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CHAPTER 8

PROBLEMS IN ASSESSMENT OF LEARNING: THE SOCIAL CONSTRUCTION OF QUESTIONS AND ANSWERS IN THE SCHOLASTIC CONTEXT

M.-L. SCHUBAUER-LEONI,* N. BELL,* M. GROSSEN† and A.-N. PERRET-CLERMONT†

*Universities of Geneva & Neuchâtel, Switzerland
†University of Neuchâtel, Switzerland

Abstract

This chapter analyses the actualization of knowledge by the child when questioned by an adult (teacher or researcher, for example). We first examine the situation of questioning between teacher and pupils and then compare this to (1) interactions between an experimenter and a pupil concerning scholastic knowledge in order to analyze the impact of the interaction context and the adult interlocutor and (2) the child's display of competencies in psychological testing interviews to study the articulation of the object of discourse.

Introduction

It has been repeatedly observed that when pupils have to display learning in any assessment task in a scholastic situation, they do so in such a way which reveals a strong dependency on the task, classroom situation and the school context. This observation leads us to the question of whether pupils can really be tested on what they have learned or are they just giving a social response out of scholastic habit? Can assessment really be 'culture-free' and 'school-free'? Is it possible from a psychological point of view to assess subjects' cognitive structures independent of task, context and interpersonal relationship?

The ambition of classical psychology has been to describe general features of mental functioning. Can educationalists learn from these psychologists how to assess learning independent of specific context and interpersonal relationship or is assessment always dependent upon social 'artefacts'?

To investigate these questions, we will first re-examine the situation of questioning between teacher and pupil in which learning is assessed. We will then compare this situation to interactions between an experimenter and pupil concerning scholastic subject matter in order to analyze the impact of the interactional context and the adult

interlocutor. If the child's response is indeed closely linked to the adult's discourse, then it would be necessary to verify that this is not merely a function of the particular nature of object of discourse. To accomplish this, we will consider a particular testing situation believed by Piaget to be 'school-free': operatory tasks.

At this point it is clear that an alternative to classical psychology is needed in order to account for the transmission of knowledge and the display of learning.

Theoretical Perspectives

One of the general aims of research in education is to identify the parameters pertinent to the understanding of the acts of teaching and learning in scholastic situations. However, these acts cannot be considered simply in terms of individual cognition as they involve a multiplicity of complex socio-cognitive process which are potentially determinant of interactants' behavior. The didactic relationship is not just between a learner and an object of knowledge to be learned. This relationship is mediated by another who is supposed to be better acquainted with this knowledge. Likewise, the didactic relationship is not simply a dyadic teacher–pupil interaction as it also mediated by the knowledge taught.

In the scholastic context, pupils are supposed to learn the material established in the institutional program during the school year. This type of constraint often results in a series of didactic measures aimed at the homogenization of the progress of different pupils. In order to guide the progress of the class, the teacher has a repertory of questions aimed at promoting pupils' learning. These same questions are also used to verify if pupils have assimilated the knowledge taught. This often results in a confusion between learning and evaluative situations whereby responses to didactic questions risk being evaluated.

Most of the time, the teacher himself formulates these questions to which pupils must respond. The dialectic between the teacher's questions and pupils' answers takes on a great importance in the learning process to the point where the pupil no longer considers it legitimate to directly question the knowledge to be learned but waits until it is introduced and put into context by the teacher. In the scholastic context, the succession of acts of questioning and response by teachers and pupils (in a diversity of forms) is a vital aspect of didactic situations.

A condition of successful communication (in particular of question/response exchanges) is the shared conceptual referential framework. That is, an 'intersubjectivity' (Rommetveit, 1974) is developed whereby a tacitly assumed communality establishes a shared frame of reference between teacher and pupils. Thus, mutual understanding is attained by the sharing of the same reality, the same implicit assumptions about the episode, context, etc. The intersubjectivity which exists in the classroom contains tacit assumptions about that context which serve to guide and regulate teacher and pupil behavior which, in turn, become normative in the orientation of behavior (Mercer & Edwards, 1981).

