

## NEGOTIATING IDENTITIES AND MEANINGS IN THE TRANSMISSION OF KNOWLEDGE: ANALYSIS OF INTERACTIONS IN THE CONTEXT OF A KNOWLEDGE EXCHANGE NETWORK

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### Introduction

At the crossroads of cognitive and social psychology, research trends on learning are now developing that are characterized by their interest in the social dimension of cognition. Inspired by the psychology of Jean Piaget, and exploring the perspectives of Russian psychologists such as Lev Vygotsky (1978) and his followers as well as the advocates of symbolic interactionism, notably George Herbert Mead (1934), this trend suggests a definition of the learning process and of development which emphasizes the role of interactions and of symbolic systems as these exist in specific cultural and social contexts.

Following the questioning of the perspective according to which cognitive processes were conceived as residing inside the individual, research inspired by socio-cultural and/or socio-cognitive approaches have paid attention to the ways in which thinking and cognitive development relate to social processes. However, initially contextual factors were de facto considered only as moderators. Today, some studies pave the way for another step by highlighting the intimate link between features of context and the acquisition of knowledge. Thus, context does not appear to be a moderating factor only, but rather a constituent of thought itself. This approach has lead us to take into consideration the notions of representation and meaning. Indeed, the subject, considered as agent of his/her own development, interprets the different constituents of the context in which he/she is, and assigns them particular meanings. From this perspective, cognitive objects are constituted in the here and now of a specific context, and they should not be considered as individual faculties that can be identified independently of

the situation in which they emerge. Consequently, the subjects' actions must be related to the context of the activities to be performed, the purpose of the activity and the broader social context of these activities (Cole & Scribner, 1974; Donaldson, 1978; Hundeide, 1985; Light & Perret-Clermont, 1989; Rogoff, 1990; Lave, 1991; Resnick, Levine & Teasley, 1991; Säljö, 1991; Wertsch, 1991; Schubauer-Leoni & Grossen, 1993).

The interdependence and the reciprocal co-constitution of context and cognitive activities, although they are the subject of a lot of research in the social psychology of learning, are difficult to conceptualize. The very definition of context (what does it consist of? what are its boundaries?) as well as the relationship between indexicality (in the ethnomethodological sense) of the interaction and cultural meanings are notably subject to debate. Some authors emphasize the continual re-creation of the social system in and through communication during the interactions : activity is its own context. Others consider that meaning, while being defined and negotiated in the interactions, is historically constituted between persons engaged in socioculturally constructed activity. Lave summarizes this perspective by arguing that "any particular action is socially constituted, given meaning by its location in systems of activity" (Lave, 1993, p.18; see also Säljö & Wyndhamn, 1993).

Pursuing this line of research (Grossen, 1988; Perret-Clermont & Nicolet, 1988; Schubauer-Leoni et al. 1989; Iannaccone & Perret-Clermont, 1990; Grossen, Liengme Bessire & Perret-Clermont, 1997), the analyses presented in this chapter will shed light on some aspects of these issues. They follow an interactionist perspective, which presents the agents as constructing the meaning of the situation while they interact, taking into account the role played in this construction by the societally and historically generated system to which the agents refer. Our observations of situations of transmission of knowledge are made in what is called a Knowledge Exchange Network (cf. below), and the activities within such networks will give us the opportunity to explore the interdependencies between cognitive and social transactions in the construction of meaning.

### Issues

Knowledge Exchange Networks, which now exist in several European countries, give people, irrespective of age, sex, profession, socioeconomic origin, etc, the opportunity to meet in order to - as it were - give and receive various sorts of knowledge. In French, a knowledge exchange network is referred to as a "réseau d'échanges de savoirs", and in order to keep the connotations of this expression, signalling a network and a meeting

place in which knowledge is communicated, we will use the expression knowledge exchange network (abbreviated as KEN). The originality of this system, aside from its ambition of democratizing and putting to advantage any kind of knowledge, lies in the particular idea of reciprocity on which it is based. Indeed, to be part of a network, every participant is asked to be prepared both to give and to receive knowledge, and thus to be both teacher and learner .

