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Knowledge Use by Extension Advisers in the Context of Farmer Organisations in Trás-os-Montes and Alto-Douro, Portugal. A New Conceptual Analysis Framework

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Abstract

The main objective of this paper is to contribute to the discussion, in theoretical terms, on the use of the knowledge, during both the social and the technical encounters between extension advisers and farmers. This reflection result from a research project (interviews and ethnographical observation) about extension advisers of farmer's organizations (FO). In nowadays, in Trás-os-Montes and Alto-Douro (TMAD), we can find around 150 FO and 300 FO extension advisers. In Portugal, actually, such organizations assume the main part of the technical support to farmers, and private organizations and State services play a minor role.

These extension advisers perform a variety of tasks of different categories or types, including: supervision of activities; technical advice (office and field work levels); project planning and monitoring; training; reception and analysis of farm subsidies' applications; administrative work; replacing the Directors in some duties; management of on-going projects; strategy definition; social activities with member farmers. In most cases, the work comprises a mix of tasks involving all of the above categories. The eight (or more) hours of daily work are mostly taken by technical tasks (69% of the time), followed by administrative (15%) and management ones (12%). The social animation activities (1% of the time) are underestimated, as the interviewed people consider that they tend to be combined with other tasks and, in this sense, difficult to measure. Some elements also classify them as "technical", once they require the use of specific abstract knowledge.

In our perspective, the daily interaction between extension advisers and farmers leads to the production and sharing of knowledge. This knowledge emerges from the re-definition of the scientific knowledge acquired during the agricultural education and training, as well as trough practice (in the technical-strategic sense). It is shaped by the contribution of the contextual sense, both relational and prudential, and from the interpretative sense. In this paper we will explain more accurately the process of mobilization and transformation of knowledge by extension advisers, in order to make it more useful to farmers.

Introduction - Knowledge as a social relation

Reviewing the literature we cannot find a universal and consensual definition of knowledge. Sallis and Jones (2002) and Sun (2002) suggest the distinction among explicit and implicit knowledge. Explicit knowledge arises also under the designation of declarative (Anderson, 1983, *cited by* Sun, 2002), conceptual processing (Smolensky, 1998, *cited by* Sun, 2002) and analytic thought (Dreyfus and Dreyfus, 1987, *cited by* Sun 2002). It corresponds, in general terms, to the concept of abstract knowledge (Caria, 2002b: 806), or knowledge-information (Caria, 2003a), defined as: "written discourses that emerged from scientific/ideological, scientific/technique and philosophical/ideological studies, in which we can recognise a formal organization: universality, a thematic specialization or problematic, internal coherence, systematic, and validity of the proposed arguments, both written and discursive".

The concept of implicit knowledge arises also under the designation of procedural (Anderson, 1983, *cited by* Sun, 2002), sub-conceptual processing (Smolensky, 1998, *cited by* Sun, 2002) and intuitive thought (Dreyfus and Dreyfus, 1987, *cited by* Sun 2002), informal or tacit knowledge (Sallis and Jones, 2002). In this paper we adopt the implicit knowledge designation, including: the common sense about the general phenomena of nature and of society; the "indigenous" or "local" knowledge, inherent to the professional practices; and the organizational knowledge (routines, status, roles, norms values, power relations, and so on).

Given the insufficient nature of these definitions, we accept the suggestion of Charlot (2000: 61) that, following the thoughts of Monteil (1985), Dubet (1994) and Schlanger (1978), as an alternative to the classification of knowledge according to its intrinsic qualities (implicit, explicit, scientific, empiric), suggests that knowledge depends upon the particular relationships (social relationships) that the subjects (users, persons) establish with knowledge: "(...) the idea of knowledge implies the idea of subject, of subject activity, of the relationship of the subject with him/herself and with others (who co-produce, control, validate and share the knowledge)". This position is supported by Shön (1983: 49), who suggests that our knowledge, ordinarily, is tacit, implicit, is in our practices.