Research in sociology of education, pedagogy and in the social psychology of education has observed the existence of these scholastic norms and routines which direct teacher/pupil behavior in didactic interactions. These norms function implicitly most of the time as they are usually constructed in day-to-day classroom interactions. Teacher and pupils elaborate a repertory of mutually acceptable behaviors which evolve into reciprocal expectations. This system of norms and rules has been called the 'didactic contract'

(Brousseau, 1980). Thus, pupils' and teachers' behaviors in a scholastic context will conform to the system of norms and rules linked to specific knowledge implicit in the didactic contract which furnishes practical guidelines for participants' behavior (see also Voigt, this issue). The didactic contract therefore forms the relationship between teacher and pupil concerning a given knowledge.

The didactic relationship is a ternary relationship situated within the institutional framework. Thus, the didactic contract is embedded in this framework which acts as a supraordinate directive. This contract 'obliges' the pupil to work within a given universe of meanings which has been established in the classroom. The repetition of situations and tasks in a given classroom context creates a certain familiarity and habit of manipulation of specific knowledge. To some extent, the didactic contract established in the classroom plays the role of a collective group memory of the meanings shared between participants. The content of this memory is constantly rehearsed by the teacher who institutionalizes the capitalization of shared knowledge thus identifying the competences expected from pupils during the school year.

In a scholastic context, the didactic relationship is essentially asymmetric in the sense that one of the important features of adult–child interactions is the fact that "the (adult), and he alone by virtue of his role, is fully in control of the premises for interpretation and the criteria by which comprehension and intersubjectivity are evaluated" (Rommetveit, 1979, p. 12). This means that, although negotiation is allowed, pupils have little choice other than to eventually accept the teacher's premises of definition and interpretation. According to their interpretation of the terms of the didactic contract, pupils could be lead to take different degrees of liberty with this contract ranging from refusal to honor certain rules (resulting in expulsion from the didactic relationship) to subtle negotiation of their status (for example, bargaining for more time to finish a task, getting 'help' by other pupils or by the teacher, etc.). Pupils' interpretation of the didactic contract will vary as a function of their social and scholastic status within the institutional context (Schubauer-Leoni, 1986a).

Transmission and Display of Learning in the Classroom

Scholastic subject matter takes the practical form of tasks, exercises and activities. Every 'problem' to which the pupil is confronted contains certain 'rules of the game' which determine the manipulation of the given object. Subject matter content cannot be considered 'in abstracto'. Teachers consider concepts to be taught within the context of their teaching (i.e., in relation to specific pupils and curricula). Likewise, pupils interact with knowledge as a series of required tasks and cannot conceive of this knowledge independently of the interpersonal context in which it is transmitted (Schubauer-Leoni, 1986a; Perret-Clermont & Schubauer-Leoni, 1988). The teacher gives certain instructions permitting the pupil to 'do' something in relation to this object and thereby be able to respond to the teacher's questions concerning this object. These instructions will vary according to subject matter and the pupil (or groups of pupils) to whom they are addressed.

Setting up the task becomes a series of conversational exchanges between teacher and pupils. Their questions and answers are initially aimed at situating the activity in the context of classroom activities familiar to pupils. This preliminary work of definition and

framing of the situation (Goffman, 1974) serves to situate any new knowledge in relation to existing knowledge and permits pupils to identify possible teacher expectations.

The ritual of assigning a task or activity to pupils contains certain 'conditions of legitimacy' which seem valid to the majority of the participants in the classroom. According to the didactic contract, the teacher is authorized to ask pupils to enter into the problematic of the task. Within the scholastic context, the adult is invested with an 'authority of function' (De Fornel, 1983) which does not have to be continually negotiated for each interaction.

Once the institutional conditions of legitimacy are fulfilled, the teacher can then proceed with the introduction of knowledge within the context of the class. In the scholastic context, this process is punctuated by the institutional tempo with transitions from one domain of knowledge to another. Pupils thus must pass from one activity to another, from one subject matter to another, and from one teacher to another. There exist conversational markers which serve to signal these transitions and indicate the entry into a different object of knowledge (Sinclair & Coulthard, 1975). For example, teacher remarks such as "have you cleaned up?" or "O.K. now ..." are indirect cues sufficient to change pupils' behavioral orientation.

