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**ABSTRACT**

Teachers' knowledge and understanding of classrooms is perceived in this study in terms of interpretation of non-verbal and situational cues. Two sets of videotapes of classroom episodes were prepared, one in Hebrew and one in Dutch. These tapes were viewed by Israeli and Dutch teachers in cross-cultural settings. Teachers responded in writing and in group discussions to questions about the perceived nature of the viewed episodes and commented on the cues on which their interpretations were based. Analysis of written responses and protocols of discussions yielded insights into the nature of teachers' cues and the interpretation process in the two cultures. On the basis of the data collected, it appeared that teachers use personal cues, part of their personal knowledge, to infer classroom meanings in cross-cultural settings. The different cues used by individual teachers represented their personal knowledge and were shaped by their own experience. (Author/JD)

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How teachers know their classrooms:  
A crosscultural study of teachers'  
understanding of classroom situations

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How teachers know their classrooms: A crosscultural study  
of teachers' understanding of classroom situations

Abstract

Teachers' knowledge and understanding of classrooms is perceived in this study in terms of interpretation of non-verbal and situational cues. Two sets of videotapes of classroom episodes were prepared, one in Hebrew and one in Dutch. These tapes were viewed by teachers in cross-cultural settings. Teachers responded in writing and in group discussions to questions about the perceived nature of the viewed episodes and commented on the cues on which their interpretations were based. Analysis of written responses and protocols of discussions yielded insights into the nature of teachers' cues and the interpretation process in the two cultures.

Index words: classroom situations

interpretation by teachers

non-verbal cues

cross-cultural

Running head: Teachers' understanding of classrooms

The focus of our study is to understand how teachers make sense of their professional environment, the classroom in action. This sensemaking is central for teachers' professional functioning. On the basis of their understanding of classroom events, teaching activities are performed and assessed.

According to Erickson (1982) two sets of procedural knowledge are involved when teachers and students engage in a lesson together; knowledge of the academic task structure and knowledge of the social participation structure. The academic task structure determines the logical sequencing of instruction. The sequencing and articulation of classroom interaction are determined by the social participation structure. Erickson contends that interactional partners "must have means available for establishing and maintaining interdependence in their collective action. These means appear to be patterns of timing and sequencing in the performance of verbal and non-verbal behavior". (ibid p. 156).

Such patterns are considered to function as an explicit and implicit signal system which guides the behavior of the interactional partners. One may claim that these patterns enable participants in face-to-face interaction to make sense of their experience and to engage in the encounter (Goffman 1961).

We are interested in the signal system which enables teachers to make sense of classroom encounters. Therefore we pose the following questions:

- What are some of the personal non-verbal and situational cues that teachers use in their attempts to make sense of classroom

situations and how are these cues interpreted by teachers in cross-cultural settings?

- How do teachers relate their cues and their interpretations of classroom situations to their past personal experiences?

We draw our conceptual perspectives from research on teaching, from literature on the anthropology of learning and on the role of cues in communication.

The basic premise of our study is that teachers are active and autonomous agents in the carrying out of their profession. "Research on the cultures of teaching has begun to replace the image of a passive teacher, molded by bureaucracy and effected by external forces, with an image of the teacher as an active agent, constructing perspectives and choosing actions". (Feiman-Nemser and Floden, 1986, p. 523). In this sense the image of teachers is similar to the image of learners viewed as active learners, who "already possess extensive bodies of knowledge organized in particular ways. When presented with new knowledge by texts or by teachers they actively process the information in that instruction through the filters or lenses of their prior understanding" (Shulman, 1986, p. 25). Teachers are perceived as making sense of their professional environment using the filters or lenses of their prior understanding. We are interested in the nature of this prior understanding and in the process of sense making.

The question whether teachers share a common culture has not yet been resolved. Feiman-Nemser and Floden (1986) maintain that researchers have only begun to explore the diversity of the

cultures of teaching. By the culture of teaching we may mean the culture of classrooms or the culture of the profession. The culture of classrooms may be defined as "socially and culturally organized environments for learning" (Erickson, 1986, p. 120). The culture of teaching, as a profession, is seen to be "embroiled in the work-related beliefs and knowledge teachers share" (Feiman-Nemser and Floden, 1986, p. 508). We hypothesize that teachers' personal knowledge of classroom's regularities may be transferable across classroom settings. Drawing on this knowledge teachers may be able to interpret alien classroom situations, basing their interpretation on the perceived meaning of classroom cues.