Beyond the ideological debate, this type of social innovation seems to be a favourable field for psychologists of learning. As it exists in parallel with the official institutions of formal schooling, it permits us, by means of somewhat of a detour, to take a fresh look at the school system as an institutional arrangement for the transmission of knowledge.

This research project has been carried out in the Strasbourg network . However, in this chapter, we will not compare the two models for knowledge transmission - school and KENs - as such. Starting from data collected in the field in Strasbourg, we will rather analyse how the KEN and its ideology are interpreted and put into action, as it were, by its members. We will see that the context is both structuring and constructed, and that the result (as in the case of school) is not always in line with the initial ideological inputs.

The Strasbourg KEN will be described at two different levels: first at the general level of the organisation of the exchanges of knowledge and skill, then at the level of the interactions.

1) We will first examine to what extent the context of the network contributes to structuring and producing one particular type of exchanges for the transmission of knowledge. The exchanges are set in a specific context, and they are linked to a specific ideology. Which part does this symbolic context (involving reciprocity and the sharing of knowledge between experts and novices) play in the organisation of the exchanges? In this perspective we will observe what kinds of knowledge become objects of exchange and how the basic principle of reciprocity is sometimes understood in a very particular way.

2) We will then focus on the analysis of some salient forms of social interaction taking place in the network. We will explore the way in which the micro-context of the interaction is constructed by the participants in accordance with their representations of the broader social context(s). In this respect, the analysis will concentrate on three questions:

a) First of all, we will investigate the representations which different agents have of a situation of exchange of knowledge in the network. Does the situation have the same meaning for all participants? Which representations of the network are involved in the organisation of the didactic relationship?

b) Some studies in psychology have shown that in problem solving interactions or knowledge transmission interactions, the agents (teachers, pupils, experimenters, subjects, etc.) are constantly positioning themselves in relation to the others, according to a set of explicit or implicit rules, legitimized by the institutions (such as school) to which they belong (Donaldson, 1978; Flahaut, 1978; Schubauer-Leoni, 1988; Rommetveit, 1992; Valsiner, 1992). This leads us to take a closer look at the way in which the members of a network give each other positions (the term used by the social psychologists Flahault (1978) and Kerbrat-Orrechioni (1988) in their analyses of how participants in interaction create positions for each other is places [in French]) as the interaction proceeds, and how the roles of what is called provider and recipient as defined in the network are interpreted and negotiated during the interaction. In other words, how do the individuals refer to the network institution and how do they position themselves in relation to the other participants?

c) Finally, we will study the status of what we will refer to as the object of knowledge, and the way in which it is itself subject to negotiation. The manner in which the object of knowledge is treated in an interaction depends not only on the agents' representations as regards the network context, but also on the identity issues at stake in the very situation.

Dealing with these questions in our analysis, we will see that the context of the network, far from being a mere container, is itself subject to interpretations and is constructed through the interactions between the agents.

### Methods of data collection

In order to understand what was going on in these situations of transmission of knowledge we intended to study, it was important to grasp the general functioning, the starting point, and the aims of the organisation of the Strasbourg KEN itself as well. A participant observation approach made it possible for the researcher to take part in the events that characterize this institution and to be initiated into the habits that make up the everyday experiences of the members (Garfinkel, 1967).

The fieldwork took four months (in the spring and summer of 1994). This time was devoted to observation and more or less active participation in the following activities: in weekly meetings of the organizing members, in six exchanges as receiver, and in the setting up of knowledge exchanges as an organizer. In general, only the presence of the tape recorder indicated the special status of the researcher, who had introduced herself as such at the beginning of the meeting (Muller, 1994).