The following example of classroom dialogue concerns a second grade teacher's presentation of a mathematical problem to his class (Schubauer-Leoni, 1986a).*

> Teacher: The work that you're going to do won't be graded. I think that you're all going to find different ways of answering. There is no one right answer! I want everyone of you to work alone. I'm going to ask you a problem. You have to write it on your paper then answer in writing. I'll then give your paper to another child of the class (who isn't here now) and I will ask him to tell me, to guess what problem I asked you and how you answered. While I explain the problem, don't write anything otherwise you won't understand. Here's the problem: John, Marc and Catherine are playing marbles. They have 23 marbles in all. Marc has 9 marbles. How many marbles does John have and how many marbles does Catherine have?
> Pupil 1: Do we have to write the children's names?
> Teacher: Yes.
> Pupil 2: Do we have to write all that you said?
> Teacher: A child who looks at your paper has to understand the problem that I asked you.
>
> The teacher now writes in a column on the blackboard "John, Marc, Catherine, 9, 23".
>
> He re-explains:
>
> Teacher: So that the other children understand, you have to put the question that I asked you, the answer that you found, an explanation which lets the child who gets your paper to know how you found that answer.

Looking at the questions asked by pupils in response to the teacher's task presentation, we can see that when the context is perceived as legitimate, pupils will have the tendency to simply follow the teacher's instructions without concerning themselves with the aim of the exercise nor what follows. The questions they do ask concern what could be considered as details in the eyes of the teacher (or educational researcher) which allows pupils to decode the teacher's expectations. The pupils' questions obliges the teacher to re-explain the task using the blackboard. This example shows that a teacher can never render a task entirely explicit to pupils (Perret-Clermont & Bell, 1987).

The task comprises three demands: (1) write the 'question' posed (i.e., formulate the

*The extracts of dialogue presented in this article have been translated from French.

problem), (2) answer the question (i.e., resolve the problem), (3) explain one's answer (i.e., justify the resolution). How have pupils answered this triple task which never explicitly refers to mathematical knowledge? No pupil rendered a blank paper thereby indicating that one of the essential terms of the didactic contract is 'respond' to questions asked by the teacher. Simply copying what the teacher had written on the blackboard cannot be considered as resolving the problem but it nevertheless fulfils the conditions of the contract to 'hand in something'. Those pupils who attempted the task organized their response in such a way that it included elements of the three demands. But what is important to note here is that the majority of pupils' responses used conventional arithmetic formulation (e.g., "4 + 9 + 10 = 23") or other mathematical schemas taught at school even though this was not explicitly requested by the teacher. This suggests that pupils did not interpret the teacher's instructions independently of the context in which it is given. They have the tendency to reproduce known cognitive behavior patterns (orthodox problem-solving strategies, etc.) already sanctioned and reinforced (by grades, positive verbal feedback, etc.) by the teacher in previous interactions. The pupil's manipulation of knowledge is linked to the specific context in which it is presented by the teacher.

What happens when the pupil is confronted by an unknown adult in the classroom context whose implicit aim is the understanding of the pupil's functioning when faced with a problem? When a researcher intervenes in a class, his decisions made regarding the task and pupils will necessarily be of a different nature than those habitually made by their teacher. How (and from what cues) will pupils interpret this new situation? In this type of questioning situation, the administration of a task with a content known to pupils will push them to interpret the situation according to the rules of the didactic contract in force in that classroom. In our studies of written formulations of addition problems undertaken in the primary classroom context (with 8–9 year old children), pupils questions by an experimenter within the classroom context have the tendency to refer to mathematical notation learned at school to represent mathematical operations and actions in their problem solving. This suggests that, independently of the adult who presents the task, this type of task content elicits scholastic habits in this context. However, when pupils are given the same task outside the classroom in a one-to-one relationship with the experimenter, their written solutions are more heterogeneous in nature using natural language, illustrative drawings, etc. (Schubauer-Leoni & Perret-Clermont, 1980, 1985; Schubauer-Leoni, 1986a, 1988).