The literature on research on teaching supports the claim that different teaching situations, though involving specific groups of participants bounded in place, time and physical environment, possess some common features. Erickson (1986) maintains that "each instance of a classroom is seen as its own unique system, which nevertheless displays universal properties of teaching" (p. 130). The assumption is that "when we see a particular instance of a teacher teaching, some aspects of what occurs are absolutely generic, that is they apply cross-culturally and across human history to all teaching situations" (ibid., p. 130). Other aspects are specific to the circumstances and persons involved in the situation. The commonalities may allow teachers to interpret classroom situations in alien cultures, in spite of the accepted notion of cultural diversity of classrooms. Lortie (1975) shares this view and claims that "people in a similar line of work are

likely to share at least some common thoughts and feelings about such work. Such convergence can arise from the diffusion of a subculture. On the other hand, it may derive from common responses to common contingencies" (Lortie, 1975, p. 162). Moreover, there is evidence that classrooms constitute fairly constant environments (Cuban, 1984). Therefore, we base our study on the assumption that teachers in one culture will be able to interpret classroom events in cross-cultural settings, using multifaceted cues drawing on their personal knowledge and experience.

Classrooms constitute complex sets of environmental features, such as people, architectural structures, equipment, learning materials, etc. In Doyle's (1977) analysis the major task of students in this environment is the exchange of performance for grades. This exchange is based on teacher cues and on cues available from other sources, such as peers and learning materials. We claim that teachers, too, base their teaching at least partly on classroom cues, which enable them to participate in a setting characterized by the two sets of procedural knowledge mentioned above, knowledge of academic task structure and knowledge of the social participation structure. Cues and signals are part of these structures, therefore sensitivity to and understanding of cues constitutes an important component of the knowledge of structures.

In our study we focus on teachers' perceptions of cues, which may lead to their mediating responses in the teaching-learning process, such as the allocation of time to specific tasks or

people, or the choice of a teaching strategy. The ability to discern cues and to interpret those is dependent on teachers' personal knowledge which, in turn, is shaped by their previous experiences. We try to identify some of these cues and to explore their interpretations by teachers.

What do we mean by the term "cues"? The term is used widely in psychological and educational literature and may be understood to stand for "manifestations that tend to influence behavior in more or less specific ways" (Hervey, 1982, p. 1). In semiotics these "manifestations are normally referred to as 'signals', the explanation for their tendencies to influence behavior is that they do so by way of conveying 'messages'. The conveying of 'messages' by 'signals' constitutes the prototype of the phenomenon of 'communication'... The typical questions semiotics pose are all connected with the phenomenon of correlation, conceived of as a correlation between 'signal' and 'message'". (ibid., pp. 1 and 2). In educational literature, dealing with classroom interactions, the term 'cues' instead of 'signal', is often used.

Brunswick (1955) and Snow (1968) postulate that experience with events and objects in an environment produces knowledge regarding the nature of recurring cues. "It is also proposed that long-term experience in a particular setting establishes a systematic bias toward certain cues because of their consistent functional value in predicting outcomes" (Doyle, 1977). Green (1983) in reviewing research on teaching as a linguistic process, refers to contextualization cues (Gumperz 1977), verbal and nonverbal, such



as pitch, gesture, facial expression and physical distance, that signal how utterances are to be understood.

Erickson (1982) analyzes some of the explicit and implicit signals and cues that are part of the academic task structure and of the social participation structure in a lesson. He claims that members of a lesson are able to take advantage of shared cultural norms of interpretation and performance, that help to define structure points, while being open to improvisations.

There are a number of reasons why we focus on nonverbal cues in our cross-cultural study. Erickson (1986) speaks about the "invisibility of everyday life" and mentions the advantage of "making the familiar strange" in our attempts to gain understanding of social settings. Teachers are used to their own classroom environment and may find it difficult to discern the cues they tend to use in order to interpret this environment. By choosing to disregard the content of the spoken word, and by having teachers try to interpret classroom situations in an alien language and culture, we make the familiar strange. Because we are also interested in the comparative aspects of teachers' interpretation and wish to gain some insights into the nature of classroom lives in different cultures, we decided to disregard linguistic cues and to focus on the paralanguage and the nonverbal aspects of classroom interactions. Moreover, we believe that even in their own classrooms teachers tend to use verbal as well as nonverbal cues in their efforts to interpret their situation. Yet, these are often a neglected areas of study. By disregarding the verbal cues and focusing on nonverbal cues and

paralanguage, we may aid teachers to become more aware of the use of the latter.

