyst is much more complicated in the stage of information organisation, but the problem of “neutrality” is overcome in the sense that analysts or scientists, together with their tools, can’t be neutral, as it is in *hard science* (*uncertainty principle* by Heisenberg, 1958). We can partially overcome the problem showing the research results to the interviewed family members and discussing them together.

iv) Third stage: analytical derived tools

A certain number of derived tools can be drawn from the more complicate EPLAV charts. Briefly:

a) Synthesised farm history and strategic orientation. Static point of view. The analyst individuates the main sentences and the relations among them and defines a specific present-day “strategic management style”, as a result of past choices (e.g., marketing oriented, business oriented, product oriented, market oriented).

b) Farming development path and growth process. Dynamic point of view; this is determined by putting on the Cartesian axes the time/years and “activities’ development”, i.e. the main “facts” in farming life (e.g., land buying, new tractor, wine crisis, a family member leaving the farm, greenhouse investment, tourism business opportunities, label on wine bottles, direct sale channel, training courses etc.). The analyst can also think to project in the near future the “curve” of activities’ development as a sort of evidence (one or two alternatives). Different courses or “farming growth models” can be defined by the analyst (e.g., farm size increase due to land purchase, search for new business areas, full exploitation of agricultural policy opportunities, growth through development of knowledge etc.).

c) Matrix of strategic management style and farm growth model. The previous definition can be joined in a matrix to improve the definition of the studied farm cases.

v) Fourth stage: “farming strategic field”. At the end of our analytical procedure we can define a sort of “farming strategic field” (“field of social forces” of the “global social space” by Bourdieu, 1994). We identified four elements in this field:

a) Farm main objective. Every farm/household has a peculiar problem at a given moment of its life (full family members employment, satisfying revenue achievement, business enlargement, overcoming of a crisis etc.) that can cover a cluster of secondary objectives.

b) Shared believes and moral values. These are the bases to understand the farm and business “philosophy”. We can also say to have found and highlighted the singular “*family axiomatics*”.

c) Pursued implicit strategies. The analyst tries to make the hidden idea of farming strategy emerge. In some case entrepreneurs define their own explicit strategy, but the analyst has to compare both.

d) *Suggested strategy*. Analyst suggests a consistent list of actions or activities on the basis of the previous elements and the complete view of EPLAV charts.

vi) *Fifth stage: comparison between research results, as analytical suggestions, and the interviewees*. Share the results of the research with the interviewed family and eventually modify the results on the basis of the discussion.

vii) *Another stage: extension service*. In the case of a study including a large number of farms/households in a rural area with the purpose of extension service application, one can build a matrix of different typologies of farms/households (see point iv.c) crossed with a long list of strategic suggestion items. A final “recipe” for each typology will be drawn choosing a certain number of appropriate items. Approaches and tools from family and groups’ sociology, groups’ psychology, and cultural and economic anthropology have to be used to better investigate the system of local relationships.

Finally, as a conclusion of the operative method presentation, *we underline that the comparison between the observer and family or family groups also constitutes a “proof” of the validity of the EPLAV model to describe and interpret a socio-economic system (household, village or rural area) and also to provide normative strategic suggestions*. If the fieldwork has been accurately done and the interpretation by the observer/analyst is sufficiently correct, interviewees recognise themselves as in a mirror.

2. An institutional approach

2.1. Theoretical references

The farming systems (farms, households and their social environment) can be looked at as a web of human relationships producing flows of goods, services, information, knowledge, behaviour and culture during time. The same elements and flows create or modify people’s relationships. Institutional economics, as “old” (Veblen, 1898 and following scholars) or better as “original institutional economics” (so called by Stanfield, 1999) opposite “new institutional economics” (Williamson, 1986), seems a suitable approach to cope with this dynamic complexity (Hodgson, 1988), in a double sense. Firstly (*in negative*), world’s elements and relations can’t be reduced to a small number of variables and to only one decisional agent (reductionism and methodological individualism). Secondly (*in positive*), explanations have to be expressed in a more articulated and detailed way, also considering the weight and importance of certain elements in relation to the analysed situation, the historical time, the perceived socio-economic processes (relativism, historicism and systemic approach). Certainly, at this point some difficulties arise. The role of the observer (the analyst, researcher, social scientist, but also policy maker and farmer) becomes essential, and non-neutral as in standard economics, in the definition of the inquiry field and the singling out problems and problem solving. We want to remark that the inquiry field deals with problem solving, determined thanks to the definition of the inquiry field or of the boundaries of the research. Ways and methods used by the observers are conceived in relation to their cultural or/and economic interests; understanding scientific results means understanding researchers’ background.