The Strasbourg KEN as a structuring as well as a constructed context

General background

The networks

The KENs were set up for the first time in France in the eighties (Claire and Marc Heber-Suffrin are considered the founders of this movement, see Heber-Suffrin, 1992), and they are now developing rapidly also outside France. Their origin is to be found in a number of ideas and circumstances both in the socio-economic domain (acknowledgement of the rise of unemployment and problems of social exclusion as well as of the essential role played by qualifications in social integration) and in the pedagogical domain (acknowledgement of a certain inability of the official pedagogical structures to cope with the new social demands). The original organization of this type of transmission of knowledge is also of interest in terms of what has been referred to as the vulgarization of science. Some scholars see these networks as possible opportunities to pass on scientific knowledge more or less directly from the expert to the citizen rather than passing via intermediaries that might distort or vulgarize the results or the scientific modes of reasoning and, in fact, increase the social distance between scholars and lay audiences (Jurdant, 1992). The concrete manner in which science and its results are made available to broader audiences is ambiguous. Ideologically it is often claimed that popularization of scientific results provides lay audiences with an opportunity to share knowledge normally only available to a limited group of specialized professionals. But empirical studies show that this is often not the outcome of such attempts. For instance, only those who are already well educated appear to be interested in - and seem to understand - this kind of knowledge. In spite of the attempts to build bridges between professionals and other groups, such information that imply vulgarization of science increases the social distance.

The Strasbourg network

Generalities. The Strasbourg KEN was founded in 1992. In 1994, when our field work was carried out, it had about 130 members from the Strasbourg area. The members of this KEN are drawn from different socio-professional backgrounds (it seems, however, that most of them can be considered as middle to upper-middle class). A team of seven or eight people runs the network (manning the office once a week, setting up the exchanges and leading their first session, etc.). The list of the kinds of knowledge offered and requested includes some three hundred topics. Some examples that illustrate the diversity of the knowledge offered would be the following: learning how to stage a theatre play outdoors; knowledge of Strasbourg and its surroundings; esperanto; job-seeking techniques; how to set up your own business; tango; how to repair a bike; knowledge of mushrooms; etc).

Basic principles. The principles of operation used in the running of the Strasbourg KEN are similar to those applied in other KENs: the exchanges are based on reciprocity (each teacher is invited also to be a learner, and, in turn, each learner is invited to offer his/her knowledge in some area of expertise); the exchanges are free of charge; the different sorts of knowledge offered have equal value (computer science is 'worth' the same as Mauritian cooking); the relationship between the members is one of equality (there is no hierarchy in the network); the value of the person is reasserted through his/her knowledge.

While most networks develop in disadvantaged areas of big cities with the aim of recreating social cohesion and solidarity ties, the organizers of the Strasbourg network claim a special characteristic, namely that a priority of this network is to make it possible for the participants to teach and learn scientific forms of knowledge. However, the idea of integration, held dear by Claire and Marc Heber-Suffrin, is still present in the Strasbourg network. Indeed, a pamphlet presenting the network reads: "The network is an exceptional instrument of social development providing warmth, friendliness and solidarity, and promoting new contacts."

In the Strasbourg KEN, this emphasis on the transmission of knowledge (that is to say on technical and scientific education, as opposed, in the eyes of the informants, an emphasis on the creation of a more general warm and friendly atmosphere) is related to the risks of so-called scientific vulgarization that have been raised by the present president of the network. The development of the Strasbourg KEN has therefore been motivated by ideas both of a social nature (to re-create social relationships between people) and of an educational nature (to make scientific knowledge generally accessible), as well as by a desire to act and achieve concrete results in the area of knowledge reproduction.

As we have just seen, the Strasbourg network is driven by a particular philosophy or ideology. However, the question must be raised of the awareness of these principles among the participants: how are they informed about them and how are they initiated into them? The network, through its organizing team, publishes documents handed out to the people interested, the media, the local authorities. There is also the network journal, which lists the sorts of knowledge available at the moment, provides information on the exchanges taking place and on the activities offered by the network. From these documents, as well as during the office hours, the participants can come into contact with the organizers' representations of the aims of the network and how it should function. As far as the exchanges are concerned, it must be noted, however, that great freedom is given to the members, who, after a first session in the presence of a coordinator, are left alone to agree on the content of the exchange, its duration and location. No teacher training course is planned for those acting as providers, nor, it must be added, for the coordinators. The network can therefore be seen as a framework, where outside definitions as to the purpose of the activities are not strongly imposed. How do the members interpret this context, and which meanings do they assign to it? Are the ideological values of the organizing team put into practice by the participants? Two examples below will present the problematic relation between the organizers' representations and the members' concrete activities.