What are, then, some of the cues? Ruesch and Kees (1956) classified the elements of nonverbal communication as follows:

(1) sign language namely, forms of codification in which words and numbers have been supplanted by gestures. An example of sign language in the classroom is the raising of hands in order to receive permission to speak; (2) action language includes movements that are not used exclusively as signals, such as walking. Such movements constitute messages to those who may perceive them. In classroom situations, for example, the way a teacher walks away from a child may constitute a message to that child or to his or her peers. Ekman and Friesen (1969) developed a system for classifying body motions, or kinesic behavior, as nonverbal behavioral arts. (3) object language which includes all intentional or nonintentional display of material elements, such as architectural structures, pictures, instructional materials, seating arrangements, etc.

Paralanguage "deals with how something is said and not what is said. It deals with the range of nonverbal vocal cues surrounding common speech behavior" (Knapp, 1972, p.7). Paralanguage elements may be important cues in teachers' interpretation of classroom situations, especially when the spoken language is unknown to the listener.

An interesting area in the study of the perceptions of social and personal space is the area of proxemics. Small group ecology,

which is part of proxemics, concerns itself with spatial relationships in formal and informal groups. As classrooms may be viewed as constituting formal, relatively small groups, it is interesting to note whether teachers use spatial cues in their interpretation of classroom situations. (Erickson 1975).

To sum up: cues in our study, are elements in the representation of classroom situations whether visual, auditory, temporal, or spatial, constituting elements of 1) sign language 2) action language or proxemics, 3) object language and 4) paralanguage that are used by teachers to interpret these situations. Without understanding of the language spoken in the classroom it is difficult to discern cues of the academic task structure, though some of these are related to use of instructional materials and may be interpreted without mastery of language. Moreover, personal experiences of teachers in structuring subject matter may guide their attempts to interpret the academic task environment even in a strange language.

Answers to the research questions may provide insights into the personal professional knowledge of teachers, and its manifestations. We may come to have a better understanding of personal knowledge of teachers in one culture by considering other possible patterns of knowledge. According to Garner (1966), the response to any one pattern cannot be understood without considering the matrix of possible alternative responses.

### Research Design and Methodology

Sarason (1971) suggests that we try to view familiar school cultures from the vantage point of a "being from outer space" who is able to see everything that goes on in schools without comprehending the meaning of the written or spoken language and without knowing anything about the nature of schools. We chose a mode of inquiry that allows for a certain measure of the "outer space" qualities. In order to gain insights into some cues that are part of teachers' personal knowledge, we ask teachers to become "travellers", and to interpret classroom situations in a foreign country and strange language. These teachers share with the "outer space being" the lack of comprehension of the written or spoken language in the observed situation. On the other hand, the teachers possess knowledge about the nature of schools and about life in classrooms. What is this knowledge and how does it serve them in the process of interpretation of classroom situations? In order to answer this question the research design is conceptualized as comprising two experiments: one in Israel showing Dutch teaching episodes to Israeli teachers, and one in the Netherlands showing Israeli teaching situations to Dutch teachers.

Two sets of classroom videotapes were prepared, one set in Hebrew prepared in Israeli classes and the second set in Dutch, prepared in Dutch classes, in the teaching-learning process. Each set contains seven episodes, taped in the second grade of junior high school and the last grade of the senior high school. Videotapes allow us to "transfer" situations from culture to culture, to

have teachers relate to a predetermined set of episodes and to have them return to the same episodes for interpretation. Such videotapes present the viewer with a replication, within the limits of the medium, of the sights, the sounds and the tempo of the classroom in action.

To preserve ecological integrity and contextual validity of the teaching to be shown, episodes were selected from the tapes with a criterion of coherency of teaching activities and a criterion of duration of the episode. The criterion of coherency was adapted in order to ensure that interpretations by teachers should not be distorted by the selection of a sequence of activities that runs contrary to the flow of instructional strategies. The selected episodes show different stages of the lesson cycle, from lesson start to finish, focussing on various instructional strategies such as discussion, lecture, seatwork etc. The appendix gives a description of the episodes on both tapes. (see Appendix No. 1).

As for the duration of the episodes, we had to find a balance between "too long", causing possible problems of memory overload, and "too short", in which case teachers would not be able to make sense of what was going on. Episodes lasting for about 5 - 7 minutes were prepared and turned out to be the functional length for viewing teachers.

In the Dutch situation the following set up was used for taping: two cameras were installed in steady positions, one in the left hand back corner viewing the teacher in front of the classroom,

one in the right hand front corner viewing the children in their seats. The recording was done outside the classroom on two tapes.

In Israel the seats of the students were moved together in rows to one side of the classroom so that the cameraman could record the situation from the other side trying to follow interaction as much as possible, sometimes "zooming in" to show facial expressions, details of the classroom or blackboard writing. The audio recording was done in Israel by means of a microphone around the neck of the teacher and an omnidirectional microphone on a tripod in front of the class.