The Display of Competence in One-to-One Interactions

The context in which a competence is solicited plays a role in orienting pupils' decisions of choice of register of responses which they judge to be acceptable and expected by the adult in a particular context. In the specific situation where a pupil is individually confronted by an adult (teacher or experimenter) in a one-to-one interview the construction of his responses will notably depend upon the dynamic of the relationship established in the *hic et nunc* of the interaction.

Let us briefly compare two examples of conversations between a pupil and an adult with differing interpersonal and situation contexts in order to illustrate two different beginnings of dialogue. The pupil–teacher interaction is managed by the didactic contract in force in the classroom. However, the didactic contract cannot be applied as such to an interaction

between an experimenter and a pupil. The didactic contract has a function of regulating teacher–pupil habits and reciprocal expectations concerning specific knowledge and producing orthodox behavior conforming to its implicit rules. In the same way, an 'experimental contract' is established between an experimenter and a subject concerning an experimental object which has the same function in the particular context of the experimental interview (Schubauer-Leoni, 1986b, 1988).

The first example is between a second grade teacher (T) and one of his pupils (P) concerning the second phase of the exercise described in the example in the preceding section. The aim of this second phase is to have the pupil 'decode' a mathematical 'message' written by another pupil in their class describing the mathematical manipulation involving the addition of marbles (Figure 8.1 shows the pupil's production).

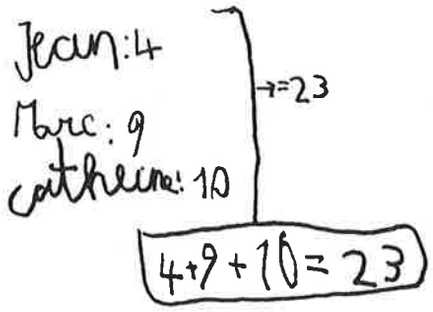

Figure 8.1.

T: Off you go
P: Well ... it's like one time when you made us do ... with the marbles ... so if I've guessed right, John has 4 marbles, Marc 9, and Catherine, she should have 10 so you asked how many that made in all, that made 23 I think that was the problem you asked them
T: O.K., you think I asked the problem like that
P: Yes
T: Do you think that Daniel's answer is ...
P: It's right
T: You think that the problem ... there, you are guessing that he wrote "marbles" there? Daniel explains that that is the problem?
P: No, I just found it like that.

The second extract is between an experimenter (E) and a pupil (P). Within the framework of an experimental procedure involving written formulations of additive operations, the experimenter presents the same task in three phases to second grade pupils (8–9 years): the first phase takes place inside the classroom with the presentation of the task to the whole class, the second phase outside the classroom in one-to-one interaction between the experimenter and a pupil and the third phase back inside the classroom with the whole class. The following extract is from the second phase (one-to-one interaction between the experimenter and a pupil) in which the experimenter would like the pupil to produce a written formulation translating a manipulation with dice:

E: Here's Alexander ... wait a minute while I write your name ... O.K. now listen Alexander, we're going to play a game with dice, O.K.?
P: O.K.
E: You see that there're two black dice and one red one ... O.K.?
P: O.K.
E: Now listen, we're going to throw the dice together and we'll decide that you'll win the points on the black dice and lose the points on the red one
P: O.K.
E: O.K.? Now listen, I'm going to throw the dice ... take a piece of paper ... I'll give all that (coloured pencils), you take what you want eh and I'd like you to mark on your paper all that's happened with the points during the game ... how many points won and lost there're be at the end of the game
P: O.K.

(The pupil writes "we win the points on the black dice and lose the points on the red one")

E: O.K., can you explain to us what you wrote?
P: (he reads) "we win the points on the black dice and lose the points on the red one"
E: O.K., "we win the points on the black dice and lose the points on the red one". Alright, listen, I'd like to know if you remember the other time in class, eh? We played a game with dice ... was it the same game or a different game?