Caria (2000, 2002b, 2003a), studying the professional group of teachers, developed a theoretical framework about the use of abstract knowledge, formulating a typology of styles of knowledge use, that emerged in function of the combination of the so called interpretative sense, technical-strategic sense and contextual sense.

This author defines the interpretative sense as the one "that is expressed by verbal explicit discourses, capable to interpret and/or explain problem-situations, starting from internal regularities (statistical, structural or systemic), and that confers legitimacy to the activities of a professional group, qualifying and distinguishing the group from the verbal discourse of non professionals" (Caria, 2003a: 12). He also defines technical-strategic sense as "the expression of the professional actions that permit to identify alternative ways by reference to values and, therefore, particular competencies, for manipulating objects, technologies and processes".

Concerning the contextual sense, the author does not propose a definition, but, based in the studies by Goody (1987; 1988) and Iturra (1990a: 1990) on the coexistences of the cultural and the rational-positive mind, admits the re-contextualization of abstract knowledge in the cultural mind. In the case of teachers, this author verified that the re-contextualization transforms the logic of theories into the logic of action, using barely what is important under the scope of the interpretative and technical-strategic sense. He also highlights that the "reflexivity in action" and the "reflexivity of the action" do not generate the "reflexivity about the action", as remain centred in the organization that makes sense to the local context and the social interaction (contextual sense of the use of knowledge). Finally, he suggests that the interpretative sense is related to the knowledge-qualification concept (both refer to the verbal discourse that makes social legitimization explicit), and the technical-strategic sense is related to knowledge-competency (both refer to the "intellectual abilities to put abstract ideas into action", as presented by Caria, 2003a: 13).

Use of knowledge in the work context

Based in the work of Caria and in the results of our own research with FO extension advisers, we propose a possible representation of the use of the knowledge in the work context (Figure 1). The scheme consists of two related cycles: the cycle of knowledge transformation (abstract and implicit) and the cycle of articulation between senses of use of knowledge. The arrows in both directions suggest the feedback of the respective senses and the circular shape suggests the dynamics of this process.