Scientific exchanges. One of the special characteristics of the Strasbourg KEN, according to the staff, lies in its aim to provide an opportunity for scientists and members of the general public to meet. In this respect, some people involved in the field of scientific research have been contacted and have registered as members. In what way does this scientific spirit, as it were, appear in the network?

Among the three hundred types of knowledge offered, only eight seem explicitly to have to do with a scientific domain: telephony; low voltage electricity; biology; energy and environment; electronic microscopy; archeology; the study of stars; entomology; principles of radio emission and reception. Moreover, it seems that these types of knowledge have been chosen in a very limited number of cases only. In general, the exchanges which have actually taken place were devoted to English, German, computing, simple and friendly cooking, Mauritian cooking, rose and tree pruning, transactional analysis, the conduction of press conference, jogging, car mechanics, origami, etc.

This observation is puzzling. Whereas exchanges between scientists and members of the general public usually occur through the medium of texts and images (via journals and

newspapers, TV, films and so on), the network ensures a genuine interaction in the sense of exchanges between individuals. Moreover, following the principle of reciprocity, the scientist does not appear only as the one who knows, s/he can also be in the position of the receiver. In return, the receiver of scientific knowledge, hence, is continuously confirmed that s/he knows things that his/her partner does not know and that s/he will also be able to teach these things. Why, then, do scientific exchanges not take place?

In this regard, the notion of social representation associated with different types of knowledge (see also the notion of valorisation developed by de Abreu, 1995, and in this volume) can help us to understand this phenomenon. Indeed, different phenomena that make up a society are subject to social representations (Moscovici, 1961), which are linked (although in a complex manner) to attitudes and behaviours. A rich number of social representations (partially associated with social class membership) are associated with scientific knowledge (Bourdieu, 1976; Jacobi, 1987; Jurdant, 1973, 1993). For example, for some people, scientific knowledge is associated with images of complexity, mystery, taboo, eccentricity, scientists locking themselves away in an ivory tower, seriousness, etc. Social representations attached to scientific knowledge (which should be studied in detail) make this knowledge symbolically inaccessible to some people. These representations cannot be changed just by the fact that this knowledge is actually accessible. We can therefore put forward the hypothesis that the participants' pre-existing social representations present some resistance to the plans of the network organizers.

This interpretation also leads us to raise the question of the functions that this social system can fulfil: what are the expectations of those who register in a KEN? Do they want to be confronted with expert, highly specialized, knowledge? On the contrary, it seems that they primarily wish to acquire skills (English, computing, cooking). One may also seriously consider the central role of friendliness and atmosphere in this type of organisation: members seem to look for an opportunity to meet other people and discuss in a relaxed atmosphere, rather than facing too much unknown, which might be too threatening for their own identity.

Reciprocity. Another aspect is worth examining, namely that it seems that some members specialize in one role, that of provider or that of receiver. They thus reject the idea of reciprocity, although it is a foundation of the network. For some specialized providers we have met, the explicit or implicit purpose was either to prepare to become a teacher by experiencing a similar situation, or to be back in the teacher's role, which had been their profession. These specializations outline the identity dimension of the

didactic interaction: what does it mean, in terms of social identity, to transmit knowledge and to be in the position of the one who knows? What does it mean, on the other hand, to receive knowledge and to be in the position of the one who does not know? Above all, what does it mean to be in these two positions successively? This kind of observation can also question the purposes of the KEN: what is the offer (in terms of identity) of the KEN when it expects from its members to occupy either of these positions? By means of a detailed analysis of some interactions, we will attempt to understand the identity issues involved in such didactic relationships.

The Strasbourg network is driven by a particular ideology essentially consisting of the notions of reciprocity (each member is provider and receiver, in a system excluding hierarchical relationships) and of scientific popularization. Yet, as we have argued, the agents reinterpret the framework offered by the network and recreate it in accordance with their own objectives.

### Analysis of interactions

To what extent are these processes of interpretation perceptible in the interactions themselves and not only in the accounts given by the participants when reflecting on what they are doing? How, and according to what kinds of representations, do the individuals structure the situation? Which role does the context offered by the network have in these interpretations?