The observer role, the problem definition and the problem solving are linked with two theories: “the new discourse about the method” (Le Moigne, 1977) and “the theory of scientific growth” (Laudan, 1977).

The new scientific method is based on four precepts (opposite to Cartesian precepts): pertinence, globalism, teleology, aggregation (against evidence, deconstruction, causality, exhaustiveness). *Pertinence* means the object is defined by the implicit and explicit intention of the researcher; *globalism* means the object is embedded in and referred to a greater whole; *teleology* means the object has an aim perceived by the researcher on the basis of its

behaviour; *aggregation* means the object is built thanks to a recipe of selected and believed pertinent elements or facts. Certainly, in this approach, the observer assumes a central importance, egocentric and almost arbitrary, but that can be read as creative (Feyerabend, 1975) or as the development of personal knowledge (Polanyi, 1958). In our opinion, this freedom is conditioned by the cultural area or the society to which the researcher belongs. The individual is a social entity, but is not completely determined; in other words, the cultural area of belonging has led the authors to define this relative dependence as a *scientific paradigm* (Khun, 1962), or as a *research program* (Lakatos, 1970), or as a *research tradition* (Laudan, 1977).

The second theoretical reference is based on Laudan's approach in relation to scientific progress; in his opinion, it's not a problem of rationality or irrationality of science, as in post-Popperian debate, but it is a problem of the capability of solving problems. These problems are classified as empirical and conceptual; the former almost always contain the latter.

2.2. *Empirical, conceptual and methodological problems*

The specific empirical problem to solve arises not from some direct farmer requirement, but at the end of a long personal research experience in entrepreneurship, strategic and marketing behaviour analysis realised on behalf of farmers and co-operative organisations. In other words, the problem is matured in a particular *research context* (Laudan, 1977). The problem consists in improving decisional skills and procedures in family farms with a large base of relatives. A related problem is the definition of this kind of family farm; we want to remark that this definition represents at the same moment both a previous knowledge and a result of research: actually, the researcher is embedded in the social environment and "knows" it. However, this family farm is not only a residual multinuclear traditional family, but is characterised also by a real modern organisation even though preserving some behaviours and values of the old system. In terms of a strict institutional approach a family farm is an organisation, among the others, with internal functional norms linked to other organisations and external institutions created by the contribution of all organisations together (anthropologic aspect).

The above-mentioned aspect, with a certain correspondence between previous knowledge and analysis result, refers to a debate about inductive and deductive approach. The dispute is sterile because, on the basis of a dialectic and rhetorical criterion, our ideas and hypotheses arise from our different ways of having a relationship with the environment, through introspection (deduction) and experience (induction) and neither have heuristic power without the continuous interrelation with each other.

A second aim of our research, that also represents a conceptual problem, is contributing to establish a "theory of firm specificity" (Zan, 1985) based on the idea that every firm is a particular case. The problem is whether a sort of general schema, enabling us to analyse every singular firm and family farm behaviour, exists. We think that the EPLAV model, briefly presented above, is the right answer which is supported by the present discussion.

In scientific demonstrations and in business, it is important to identify and show the fundamental beliefs leading the researchers and business people's behaviour, in other words their *axiomatics*. One can refer to Ansoff's managerial axiomatics (Ansoff, 1979) based on five principles drawn from other authors -Withehead, Machiavelli, Thompson, Emery-Trist and Chandler: individual internal influence on organisations, power within organisations, dynamics of organisations, environmental influence, success of organisations. For a more general institutional approach (or scientists' axiomatics) "a valid economic theory must be: realistic, empiricist, holist, cultural, non-mechanistic, coercive, evolutionary" (Ramstad, 1995). We can try to define our own axiomatics: on the side of the research method, a good representation arises from a profound relationship and discourse between the researcher and

the business people (farmers, managers, entrepreneurs etc.) and also from a large and selected reading (everyone has his/her own reading path) and introspection (everyone has his/her own introspective path); on the side of business people's behaviour, "ability to be at the right place at the right moment with a right offer" (we know this is less than a slogan); on both researchers and business people's sides, the search for detailed axiomatics of the entrepreneurs, as family farms or households. In this case, from the applied EPLAV model we derived, in a first family farm, a group of eleven axioms, the real behavioural and philosophical beliefs system of a particular family farm (actually, a research result, ex-post, and not a previous knowledge, ex-ante, to explain behaviour; this carries out a conceptual problem). Axiomatics are learned in time and can be modified in time, but excessively conformist groups can kill efficiency in favour of internal cohesion.