In the Israeli situation, two classrooms, one of a female teacher in religious philosophy and one of a male teacher in Bible studies were videorecorded. Both were done in the same religious highschool for girls. In the Dutch site, lessons of 5 male and one female teacher from two secondary schools were recorded. Subject matter areas were history, science, Dutch and English language and religious studies. The age of students in both countries is around 13 and 17 respectively.

In both countries students and teachers who were recorded did not perceive the recording as disruptive to the flow of events in the classroom.

Sixty four teachers in the Netherlands and twelve teachers in Israel participated in the research. A group of fifteen Israeli 11th grade students, in a senior high school, were also shown the Dutch tapes. This was done as a pilot study for future extension of the research to include respondents other than teachers.

The Dutch sample comprised 44 men and 20 women; the age range was between 24 to more than 45 years of age. 10 teachers were slightly experienced, 30 experienced and 24 very experienced teachers. The division of subject matter areas was: languages - 19; sciences - 18; social sciences - 18 and art, music and sport - 9 teachers.

The Israeli sample comprised 8 women and 4 men; their age ranging from 29 to above 55; years of experience ranged from 6 to 35. The division of subject matter areas was: languages - 3; natural sciences - 3; humanities - 3, mathematics - 2, social studies - 1.

One British teacher participated in the research.

Viewing sessions: In Israel the episodes were shown to teachers in groups of four. Teachers were asked to comment on each episode in writing, relating to the following questions:

- What do you think is happening in the episode you just saw?
- What are the cues that help you to make these interpretations?
- How is your own experience related to the identification of these cues?

After completing their written interpretations teachers participated in a group discussion of the episode. It turned out that using this mode of viewing sessions teachers became too fatigued after four episodes to go on. Four Israeli teachers were shown four Dutch episodes, and four teachers were shown three Dutch episodes. Four other Israeli teachers were shown three episodes and asked to focus on certain aspects of the videotaped

lessons, such as "teacher behavior", "classroom climate", "voices", "movement" etc. The sessions lasted about two hours each.

In the Netherlands the sessions took place at four evenings from 19.00 to around 22.00 hours with groups of about 15 teachers participating. The first 6 Dutch and the first 5 Israeli teaching episodes were shown in a sequence of showing and writing responses to the questions on sheets. Before moving on to the next episode, the researcher waited until the last teacher had finished. Each time the replying took about 5 minutes. Upon completing the responses to the last episode, discussions were conducted.

During these discussions in the Dutch site, there was some talk about the aforementioned differences between the recordings from Israel and those from the Netherlands. Some teachers said the Israeli recordings gave a more realistic image of classes than the Dutch. Recalling the characteristics of the recording, we might now state that although the presence of a cameraman might be an intrusion to the day-to-day sequences of classes, and despite the fact that it is the cameraman's eye and view of the ongoing class, the viewing teachers seemed to feel more comfortable with this than with the 'one-window-view' of a steady camera. Probably this was so because the way of viewing through the cameraman's eye seems to be conform more to everyday viewing and perceiving. In contrast, the Dutch tapes were perceived more as an artificial view on classroom interaction despite the less obtrusive procedure of the Dutch recording.



The responses of the teachers in The Netherlands were probed by the three following questions:

- 1) What do you think is happening in the episode you just saw?
- 2) What are the cues that help you to make these interpretations,  
- please check, and possibly describe which of the following ones: facial expressions - movements and gestures - voices - classroom organization - use of learning materials - use of blackboard you used  
- add any other cue(s) you think to be relevant.
- 3) Do you think that what the teacher did was effective in this episode, please, state your reasons.
- 4) How is your own experience related to the identification of these cues? Since this last question turned out to be rather puzzling to the teachers at the first session in the Netherlands, it was not answered and has been omitted in subsequent Dutch viewing sessions.

Using the research questions as a framework for analysis the written responses of the teachers and discussion notes were analyzed by the investigators.

Following the line of the two experiments, the separate investigators processed their own data without mutual consultation. The researchers then met and discussed their findings jointly.

The following procedure was used in the Netherlands:

First, all 64 responses to each of four episodes - two Dutch and two Israeli - were studied one by one; starting with reading the response of one teacher, its composing statements were noted and

then another response was read and synonymous statements were subsumed and differing ones were added. Based upon these a category system for each of the four episodes (D1, D2, I1, I2) was constructed. In this process it turned out to be that teachers did not differentiate their responses according to the questions asked, i.e. comments of evaluation and judgement were written in response to all questions. The statements listed in the first step were then subsumed under general headings. Looking at synonyms and similarity within each category and subsuming rather specific statements into a more abstract one, sub-categories were created. In further analysis it is hoped to find a better compromise between the loss of nuances and the sake of comparison.