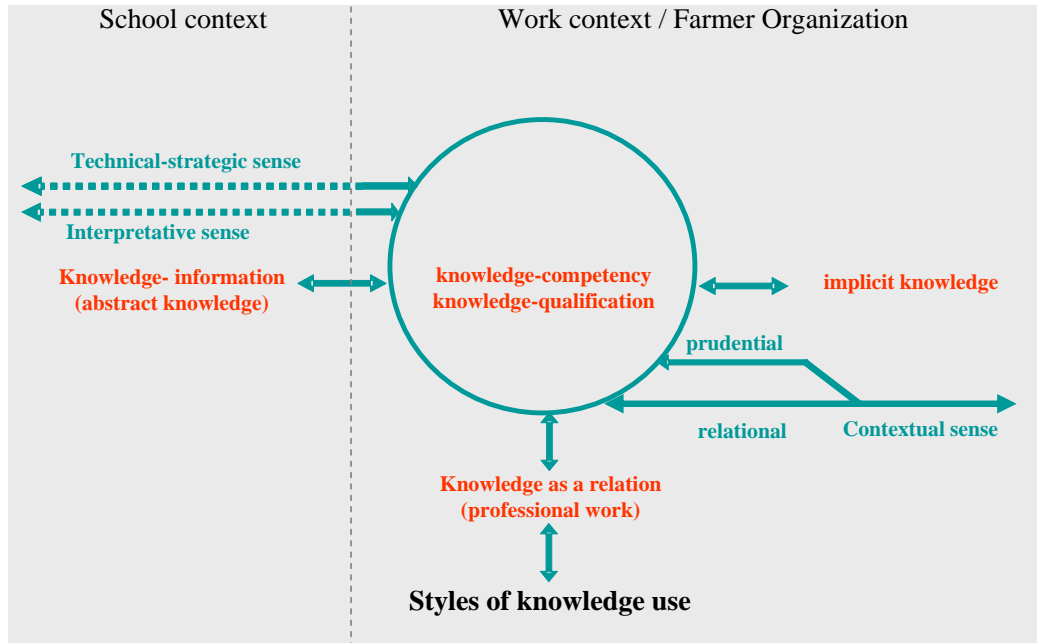


Figure 1 –Use of knowledge in the work context

In relation to the technical-strategic and the interpretative sense, we agree with the vision of Caria (2003a: 12-13). Nevertheless, comparing with the professional group studied by this author (teachers), we verified that, at end of high school, FO extension advisers already have some technical-strategic and interpretative senses, perhaps due to the proximity (familiar and geographical) of the majority to agriculture and rural life. Both senses are recognised, for example, in the critical spirit and attitude of some students that, at times, "contested" some knowledge-information pedagogic contents, based on their experience as farmers or as farmers' sons or daughters.

The limited manifestation of the interpretative sense, observed in the practice of these extension advisers, is due to the fact that such sense is not usually used, at least in explicit terms, in the interaction of extension advisers with the individual and institutional FO actors. However, on the contrary, it arises naturally in reflexive interactions with the researcher, in formal professional training or teaching situations, and both in formal or informal encounters with other extension advisers.

The interpretative-sense is well visible in the ways these extension advisers interpret and rationalize the main daily professional problem-situations, such as: the heterogeneity and the fragility of the majority of the farmers (clients) in technical, intellectual and socioeconomic terms; the great inequality in terms of know-how and qualifications among their clients, that leads to a trust-faith relationship with the technician (the responsibilities of the extension advisers go beyond the technical decisions and extend to socioeconomic and family issues); too much technical and organizational autonomy, result of the physical and/or leadership absence of FO

directors and the low level of participation of farmers in FO activities; an unstable political-institutional context, with constant changes that undermine the technical-productive sustainability of agrarian productions and the co-related financial sustainability of FO. As a result of these problem-situations, the technical staffs of FO re-conceptualize several idealized concepts (scholastic form), such as:

- (1) The companionship among extension advisers, an idea that organizes the work relationships within the FO, which corresponds to a friendly and symbiotic relationship with the colleagues, and to a commitment with the organization and its goals;
- (2) The friendship with farmers, built over an unequal power relationship, that results from the enormous differences concerning the use of abstract knowledge between extension advisers and farmers; this relationship is not instituted as a deontological code, but it is part of the daily relationships (more in the personal matters, less in the bureaucratic ones) with the people; as we said, the trust-faith relation describes better this kind of relationship;
- (3) The technical intervention, conceptualized like a balance between technical, socio-economics and humane issues, in which the value of the results (the product) is not higher than the value of the learning processes that this action involves;
- (4) The policy and the bureaucracy, conceived like a end in itself, like an obstacle between the policies and the practical achievements in the field; the main preoccupation is to save farmers from any bureaucracy related penalizations (for forgetfulness, mistake, or deliberated action) and to assure that they get the most out of subsidies and other monetary support measures. The re-conceptualization of the policies and bureaucracy is done under pression and not, as desirable, according to a deliberate and sustainable development strategy.

In relation to the contextual sense, it consists of the degree of conscientiousness and the consideration of the different information elements that constitute the real situations of professional action (or interaction). The contextual sense of knowledge can be differentiated in the contextual-relational sense and the contextual-prudential sense.

The contextual-relational sense derives from the technical and intellectual work of the FO extension advisers, which is based in the deep interaction between the extension advisers and the FO actors, both individual (farmers, above all) and institutional, at which the knowledge and the relativity of the rationalities are essential to the effectiveness of work. Hence, by one hand, this sense has something of technical, because the academic and professional training of the technician helps to improve the communicability and to understand different cultures. On the other hand, it has something of strategic, because extension advisers are sensible to farmers' attitude change in crucial issues of the FO activities as, for example, active social participation and the adoption of technical-productive innovations. That is, the desired trust-share relations emerge from a trust-faith relation.