Both interactions involve an adult who occupies the dominant position of the relationship and has the role of managing the conversation, maintaining control of the structure and direction of the verbal exchange. However, this control is manifested in different ways by the two adults. The experimenter (in the second example) controls the interaction by guiding the interview procedure with the aim of staying within the experimental script, repeating the pupil's responses only in the interest of obtaining comprehensible data. On the other hand, the teacher reformulates the pupil's discourse by using affirmative statements which are open to the pupil's confirmation. He effectively directs the interaction by anticipating the pupil's discourse.

The contractual nature of questioning implies that to answer a question, the interlocutor is 'contractually bound' to reply in congruence with its' premise (Hundeide, 1981). In didactic interactions, this means that the pupil is contractually bound to answer the adult's questions as refusal to answer would be rejecting the premise and transgressing the didactic contract whereby the pupil is obliged to respond and not ask questions in return. As long as pupils assume that the teacher's questions are valid, they will adhere to the rules of the contract and respond. It is interesting to observe in the above examples that it is the experimenter who takes certain conversational precautions to ensure the pupil enters into the dialogue and stays on the subject (cf. the abundance of 'OKs'). This is not the case for the teacher who does not seem to need conversational insurance to maintain the dialogue with his pupil as his power over the pupil is legitimate. This particular situation of questioning of the pupil by his teacher is authorized by the didactic contract. The

questioning of the pupil by the experimenter is legitimized by the institutional context in which it occurs. The pupil accepts to enter into dialogue with the experimenter as this adult is assimilated into the category of adult authority within the school context (or the authority of the teacher (as stipulated by the didactic contract) is such that the pupil is obliged to obey the teacher's request to collaborate with the experimenter).

Let us now examine the status of the objects of discourse constructed in the two examples. In the first example, the pupil is confronted by an undefined (or rather unexplained) task. However, the teacher's first words of 'off you go' is sufficient to permit the pupil to produce a coherent discourse (i.e., in the teacher's eyes) in reference to previous classroom experience. The object of discourse is embedded in the referential universe of the classroom and becomes an object of knowledge.

In the second example, the pupil enters into the one-to-one relationship with the experimenter with only an in-class presentation of the same problem as a common reference. As the experimenter has had no previous interpersonal interaction with the pupil, he is obliged to explain the rules of the current exercise and explicitly delineates the material. How will the pupil interpret the fact of being called outside the classroom to redo the same exercise that was done a few days earlier in class by the same person? From his classroom experience, the pupil could be lead to conclude that his previous answer was incorrect as usually correctly answered exercises are not redone. He obviously cannot be expected to know that this norm is not always applicable to a one-to-one interview with an experimenter. Nor can we know that the experimenter is not interested in declaring a given answer right or wrong. Rather than be given an evaluatory feedback by the adult, the pupil is expected to immediately explain his answer. In fact, although the experimenter expected the pupil to write the formula of the additive operation (undertaken with the dice), he does not comment on his erroneous comprehension of the task and simply proceeds to the next item of the experimental script. It is interesting to note that, in the first example, the scholastic criteria of 'right' and 'wrong' is spontaneously used by the pupil despite the fact that this was unexpected by the teacher in this particular episode of the task.

The Display of Competence in Psychological Testing Situations: Changing the Object of Questioning

So far we have discussed adult–child interactions concerning two types of adults: the teacher who tries to introduce new knowledge and the experimenter whose aim is the understanding of pupils' functioning when faced with this knowledge. The specificity of two contexts of interrogation were examined: the classroom and individual testing/interview situation. In order to better understand the mechanisms involved in the construction of questions and responses in teacher–pupil interactions, let us now examine a particular type of face-to-face interview where the object of discourse is not explicitly taught at school: psychological testing items.

Testing is generally undertaken in a situation where the child is faced with an unknown adult (a psychologist, for example) who proposes inhabitual tasks which do not resemble any known scholastic activity. The child is faced with a potentially ambiguous situation which does not correspond to previous social experience nor follows normative scripts for

teacher–pupil interactions in the scholastic context. The adult's goal is essentially to evaluate a given psychological competence and not to teach this competence. Didactic and testing situations are both based on a question/response interaction and the implicit rules which govern these interactions are different. According to the rules of the didactic contract, the teacher is only authorized to question pupils about previously taught knowledge. This rule is not applicable in the psychological testing situation since its principal aim is to observe if the child has acquired a given logical concept whether or not this concept has been explicitly taught.