In Israel, too, the researcher made a tentative attempt to code and categorize the responses of teachers. The categorization of cues was attempted so as to create a possible framework for comparison between Dutch and Israeli responses to the videotapes. Because the goal of our study is not the compilation of a taxonomy of cues for the interpretation of classroom situations, we shall focus in findings mainly on specific cues and on the interpretation process itself.

## Findings

We present our findings separately for the Netherlands and for Israel and then discuss those findings together.

### Findings in Israel

We shall start with a brief description of a videotaped classroom episode in the Netherlands:

"About twenty students, age 17-18, crowd into a classroom, getting settled in their seats. The classroom is not very big, seats are arranged in rows, the male teacher sits at his desk in front of the class. Different geographical maps hang on the walls, the blackboard is clean. Students speak animatedly among themselves. The teacher interrupts. Everyone sits down with a lot of shuffling of papers and books. A student enters the classroom and walks slowly to her desk, sitting down. The teacher starts to talk rapidly. He turns to one of the students who answers hesitantly. The teacher responds briefly and turns to the student's neighbour. The students laugh. The lesson continues. Students follow the teacher's words and take some notes. Very little student participation takes place. Students look fairly busy".

Without understanding the Dutch language and unfamiliar with the Dutch school system an experienced teacher in Israel tries to make sense of this episode. The following is her response:

"I was asked to make sense of this videotaped classroom scene which takes place in the last grade of a Dutch high school. The language and the setting are strange to me. I don't understand a word and don't even know what the subject matter is. What is happening in this class? Obviously it is the start of a lesson as the students were shown coming in. The students, mostly boys, are quite talkative. I don't have a cue to what they are talking about. They talk a lot but they are physically restrained, they don't move about much, they don't touch each other and they don't raise their voices too much. That is very different from my own classroom culture. I don't think that they talk about the lesson which is about to begin. How do I know that? For a number of reasons. In my personal experience as a teacher, students don't usually discuss lessons outside the class, unless they want to copy homework or to prepare for a test. How do I know that they are not doing just that on the tape? What cues do I have? Well, copying homework would be accompanied by opening books and/or copybooks, and would involve some writing. Then, the level of animation in tone, facial and bodily expression, is too high. I don't relate that level to a discussion of the intellectual

substance of a lesson, though it may sometimes happen. The teacher starts the lesson posing some questions which are directed specifically at various students. I recognize the opening pattern, I use it myself. Sometimes you ask a question without directing it at any individual, these are mostly questions aiming at generating class discussion. You can recognize such a question by the expectant look on the teacher's face and his or her gestures inviting responses. The questioning on the videotape was different, it was directed at individual students, more in a "testing" mode. Maybe the teacher asked for an answer to a homework question. This would fit with the "timing" pattern of the lesson. Homework questions are usually dealt with in the beginning of a lesson. The teacher responds to this student, who speaks only briefly and moves on to talk to his neighbour. The length of the student's response, and the subsequent teacher's act of inviting another student to speak, suggest that the first student's response was not satisfactory. The other students laughed, some covering their faces while laughing. Maybe they laughed at the lame excuse of the student but felt embarrassed doing so. Then the teacher starts lecturing. It is obvious that he is lecturing because one can see that students are taking notes. The correspondence of these two activities seems to be a general rule - teacher lectures, students take notes. I would say that seeing students taking notes, even without seeing the teacher or hearing his voice, is evidence that a lecture is being given. Would that always be true? Not really, students would be taking notes in other circumstances, but then you would be able to observe some of these circumstances. For instance, laboratory equipment in use, would be another setting for students' note taking. Very little student talk is noticeable, students seem rather apathetic. Their faces do not reflect high involvement in what is said by the teacher. The difference between their active participation in what goes on in the class before the lesson starts, and their quiet, almost resigned note taking, is striking. I don't know whether this is a typical lesson for this teacher and this class, nor do I know what the topic of the lesson was."

This teacher focussed on action language, paralanguage elements and object language to provide her with cues for making sense of an unfamiliar classroom situation, conducted in a strange language. Movements, level of voices and use of paper and pen were some of the interpreted cues. It is interesting to note that information is gleaned from the absence of certain cues, as well as from their presence. For instance, the lack of laboratory equipment was noted. Timing is an important cue for teacher

interpretation, the personal knowledge that homework questions are usually dealt with in the beginning of a lesson" is drawn upon to interpret the nature of teacher questioning in the viewed episode. The responding teacher explains quite explicitly how her interpretations are tied to her experience and practical personal knowledge.