The contextual-prudential sense emerges from the consideration of the fact that farmers have different technical-productive, socioeconomics, cultural and emotional characteristics, which require the incorporation of the cultural and affective rationalities (knowledge-competence) in the technical decision-making process. It emanates from the well accurate understanding of the context and from the rationality of the technical action sustained in a trust-faith relation. Aims, on one hand, to ensure that farmers do not incur in mistakes that can result in economics and legal damages (to miss deadlines, to provide wrong data, etc), and, on the other hand, through a step by step movement, to make them understand the political-institutional and market context that frame their activities, rights and duties. The farmer is seen as a total human being with all dimensions and no merely as a technical-economic agent. In substantial terms, the contextual sense emanates from the implicit knowledge, that is, from the indigenous agricultural and organizational knowledge.

Finally, the knowledge as a relation (a social relationship), or the concrete professional skills of the FO extension advisers, expresses a practical sense of the action, routines and rituals. It derives from the re-definition, and consequently the evolution, of the technical-strategic sense acquired by practice (professional experience) and it is shaped by the contribution of the contextual sense, both relational and prudential, and the interpretative sense. This last one may be placed during, before or after the action.

The peculiar way each FO extension adviser combine the different senses of knowledge use determines the so-called “styles of knowledge use”. Having as reference the typology proposed by Caria (2003a: 13), among the FO extension advisers we can find three distinct styles.

The “technical” or “technical-instrumental” style, which is very often observed among FO extension advisers initiating a professional activity. Comparing with the teachers, for instance, the FO extension advisers already possess the three senses of knowledge use described before, although in an incipient form, what can be explained by their proximity to agriculture and the rural environment? The “identitary” or “critical-expertise” style, which reveals a deep understanding and mastering of the main professional activities, and a good use and articulation of the senses of knowledge utilization. And, finally, the “critical-pragmatic” style, that corresponds to the intermediate cases. Some individuals adopt this style after experiencing the “identitary” one, by loss of contextual sense, due to the typification of the problem-situations which emerged as a consequence of some personal and professional disappointments, such as the low salaries or the lack of competitiveness of the FO.

We observed that the FO technician reached the identitary style very fast (more or less after two years of experience). That can be explained, at least partly, because the majority have a life trajectory close to agriculture and the rural setting, and, partly because, given the absence of FO directors, they are required to learn very fast the *modus operandi* and the *modus vivendi* of the FO, and of the associative and cooperative movements in general.

We also verified that some technicians remained within the “critical-pragmatic” knowledge style, considering it adequate to manage with pragmatism the priorities of the FO, that is, the legal-bureaucratic support and, to a minor extent, the technical support aspects which don't require a change attitude. When the FO, or the technician, feels the need to promote changes in attitudes and behaviours concerning the technical-productive and the associative/cooperative dimensions, or when their action involve socioeconomic and human issues (contextual-prudential sense), extension advisers need to adopt the “identitary” style.

The use of knowledge by FO extension advisers as an essential element of the agricultural knowledge and information system in TMAD

This analysis framework of knowledge use given to implicit knowledge the same importance given to abstract knowledge, as it takes into account the essential principles of extension approaches that value indigenous knowledge and farmers total human beings, principles that many times are forgotten in practice. The re-contextualization of abstract and implicit knowledge takes place in the interaction between the extension agents and the other FO actors (especially farmers). The interaction is a moment of production and sharing of knowledge that benefits from some of the internal qualities of abstract knowledge and other internal qualities of implicit knowledge. However, its main quality is to be helpful to face the circumstances of the interaction context. In this interaction, the participants establish with each other a relation “to know”.

The re-contextualization of abstract and implicit knowledge ensures: the transformation of disciplinary into interdisciplinary knowledge; the advisability of rationalities and values (intervention senses); the acquisition and use of appropriate symbols and language; the representation of different social roles beyond the technical intervention.

The re-contextualization is motivated, among other reasons, by the abyssal distance between the real world of the farmers and the political-institutional and technical-scientific world in which

the policies are defined. The intermediation between these two worlds, that facilitates the gradual adaptation of farmers to the political-institutional, technical-scientific, and/or market contexts, to a large extent, is partly overcome by FO extension advisers; these agents, following Giddens' perspective (2000), constitute access points to the abstract systems.