To attain this goal, the psychologist constructs what he believes to be a standardized situation in order to insure that experimental procedures and verbal requests are the same for all subjects and to maintain the examiner's neutrality. Piaget (1926) criticized classical test methodology which he thought neglected the reasoning underlying the child's responses and lacked the theoretical foundation necessary to explain the results. Nevertheless, even if the Piagetian operatory tasks are indeed based on a strong theorization of cognitive development, assumptions are, as for classical intelligence tests, that it is possible to assess the child's cognitive abilities independently of any cultural and social context (for a debate of this assumption see Light, 1981; Light & Perret-Clermont, 1986; Nicolet, Grossen, & Perret-Clermont, 1988).

But does the observation of interactions between subject and examiner concerning the operatory task support these assumptions? To answer this question, we proceeded to close analysis of examiner–subject interactions during the conservation of liquids test (Perret-Clermont, Bell, & Grossen, 1985; Grossen, 1988). According to Piaget, this task is successfully completed by the age of 6–7 years and indicates the beginning of the concrete operational stage (for a study of the psychosocial processes involved in the acquisition of operatory notions see Perret-Clermont, 1980; Nicolet, Grossen, & Perret-Clermont, 1988).

The following examples are extracts of dialogue between testor (T) and his subject (S) concerning the main item of the conservation of liquids test, that is, the conservation question. After an equalization of the quantity of liquid in two equal glasses, the liquid is poured into a different glass (thinner and higher or broader and lower) and the child is asked whether the quantity is still the same.

Example 1:

E: ... if you drink all you have in this glass and I drink all I have in that glass, do we both have the same to drink or is there someone who has more to drink, someone who has less to drink or is the same?
S: it's the same
E: it's the same. How do you know that?
S: because I drink all the juice and you too
E: O.K., if we drink it all, so/
S: /there's no juice left
E: there's no juice left, yes. But what I'm asking to you is if you drink all that and I drink all that, do we drink the same amount of juice/
S: /yes
E: or do you drink more, or do I drink more, what/
S: /we drink both the same
E: hmm. How do you know that?
S: because I poured the same amount of juice

Example 2:

E: If you drink all you have in this glass and I drink all I have in that glass, do we both have the same amount to drink or is there someone who has more juice to drink, or less juice to drink, or is the same? What do you think?

S: yes, it's the same
E: is it the same?
S: yes, it stays like ... like that
E: mmmh
S: and if we drink it, then there's no more juice
E: hmmm. How do you know that it's the same?
S: because if we drink all the juice, then there's no juice at all in the glass
E: O.K., but if you drink all this and I drink all this, do we both have the same amount to drink or is there someone who has more to drink, someone who has less to drink or is it the same?
S: no, yes it's the same ...
E: but how do you know that?
S: well, because there's ... I don't know ... (sighs then coughs)
E: O.K. Listen if I take/
S: /but?
E: yes?
S: yes?
E: you want to say something else?
S: no
E: You seem to be thinking?
S: yea, it's normal if we, if we drink it all then there're won't be anymore in your glass