The last approach is similar, in its relativity, to an *expertise approach* in management science (Rumiati, Bonini, 1996). Authors claim that: experts use "knowledge strategy and not strength strategy"; they use intuition and tacit knowledge; if the problem is very complex they use a more simplified strategy; the greater part of decisions are solutions of badly defined problems which have to be coped with more in terms of evaluations and interpretations than in terms of mere choices among given alternatives (from that, different *cognitive styles*); in other words they use a procedure based on "heuristics of judgement". In case of decisional groups, the problem solving can be based on "decisional mental models" (referred to the *mental model theory* by Johnson-Laird, 1983), an organisational knowledge shared by every member of the team. This last sentence seems to be completely connected to our family farm team behaviour. In any case, linear decision making as a "definition-diagnosis-alternatives production-alternatives evaluation-choice" problem is elegant but unreal, good for young managers without experience and expertise.

2.3. Problems and methodological aspects in the application of the EPLAV model

One should be able to pass from the above theoretical elements to an inquiry and interview tool; this is an operative and methodological problem. Simon (1962) distinguishes: analysis at the desk (i.e., pure deductive activity), different kinds of mail or direct interview with questionnaires, deep interview, decision making observation, experimental laboratory, computer simulation. Our method is based on non-structured questionnaires, a scheme of general questions about the main issues of the farm and the family; of course, the internal logic of the group of questions is defined by the observer. Questions and issues, as seen above in the method guide (p.1), are about family history, competitive and policy scenario, main choices in farm life (really not distinguished from the family life choices and rather joined to them), trading stage, values and beliefs, relations with the local environment, accounting. Once put on the general issue, details arise from the open discussion driven by the observer and thus the research path proceeds by itself. In the first research experience, for instance, we went to the selected farm 13 times during a 4 month period (in a general sense, this analysis needs many visits to the farms) and interviewed simultaneously all 6 adult members of the family working on the farm, or more frequently almost all, and sometime the single ones. During the interview there were a continuous dialectics and exchange among family members and between them and the observer that allowed, picking up data and information, to build the inquiry result. We can claim that the method is a mix of profound interview, decision making observation, historical decision making reconstruction.

There are two aspects to examine appropriately (empirical and conceptual problems). Interviewing is not an abstract work, pure, clear and easy, is not a "point on the paper". Questions and answers are not numbers, but correspond to explanations and are perceived differently by interviewees and interviewer. The act of interviewing involves difficulties in interacting with others, in meeting a complete group at every session (this hardly ever

happens, because of some hidden mood between family members), in overcoming tiredness at the end of a working day (the moment of interview), in maintaining interviewees' attention and interest after the first meetings.

The second aspect is that data, information and knowledge collecting is a complex outcome derived from individual statements in the group, individual statements matured and expressed collectively, statements of groups, which are almost always different, and individual statements wanted by the researcher to verify some personal point of view. Finally, the result of the inquiry is not the homogeneous representation of a group, but a special composition of many personal models for which the whole is different from a mere addition of single parts, or statements. The role of the observer-analyst is to synthesise this whole and compare his or her analysis result with the interviewees.

The above operative data collecting is a historical method, involving a reconstruction based on family memory (*organisational memory*, in the sense of Nonaka and Takeuchi, 1995). This method, across dynamic perceptive mechanisms of the individuals in interaction among themselves, relates nowadays about the group's past experience. In this process, the perceptive system plays a role of selecting events, evaluating results, learning, self-imagining, creating a myth about ones own presumed success path, or in other words a personal re-elaboration of the past also through the interaction with other members of the group. This is the "*real image*" that, at the moment of the inquiry, the researcher with his or her perception and judgement finds and represents.

The family is not only important for remembering facts, but also family aims, behaviour, values, choices, that are related to and influence farm life. Or better, the stages of "family life cycle" over time influence farming choices in different ways. The problem is whether a separation between them is possible or suitable; our research results seem to demonstrate a profound connection that can't be destroyed without destroying this family farming system. Here is a real example: family members would prefer to close down the cowshed because of the excessive burden of the breeding labour, but the cash needed to cover daily children's needs (perceived as an element of weakness) stimulates them to have a continuous flow of money thanks to weekly milk sales (in other words, in this case price is not determinant, the revenue flow is).