Let us turn now to an attempt to categorize the responses of four teachers relating to four Dutch episodes (see Table No. 1).

(insert Table No. 1 about here)

The nature of the episodes were as follows:

Episode No. 1 - Opening phase of a history lesson, questions about homework

Episode No. 2 - Continuation of the same lesson, teacher lecturing

Episode No. 3 - Math lesson, junior high school, high noise level

Episode No. 4 - English lesson, senior high school, students taking turns in responding to teacher .

The personal background data of these four teachers is presented in Table No. 2.

(insert Table No. 2 about here)

TABLE I

Cue Categories

Specific Cues		Category I	Category II	Category III	Category IV	Category V	Category VI										
		Teacher Behavior	Student behavior	Classroom Organization	Teaching Aids	Classroom Climate	Teacher Efficiency										
		management of voice	movement	attending to students	initiating questions	accepting authority	voice of movement	attending to teacher	initiating questions	size of classroom	seating arrangements	ornaments aesthetic	use of blackboard	student-teacher interactions	student-student interactions	overall atmosphere	overall efficiency
No. of Episode	Responded to by Teacher:																
	Episode No. 1	A	X	X	X									X			X
	B	X	X	X						X	X			X		X	
	C				X	X		X				X		X		X	
D									X				X	X			
Episode No. 2	A	X		X	X		X						X	X	X		X
	B	X		X	X		X						X	X	X		
	C	X		X	X		X					X	X	X	X		
	D	X		X	X		X		X				X	X	X		
Episode No. 3	A	X	X	X	X			X	X				X	X	X		X
	B	X	X	X	X		X	X	X				X	X	X		X
	C	X	X	X	X		X	X	X		X		X	X	X		X
	D	X		X	X		X		X		X		X	X	X		X
Episode No. 4	A	X		X									X				X
	B				X								X				X
	C	X	X	X	X						X		X				X
	D	X		X			X				X		X		X		X

Table No. 2: Personal Background Data of Responding Teachers

	Age	Country of Origin	Gender	Education	Subject Matter Area	Seniority (in Years)	Role in School
Teacher A	37	Israel	Female	B.A. and Teaching Certificate	Language and Literature (Hebrew)	13	Teacher
Teacher B	45	Europe	Female	B.A. and Teaching Certificate	English	15	Teacher
Teacher C	57	Europe	Female	B.A. and Teaching Certificate	Bible Studies	35	Department Head
Teacher D	29	Israel	Female	B.A. and Teaching Certificate	Social Studies	6	Teacher

The specific cues noted in Table 1 are the actual cues mentioned by the participating teachers and are determined by the nature of the videotaped situations and the personal interpretation of the respondents. As the teachers in the videotapes did not use any teaching aids except the blackboard, some of the responding teachers related to "use of blackboard" as a cue to make sense of the situation. The Dutch videotapes focused mostly on teachers and their interaction with students, therefore, the responding teachers did not tend to relate to student-student interaction as a cue. Personal knowledge and experience seem to play an important role in the interpretative process. Teacher D, the youngest, who teaches social studies, consistently related to student-student interaction as a cue in her interpretation of all four episodes. Maybe because of being closer in age to the students and because of her teaching experience in social studies, which may have generated special interest in social interactions. The only teacher who paid attention to the aesthetics of the classroom was teacher C, the oldest and most experienced, who had previously taught in elementary schools and who came originally from Europe. It is conceivable that her background and experience contributed to her aesthetic awareness, classroom ornaments playing a significant role in elementary schools.

Table 1 shows that several cues were prevalent in teachers' interpretations. These were categorized as relating to classroom management, teacher movements or class atmosphere. Other cues played a minor role in teacher interpretations, such as student-



student interactions, questioning or seating arrangements. The reason for the selective attending to cues may be related to the nature of the videotaped situation, as well as to the personal knowledge of responding teachers.

These are differences in the scope of suggested cues generated by different episodes. Episode 3, for instance, generated many diverse cues. This episode is very lively, the teacher moves almost constantly around the classroom. Students are noisy and active. Israeli teachers seem to feel "at home" in this situation, which reminded them of their own classroom experiences. Two teachers, B and C, who came originally from Europe, interpreted the noise as highly detrimental to learning. The younger teachers, A and D, who were born in Israel, interpreted the noise as "constructive" and conducive to the learning experience of students.

Overall it seems that the responding teachers tended to focus more on the behavior of the teachers in the various episodes, and less on physical aspects of the classroom. One may claim that teachers tend to stress cues belonging to "sign language", such as codified gestures and "action language", such as teachers 'walking' around the classroom, more than to cues which are part of "object language" such as architectural structures. Teachers also seem to pay intense attention to elements of paralinguage, such as tone of voice, speed of talking etc. The reason for that may be that teaching is a highly interpersonal enterprise, demanding constant sensitivity to interpersonal events, which are part of the social task environment.