The verbal protocols of a few interactions which have taken place in the Strasbourg network will serve as a basis for analysis. We will use a narrative style to report the different processes observed. The general question which will lead the analysis is the following: how do the individuals interpret the situation in which the network has made it possible for them to meet? We will examine three topics in particular:

- how do the agents see the situation and its objectives?
- how do the agents see their role, and how do they negotiate their position?
- what place is given to the object of knowledge?

### The representation of the situation and its objectives

In the network, which representations do the different agents have of the situation of knowledge exchange? What objectives do they pursue? Let us look at an example, albeit a rather extreme one, from the field notes.

## The German exchange

Having made my choice from the file listing the knowledge offered and looked for, I [N.M] played the role of coordinator for the German exchange. I got in touch with the receiver who said she was still interested. As to the provider, he introduces himself as a retired German teacher, enthusiast and available to give courses. A first meeting is then arranged.

Mr S. seats us in the living-room, and says that 'for the first contact we will be here, but then for working, we will be in the next room'. Things are clear from the start: we are not here to have tea and biscuits! The conversation starts. Mr S. introduces himself (in German): he used to be a professor in the Hautes Ecoles, and he is very enthusiastic about his former profession. Although he has retired, he keeps in touch with the news and still gives courses. Marie, the receiver, has attended a tourism school, and needs to be able to speak German for her profession. Though she started studying it at an early age, she needs practice. Mr S. confirms: 'Übung macht den Meister!'.

Mr S. talks about his past profession. He insists on the fact that the students in the Hautes Ecoles were chosen among the best: 'die Krema der Krema'. His pedagogical method is based on repetition. Then, as a first exercise, he suggests his new student reads texts aloud several times: 'it permits one to remember German sentences and enables the language to take its proper place in the palate'. After checking Marie's knowledge of the abbreviations for some main German organisations (SPD, CDU, etc), he asks her what she is interested in. She speaks about places of interest in Strasbourg.

Time goes by and at some point he asks Marie: 'OK, do you want to come back?'. To her affirmative answer he replies: 'Next time it will get serious!'. For the next session, he suggests she might do an oral exercise he used to give his students as homework.

In the car, Marie looks a bit apprehensive. She says: 'It is quite serious! That's good, it will force me to work'. But she answers very evasively when I [N.M.] ask her if it was what she expected.

This particular session seems to be a caricature of the goals and ambitions of a KEN. No effort is made by the provider to adapt in the slightest way to his student's expectations. Nor does he attempt to get out of the school frame of reference he used to work in. The objectives of the partners involved seem incompatible: for one of them, it is to be back in the teacher's role, to remember a prestigious position (teaching "die Krema der Krema" in the "Hautes Ecoles"), insisting on the role of grammar, repetition, knowledge of the political and economic history of Germany, and so on. For the other partner, on the contrary, the purpose seems to be to acquire the communicational competence (language practice) that is necessary for her job in tourism in Strasbourg. The objectives of the exchange have been proposed by the provider and the receiver has not attempted to modify them. In this exchange, it is quite certain that the provider has not at any point changed his point of view by imagining himself to be in the position of the receiver. He therefore seems to see the network solely as an opportunity to play a role he likes. Obviously he is also at risk (this might not have been the case in the Hautes Ecoles) of loosing his student - and as a consequence - the role he enjoys. The seeker, on her side, is engaged in a process of renegotiating her expectations. Is she starting to believe that the reality of learning is neccessary serious and formal as at school and that the KEN ideology is a dream? Unfortunately she did not answer my question. But her silence was certainly telling.

Let us turn to another example. Here the topic is writing.

#### The writing exchange

It was in a totally different atmosphere that the writing exchange took place. This exchange seems particularly interesting in the sense that the negotiation about the framework was put into words. The participants' expectations were listened to; the provider's suggestions were worked out from the expectations expressed.