A family farm is a coherent unit of analysis (complex because it is an organisation), but is also open to the rest of the world; or, is not a closed system. This happens for two different reasons: first, because this unit is linked to markets, different associations and policy and in general to some degree of environmental turbulence (Ansoff, 1979). Second, because the family lives in a certain rural context and the farm is within a certain environment or, better, the family farm is an element of a larger anthropological system. Once again, there would be a problem in the definition of the borders of the research. But our research results show the deep linkage with local farming systems and the need to refer to them to explain choices, behaviour, values, perception, spread of technology and all other aspects of socio-economic life. Thus, it's not a conceptual problem concerning a boundary definition, but it is a problem of enlarging the analytical approach in a multidisciplinary sense.

Finally, the collected data and information tell us about the strategic approach of a certain family farm over time; in other words, the observer tries to explain the profound meaning of choices on the basis of historically rebuilt facts and statements and relations among them. One can also say the observer tries to highlight choice logic, hidden axiomatics, decision making procedures, farm development path and creativity of family team. The role of the observer in this reconstruction is central, in the epistemological and operative sense, but not arbitrary because based on his or her own background (deriving from a Laudanian research tradition) and on a final check about the "*real image*" with the same interviewed family after a first data and information elaboration.

But there is a great problem in the concrete representation of this complex family farm life model. In fact, a pair of Cartesian axis can show us a simple phenomenon. Likely, a quantitative mathematical model can explain part of this reality, but not the system of dynamic qualitative relationships and creative activity. We can adopt as a reference the *systemographic approach* (Le Moigne, 1977) regarded as the most complete communication medium of human thought; actually, perception passes in large part through sight. The other medium of communication is the metaphor. In our schemas and tables one can find statements expressed as metaphors. A large part of the statements are short phrases contained in boxes joined by arrows to build or rebuild the logical meaning of a wider dialectic dialogue among family members and the observer. We can reduce these complex schemas to a general simpler one (Fig.1).

Fig.1: A simplified EPLAV model

	<i>E P L A V</i>	
<i>TIME</i>	STATEMENTS SENTENCES into BOXES linked by ARROWS	FAMILY MEMBERS IN INTERACTION
<i>OBSERVER</i>		

The last problem is related to the predictive capability of the model. In standard economics a model must have some level of prediction, otherwise...the model doesn't belong to economics. From the point of view of the complexity, we can find agents' values, wishes, desires, will, goals, working approaches, coping with the human and economic difficulties, opportunities and bonds of real life. General socio-economic environment evolves pushed by the same agents, but the dynamic final result (final in the sense of a certain result at some certain moment of history) is not predictable because of the complexity of entwined relationships, ideologies, policies, powers, technological and organisational change etc. For each study case, the observer can show where it is more likely that the observed agent (family farm) is going to go and also give suggestions consistent with the analysed and discovered agent's axiomatics. But the final result of the agent's willingness and the researcher's suggestions cannot really be foreseen.

3. Some final conclusions

The last problem is how the model applied to a first group of family farms is representative of singular specificity and/or has a general validity. Another related aspect concerns the disciplines to use for different levels of analysis.

At a *specific level*, the model explains an individual history (history of the analysed unit) with its members' characteristics, relations among relatives, ways of life, procedures, decision making or cognitive style and, finally, relationships with the social environment. A firm specificity theory needs a combined approach through economics, sociology of family and social psychology.

At a *higher level* (concerning family farm groups, but also including territory and policy), every decisional unit draws general and technical information, learning, culture, behavioural ways from the referential local and global socio-economic environment, and brings towards it its own little contribution of learning, behaviour, culture, life style and so on. The model, in

the sense of claimed statements, contains a large number of references to other decision making units (family farms, co-operatives, associations, parties etc.) and norms (laws, common habits etc.). Sociology, anthropology, law, old institutional economics and farming system are all disciplines involved.

At an *even higher level*, there is the holistic, systemic and non-linear relation among the EPLAV elements. Actually, we think the model could be applied to every type of farm, firm and organisation to join in a more complex way the level of analysis. That's the real last methodological problem.

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