Let us turn back now to the actual interpretations of episodes, based on the perception of cues. We shall start with another set of notes, this time the notes of the British teacher, who does not understand Hebrew, viewing an Israeli episode.

The Hebrew videotape episode:

"The teacher, a woman, speaks quickly and authoritatively to a class of about 25 female students about the age of 17-18. She calls for four girls, one after the other, to come to the front of the class. The girls hesitate to do this. Then, one after the other, those four students speak fairly briefly and quite assertively, with determined voices. After they finish, the teacher leads a brief class discussion, playing a dominant role in it. The girls return to their seats and the teacher talks for some time".

The teacher's response:

"It seems to me that there were plenty of familiar landmarks. The seating arrangements and stance of the teacher and pupils made it clear that the teacher was in charge. She took the initiative and there were other indications that the pupils were not taking responsibility for the decisions about the pattern of the lesson (e.g., giggling themselves). There was no doubt that the teacher directed certain pupils to come out in front of the class and they displayed (maybe feigned) some embarrassment/reluctance to do so in a way that teenagers in our society would. She asked them to perform some oral task. I had no idea what the task was because I did not understand her oral command or what they were saying. However, it was apparently something that was potentially of interest to the other pupils because they were ready to listen and perhaps to maintain their attention on what the chosen group had to say. It seems unlikely that they would have done this if those out in front were being asked to recite some standard elements or repeat a homework assignment.

The performance of the group out in front was at the same time fluent and apparently unrehearsed. I guess that they had plenty to say but, as would be the case in my own language, would probably not be speaking in complete sentences as they tried to get their ideas out. I cannot be sure, but there was something about the fluency and nonverbal gestures of the speakers (perhaps indicating an attempt to persuade their audience?) which make me think that they were expressing opinions or giving justifications rather than, say, offering descriptions of something. The ways in which the other pupils reacted also sustained this hypothesis. Also the teacher's actions seemed to be directed towards setting up the activity

and managing the general procedure (e.g., deciding who should speak when), but the pupils seemed to be in control of WHAT they said without prompting from the teacher. I have no doubt that the subject of what they said must be something they were familiar with. While they may have hedged about a bit at first, it seems clear to me that those out front who spoke had something to say on a topic they had thought about before.

The pattern jumped out at me as a recognizably "artificial" situation, very common in classrooms, where pupils are being asked to simulate a discussion or argument on some topic. The situation is "set up" by the teacher and is not dependent on the pupils developing an understanding of the group processes which would be at work in a "real" discussion. For example, for all I know the pupils who were directed by the teacher to "talk" might have been silent group members in a "real" discussion (or alternatively might have dominated in the group in a way that I believe this teacher would not have allowed in this controlled classroom episode). I think I am saying that I suspect I have established a repertoire of classroom episodes (for want of a better word) over my years of observing teachers and that I use fairly high inference techniques for extrapolating from observations of pupils' and teachers' nonverbal activities to conclusions about what kinds of tasks teachers are setting and how pupils view those tasks. I am not sure what the particular cues are that I use but they seem to be concerned with who has control of the activities that are going on, what those in control do to sustain the activities, how those involved in the activities (in this case the pupil "actors" and the pupil "audience") react to them and the various other conditions (e.g., the material conditions of the classroom like the arrangement of desks) which seem to impinge on how people behave.

There were several girls in front of the class. One could surmise from that, that either the task was a co-operative one, or that there were a variety of views to be expressed/elements to be covered. Neither of these would indicate that recitation of some isolated homework task was involved, and there were no other suggestions that there was a co-operative venture".

This teacher's response to an interpretation of a videotaped classroom situation in a strange language is astonishingly accurate and insightful. The classroom teacher had, indeed, called on the students to simulate an argument in order to make the point that human thinking often takes the form of responding to each other's line of argument. One of the main points made by

the interpreting teacher relates to the issue of control in the classroom, teacher control and student control. Cues used by this teacher relate to the nature of speech of students, such as fluency and no teacher prompting, as well as to the attention level of students and the physical setting of the classroom. The Hebrew videotape section focuses almost equally on teacher and students. Many of the teacher's interpretations were, accordingly, in response to students' observed actions. What seems important to note is that the cross-cultural interpretation of a classroom situation may be highly insightful as shown by the use of sophisticated personal knowledge by the responding teacher.