In the first example, we see that, although the subject gives a 'conserving' response ("it's the same"), his justification seems to reflect a non-Piagetian logic ("because I drink all the juice and you too"). This suggests that the child does not automatically focus on what the adult considers as key features to understanding of the task at hand. As the adult-testor controls the premises of interpretation in this interaction, this justification would be considered as reflecting an erroneous comprehension of the question. Thus, in order to give an acceptable answer, the child's primary task is to try to decode tacit assumptions concerning the definition of the situation, expected roles, the object of discourse and the 'taken-for-granted' aspects of the interaction (Bell, Perret-Clermont, & Grossen, 1985). However, the child is not unaided in this task. The examiner's supposed neutrality which prevents him from giving explicit feedback does not restrain him from repeating and clarifying the question. Realizing that the child's response is based on a different assumption than his, he reformulates the conservation question as if he was attempting to bring his subject to focus on his own premise (the quantity of juice rather than the act of drinking). It is this guidance process (see Wertsch *et al.*, 1984) which implicitly orients the child to the answer expected by the adult. The child will rely primarily on these implicit cues imbedded in the interaction to decode the adult's expectations, implicit assumptions, task definition, etc. It seems that the subject in the first example understood the adult's rephrasing of the conservation question as negative feedback of her response based on the conversation cue habitually used in scholastic context whereby a repeated question by the teacher signals an erroneous response. Other studies (e.g., Perret-Clermont & Brossard, 1985) have illustrated that in absence of explicit feedback from the adult, the child is lead to search for interaction cues on paralinguistic and nonlinguistic levels (for instance the adult's gaze).

Back channel utterances such as the examiner's "mmh" and "O.K." are constitutive elements of the progression of the interaction and are often interpreted by the child as a cue to modify or elaborate his response. In the second example, it seems that the adult's simple interjection of "mmmh" after the subject's justification of his conserving response ("yes, it stays like ... like that") is sufficient to trigger an addition to this response ("and if we drink it, then, there's no more juice") which changes to logical premises which do not correspond to the adult's. The examiner's repeated questioning of his answer ("but how do you know that?") results in confusion on his part ("I don't know") as if the child was searching for the answer expected by the adult. The subject interrupts the examiner as he begins the next item ("listen, if I take/") to continue his response suggesting that he did not perceive the conversational markers indicating the end of an item and the beginning of another (O.K., listen"). The exchange following this interruption which disrupts the experimental script ("but?" "yes?" "yes?") signals a conversational dysfunctioning whereby the participants are no longer sure of turn-taking procedures. Unlike the intersubjectivity constructed between teacher and pupils over time, this particular type of interaction is based on a fragile mutual understanding which necessitates a constant reconstruction.

With these two examples, we can see how the child's response in this context is a result of a process of mutual construction between adult and subject. The child's changing of his response and the misunderstandings between adult and child observed in the above examples is not simply due to poor communication skills on the part of the experimenter (or of the subject). The nature of the situation itself (where the child is confronted by an unknown adult in an unfamiliar context) results in a form of question/response sequences in which both participants are obliged to construct a shared world of meanings in the *hic et nunc* of the interaction. In this perspective, successful task resolution implies discerning what aspects of the testing situation are relevant. This interpretative activity requires that the child distance himself from known scripts and role expectations that are implied by the scholastic context and that are not entirely applicable to the testing situation. However, the child does not simply forget his scholastic experience nor the didactic contract when he enters into a testing interaction. In our research on testing situations, we have seen that the child comes to this setting with the tendency to function as a 'pupil' rather than a 'subject' and assimilates the testing interview to a known universe of meaning (Grossen and Bell, 1988; Grossen, 1988). In other words, the child interprets a new situation referring to a known situation (Finn, 1979; Elbers, 1986). Consequently, although the examiner in the testing situation is essentially ignoring the scholastic institutional context by functioning according to a different set of interactional norms, the child is likely to assimilate the testing situation to a didactic situation and to give a different definition of the situation.

The interpersonal and psychosocial processes involved in the elaboration of a response in a testing situation make it impossible to assess the child's cognitive capacities or acquired knowledge per se. Hence we find the same problem in testing situations as in classroom settings: children's cognitive competences cannot be assessed independently of the communication network in which they are embedded. In fact, the interdigitation of cognitive and social processes is such that we have come to the conclusion that it is not possible to observe cognitive competences per se. They are always dependent to some extent on the social context in which they are elicited and displayed.

Conclusion

It is clear that the different situations of questioning that we have considered are complex socio-cognitive interactions with systems of rights, obligations, rules, and tacit agreements embedded within the institutional framework. Questions asked and responses given (and eventually what is taught and learnt) depend directly upon the participants' perception of the context, expected roles, nature of the object of discourse, etc. These

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