During the first meeting, the provider (Ophélia) introduces herself: she has to write a lot in her job, but this kind of writing is of no interest to her. It is creative writing she is enthusiastic about. The receiver (Dalia) does write, but mainly in English. She would like to 'work on her French writing', and to learn 'how to structure a story, how you do, the way to go about it, because I'd like to get going; yes, how to structure, how to elaborate.' Ophélia asks her whether she thinks of this work on an individual or collective basis. She quotes examples of surrealist games to illustrate what she means by collective writing. As to her, she has no particular wish, she enjoys writing alone, 'but to write means to be in relation with other people anyway'.

Ophélia suggests that Dalia writes texts alone. But the fact that somebody, ‘somebody who knows’, is waiting to read them would be stimulating. The proposal is accepted, but ‘in order to get going’, says Ophélia, they should meet one day for two hours, so that ‘they spend some time together’, and do some imagination games. ‘Even if it goes in all directions, it’s got to spring up; you refocus only at a later stage’.

As far as the participants’ objectives are concerned, it can be noted that Dalia’s expectation is based on a wish to “learn how to write”, to do “exercises”, to have her pieces of writing “corrected” by Ophélia. This representation of writing is in contradiction with that of Ophélia, who speaks more in terms of “game”, “imagination”, “enjoyment” in writing. But finally, provider and receiver reach an agreement. Not an agreement for the sake of politeness, but an agreement in which the contradictions seem to be transcended in a superior conception (Trognon & Rétornaz, 1989). In this exchange, the network’s principles seem to be referred to more than in the German exchange, and they are used as mediations for the activities undertaken.

The frameworks actually created by the participants in the two exchanges are not the same. This difference can be analysed in terms of closeness to the ideological core of the network, and in terms of initiation to its principles. Indeed, the participants in the writing exchange are regularly in touch with the network’s organizing team, whereas Mr S. has had only one opportunity to meet the network. That meeting took place when he registered. While in the German exchange it seems that the model of reference was the school setting, in the case of the writing exchange the participants tried to create a new model of interaction, based on the statements and negotiations about the expectations. This model is close to the ideals of the network organizers.

### Representations of roles and negotiation of positions

In the two examples above, we have seen that through the social representations operating in the situation, it is the interpretation of particular roles and identities which is also negotiated. The analyses which follow show some of the ways in which these identities are worked out during the interaction, and the importance of what is at stake.

Research in the social psychology of learning has shown that an interactive situation set up to observe cognitive activity involves social agents whose aim is not only to fulfil the task, but also to respond to the complex social situation, that is to say to understand

the experimenter's expectations and the nature of the problem, to know how to interpret their role as the interaction goes along, to handle their identity images and those of their partners (Perret-Clermont & Schubauer-Leoni, 1981; Perret-Clermont et al., 1983; Schubauer-Leoni et al., 1989; Säljö & Bergqvist, in press; Hundeide, 1992; Elbers, 1994; Grossen et al., 1997). How do they then interpret these roles in an exchange within a KEN? Let us now observe the interaction in the course of which the positions of the agents are defined and worked out around the roles provided by the network (Flahaut, 1978; Kerbrat-Orecchioni, 1988).

By means of extracts from audio-recordings of another session, the cooking exchange, we will examine how the roles of provider and receiver are jointly constructed and worked out in the course of the exchange.

#### Extract 1

P. OK, so we're going to start, so we said shortcrust pastry.  
S1. Yeah. Have you got your own way of making it?  
P. Well, shortcrust pastry, usually I make it by guesswork; otherwise, in general, it's 50 grammes of flour, 75 grammes of butter, I took out a recipe, there.  
S1. You'd told me that you made it with oil ...

It is with these words that the so-called simple and friendly cooking exchange starts. Three women are present:

P: the provider, who is about sixty, lives on her on now, but whose past life has been that of a married woman with several children;  
S1: a woman, somewhat younger, but also married and a mother;  
S2: the researcher, who looks younger, is single and has no children .

S1 and S2 both have already done a cooking exchange with P through the network, but separately. S1 and S2 did not know each other before this first day of the new exchange. The recipes had been chosen in a meeting between P and S2. S1, who was interested in this exchange, had been informed and joined it. The exchange is held at P's flat, around 10 a.m.