Last but not least, this re-contextualization result in specific professional skills that have a cognitive, technical and affective expression, which reveal a critical sense about the use of knowledge, that facilitates the emancipation of the FO actors, farmers in particular. Considering the typology of extension approaches presented by Cristóvão (1994), we can place this system close to the Farming Systems Research & Development perspective, being farmer-centred, interdisciplinary, socially responsible and focused on the local level.

In more specific terms, the knowledge and information which flow among the different system actors belong to one of three main distinct natures or types, above mentioned: the legal-bureaucratic; the technical or production related; and the social. The first two types of knowledge and information, legal-bureaucratic and production related, are the result of the complex framework which today regulates agriculture in the EU countries: production norms, farm support systems, environmental and sanitary requirements, fiscal regulations, different support measures to stimulate the modernisation of production systems and develop farmers' qualifications, etc.

The legal and other requirements are so heavy that, in many cases, absorb most time and resources available and very little is left to perform the technical and production related tasks. This is obviously a problem to overcome in one of the following ways: simplifying the legal-bureaucratic requirements; improving farmers' capacities to deal with bureaucracy, most likely to happen as their levels of education and professional training tend to increase; or adding more human resources, particularly in the administrative divisions, so that the technical agents could dedicate more time to extension functions.

The social type of knowledge and information is related to the broad scope of farmers' needs, which goes well beyond the legal and technical aspects. Many times the adviser is seen as a friend and that level of complicity favours the involvement in other dimensions of the family and/or community life, like providing personal counselling, sharing the responsibility of a difficult decision, listening to expectations and fears, showing solidarity in a bad moment, or participating in parties and festivities. In such situations, people tend to trust the extension advisers more than the institutions they represent. Knowledge is used to build interpersonal relationships and mutual trust, and to help solve personal and community problems. The factors critical of success of this system are (Cristóvão and Pereira, 2002): (1) the relationships of proximity between extension agents and farmers, along with the identification of these with the particularities of the context and the people: proximity and identification make the agents more aware of the need to be flexible, namely when it comes to combine different types and pieces of knowledge, and to attend to problems beyond the strict technical arena; (2) the financial support channelled to FO through different ways, direct or indirect, such as: support to the creation of associations and cooperatives, including the acquisition of human and material resources; support to the improvement of agricultural production (subventions, for instance); funding to develop professional training initiatives; funding to modernise farms and improve their sustainability; and (3) the contribution of the two public higher education institutions functioning in the region, a University and a Polytechnic Institute, both with strong expertise in agricultural and rural development related sciences. These institutions provide initial training, guarantee opportunities for continuing education, develop research, and disseminate information. Most FOA were trained in these two institutions and maintain with their instructors and researchers a more or less permanent contact, mostly in an informal basis.

The region of TMAD, according to this analysis, has a "system" of knowledge and information production and exchange more effective than ever had. This "system" supports farmers in various ways: helps them to deal with the legal-bureaucratic requirements; provides information and facilitates their participation in knowledge construction processes (related, for instance, to

product quality and marketing issues); and helps them to evolve as individuals and to be active community members.

In this case, however, the flow of knowledge and information is not promoted by a variety of system actors, being principally facilitated by the FO extension advisors, who stimulate the demand and supply of knowledge and information. Their daily work, close to the field, helps them to overcome some system weaknesses, like the weakness of the global institutional context in areas like research, market organisation and credit supply. In fact, given the obvious lack of shared objectives and common strategy between the different actors, it would be more appropriate to use, instead of the system concept, the one of "configuration" proposed by Elias (cited by Corcuff, 2001).

Today, public services have strong technical capacity, legal-institutional legitimacy, and power to supervise, control, and evaluate. On the other hand, co-operatives and associations are in the field, closer to farmers and communities, have considerable technical capacity, but are financially very dependent and subject to the control of public institutions, facts which make them less autonomous. In this sense, the transformation of the present configuration into a system demands, among other things, the construction of horizontal partnerships and the promotion of synergistic action between co-operatives/associations and public services.

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