During the whole activity, a consistent differentiation can be observed between the provider on the one hand, and the receivers on the other hand as to the communicative roles assumed by each of the agents (in terms of who asks questions, gives explanations,

assesses, organizes the activities), as well as to the rules of turn-taking. Indeed, as a general rule, the provider suggests explanations and structures the time devoted to the activity. When the receivers speak, on the other hand, it is often to ask for an explanation, an assessment, or a piece of information. So, the following type of exchanges can be frequently observed.

### Extract 2

S1. What will the biscuits be backed in? Will this dish do?  
P. No! Biscuits are baked on a baking tray.

### Extract 3

S2. What's a gougère?  
P. Well, basically, it's a choux pastry with cheese ...

From the way turn-taking is handled, it is possible to observe the setting up of the roles between the agents. In this exchange, the receivers indeed seem to play the role of learners. Thus, they address the person who they think 'knows' — using linguistic signs which show that 'they don't know', and so they put the provider into her role of 'teacher'. In this manner they produce a school-like context. It therefore seems that:

- 1) the official roles (marked by the terminology used in the network) of provider and receiver are respected;
- 2) these roles are not only respected by the participants, but also jointly constructed by them; each one, from her position, contributes to defining the other's position.

### The place assigned to the object of knowledge and its definition

Our analysis reveals that providers and receivers spend a certain amount of energy in order to assign, define and negotiate everyone's position in the activity. It thus seems justified to raise the question of the place assigned to the object of knowledge itself in this interactive play. This question is of interest to us as psychologists of learning insofar as the following hypothesis can be put forward: when an agreement is reached between the participants to consider that the aim of the interaction is to transmit

knowledge, the individuals can test the relation to reality of the concepts they use. It is thus important to allow some conversational space for the constitution of the object of knowledge, and not just negotiate one's own positions (Nicolet & Perret-Clermont, 1988).

In the first extract from the cooking exchange quoted above, P and S negotiate the definition of the knowledge which is to be the content of the exchange. Already in her first utterance, S1 interrupts P to ask her about her "own way of making shortcrust" pastry. As a response to P's refusal reveal her personal way of cooking ("Well, shortcrust pastry, usually I make it by guesswork (...) I took out a recipe, there"), S1 insists: "You'd told me that you made it with oil." This exchange goes on for a few turns in this manner until S1 finally accepts the definition of the task presented by P: we witness a confrontation between and an adjustment of the representations of what is the very object of the exchange. While S1 expresses an expectation, that of learning the expert's know-how, P, on her part, expresses a different definition: what the exchange is about is not a personal kind of knowledge (which, besides, is difficult to transmit, insofar as it is not quantifiable — "I make it by guesswork") but rather an official and rigorous kind of knowledge, that of the recipe.

Through this confrontation between two points of view in the course of an exchange in the KEN, is it not also a representation of the network itself that is revealed? It indeed looks as if the receiver imagined the network as a place where intimate and personal knowledge could be transmitted, that is to say precisely the kind of knowledge which cannot be found in recipe books. For the provider, on the contrary, an exchange in the network might be conceived as consisting in the transmission of rigorous, specialized knowledge.

This exchange draws our attention to two points:

- 1) To find out about the place assigned to knowledge transmitted in this type of interaction, it is necessary, first, to investigate the way in which this knowledge is defined by the agents themselves.
- 2) The interactive processes used in order to define this knowledge are also linked to identity issues. Indeed, it looks as if in this sequence the function of S1's interruption was not only to ask for a piece of information, but also to test, as it were, the participants positions. Through her question, she tests P's capacity to recognize her (S1's) status as novice, but as a novice who requires from P the transmission of a specific kind of knowledge. Analogously, the provider wants to be recognized as a real

cook speaking on the basis of information from recipe books. She does not want to appear as a friend presenting private knowledge.

Therefore, the definition of knowledge itself is linked to identity issues: the way in which it is defined and shared allows the participants to assign non-interchangeable positions to the different agents.

### Discussion

From observations made in a KEN, our purpose has been to examine the relations between didactic interactions and their context. Firstly, we have shown that, at a general level, the objectives of the network, as presented to the public and endorsed by the organizers, do not necessarily correspond to those realized by the members themselves in the activities. The members interpret the framework of the network, and they re-invent it in accordance with their own objectives. Thus, the network does not appear to function as a pre-structured and given order, but rather as an activity constituted through procedures chosen by the agents themselves.

The analysis of the interactions has highlighted the role of meanings and representations as organizing and structuring both the procedure for the interactions and the knowledge involved. More precisely, taking some micro-stories as a basis, three observations have been made:

- 1) The roles, the identities and the status of the knowledge are defined in the course of the interaction starting from representations of the situation. These *de facto* draw on not only the representations of the network and its objectives in general, but also on other relevant and familiar contexts such as the school.
- 2) The roles and positions of the agents in this type of exchanges are co-constructed, and defined in seemingly stable and complementary positions. The positions implied by the terms provider and receiver have been effectively institutionalized by the network and they are used by the members. These terms also relate to social identities assigned to people in other social settings. Moreover, this social play of assignment of roles and responsibilities seems to represent an important part of the exchange.
- 3) The status of the knowledge transmitted is inextricably interlinked with this interactive assignment of roles and negotiation of identities. It therefore appears that there is no such thing, in and by itself, as a piece of knowledge like cooking or writing to be transmitted. Rather, the definition of the knowledge depends on representations

and negotiations between the agents according to their present needs and in reference to the larger official context of recipe books, school, professional activities, and so on.

These observations question the understanding of the relation between what is referred to as context and socio-cognitive processes in the construction of meaning. Let us summarize some results of our analyses.

- Context is perceived by the actors via their representations and is (re-)constructed in the interaction. It is interpreted, and these interpretations are dynamic, evolving and negotiated;
- These representations and interpretations - of the context and of the situation - are not totally created (as *ex nihilo*) in the situation, but are taken from a stock of common knowledge, partially shared in society, as resources to give meaning to the situation in which the members operate;
- The way the actors interpret the situation can have an effect on the construction of the object of knowledge;
- The identity dimensions are highly present in a didactic interaction. In transmission of knowledge, identity issues seem to be crucial.

In learning situations, it appears that both the identities of the agents and the meaning they will assign to the situation are defined not only in the course of the interaction, but also with reference to the representations these elements have of the wider social context in which the network itself is operating. In this case, learning appears to be entirely embedded not only in a particular social context, namely the interaction, but also in a broader context which contributes to its meaning and form.

It seems that the context of the network does not always provide the necessary resources for the agents to lend meaning to the situation. Some studies have shown that young children, who are given problems in the context of mathematics classes, implicitly use pre-definitions of what it means to take part in mathematics classes, which permit them to solve the problem in a specific way. These pre-definitions include the idea that the problems given have a solution, that the elements of the problem give indications as to how to solve it, that it can be solved using mathematic rules learnt at school, etc. (Säljö & Wyndhamn, 1993; Schubauer-Leoni, 1988, 1994). But, in our case, the network is a relatively open framework. The basic principles do not tell the members very much about how to interpret their role, how to treat knowledge, how to interact with their partners, and so on. In this situation, the participants seem to hesitate as to which meanings they should assign to the situation.

In this research we wanted to deepen our understanding of the interdependence between cognition and context. The latter element has not been conceived as a set of external variables affecting the mind but as a reality that is discovered and co-constructed by the actors in the course of their interactions and thinking. Learning appears then as a set of phenomena mediated by representations and interpretations.

The study reported here has paid close attention to didactical interactions within a Knowledge Exchange Network. In particular, the analysis revealed the importance that the teachers and learners give to the negotiation of roles and positions, and this occurs in spite of the fact that the official ideology of the network is supposed to have define these matters. In fact, the ideology and practices of the network - the institutional framework itself -are constantly reinterpreted, negotiated and reconstructed by the actors (as are those of any institution) within the teaching situations.

The observations of these transactions reveal that what is at stake is not only - or sometimes even not primarily - the transmission of an object of knowledge (object which itself gets defined and transformed in the course of the interactions), but also the management of social identities given by the wider society (e.g. "former teacher", "housewife", etc.), of roles in the present situations (e.g. "teacher", "learner", "provider /or receiver in a KEN", etc.), and of positions (e.g. high or law status).

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