Let us turn now to other instances of Israeli interpretations. Thus, in interpreting the first Dutch episode, one teacher claimed: "Why do we have to watch student behavior, we can see that the teacher succeeds in talking without interruptions, that means that students are learning". This teacher equates "teacher talk" with "student learning". For another teacher, paralinguistic cues, were important in making distinctions between students' talk before and after the start of the lesson. Though in a different classroom culture one can imagine students standing around and talking loudly during the lesson, the personal knowledge of this teacher related "loud talk" to breaks. Movement, action, cues are related to the interpretation of the teacher's questioning. One responding teacher, probably on the basis of her own experience, relates questions addressed to the class as a whole with "inviting gestures". Interaction cues serve

to identify elements of classroom climate. Lack of students' talk is interpreted as expressing boredom and lack of involvement in the learning process. This is, obviously, not the only possible interpretation, but one reflecting a teacher's personal knowledge about teaching and learning in classroom. One teacher commented on the teacher's question directed at a student and interpreted it as a nonsuccessful mode of questioning, reading the lack of student's response as an indication of the lacking competence of the teacher. In a sense, this teacher transferred the complete responsibility for the classroom situation to the teacher.

A number of illuminating teacher comments are worth noting:

"It seems that the 'old' method is not extinct in The Netherlands, which is a comforting thought". The personal knowledge of this teacher apparently leads her to seek for the reconfirmation of her views about teaching.

"In a society which still honors its adults (The Netherlands), it is difficult to distinguish between respect for the teacher as a professional or as an adult". This teacher relates to the status issue of adults in society as a background to understanding the role of teachers in the observed videotaped classroom episode.

"If we'd been invited to teach in The Netherlands we would not feel as 'strangers', the same goes for Dutch teachers in Israel, though it would be easier for us, because of the more 'natural' authority of teachers in The Netherlands". The notion of "sameness" and "interchangeability" is reflected in

this statement. Teachers are teachers, even in different cultural settings, though there may be perceived difficulties to establish teacher authority.

It is interesting to note the sense of relief that crept into some of the teachers' interpretations. A priori they expected class actions in a foreign country, presented in a strange language, to be different and alien. The feeling of familiarity seemed to be comforting to the responding teachers.

As noted above, several Israeli teachers were asked to focus on predetermined aspects of the videotaped episodes. The group of four teachers discussed their interpretations following their writing of interpretive notes. Three episodes were selected as follows: the first episode showing the start of a history lesson in a senior high school; the third episode, showing a lively math lesson in a junior high school; the seventh episode, a lesson in religious philosophy in a senior high school, taking place in an informal, out of classroom, setting. Some of the teachers' interpretations were as follows:

Episode No. 1. One teacher was asked to focus on the teacher, two teachers were asked to focus on specific students ("the student in red") and one on the interactive processes. Focused observation led to greater awareness to the personal dimension of interpretation. Details which went unnoticed in an unstructured mode of observation and interpretation became visible to the responding teachers. For instance, "the student in red" moved about continuously taking things out of her bag, turning here and

there. The interpretation - "this student is not attending to the lesson" was based explicitly on the teacher's own knowledge of classrooms. Interesting differences between personal knowledge bases emerged. Thus, teachers argued about the meaning of the seating arrangements in the classroom. One teacher interpreted seating in circle as contributing to the pleasant atmosphere of the classroom. Another teacher contended that this seating arrangement is counterproductive to learning "because it does not allow students to have a moment of privacy in the lesson". The issue was debated in relation to the personal knowledge and experience of the participant teachers.

Episode No. 3. Two teachers were asked to focus on voices and two on movements. In the discussion the teachers who had focussed on voices argued that the teacher was "shouting" all the time and suggested interesting interpretations. One teacher claimed that the videotaped teachers was apparently "struggling against some 'hidden noise', even when the students were relatively quiet". The teacher was perceived as detached from the actual classroom scene, "fighting his own battle". Another teacher saw the shouting as a legitimate response to overcome classroom noise.

The teachers who focused on "movement" emphasized the impact of the movements on classroom atmosphere. One teacher interpreted certain gestures as signifying lack of regard for students. Another teacher interpreted the same gesture as expressing despair. It is interesting to note that the Israeli teachers were struck by the lack of student movement around the classroom. Based on their own experiences they claimed that similar teacher

behavior in Israel would have led to complete pandemonium in the classroom.

In conclusion, it seems that focussed observations of videotaped classroom episodes enriches the interpretative process.

In Israel the Dutch videotapes were shown also to high school students. The following are some of their responses:

The first spontaneous reaction was: "What! That is how they study in The Netherlands?" The students were immediately sensitive to the "sameness" of the Dutch situation with classroom situations they know. Students had anticipated notable differences and were disappointed by the perceived "sameness" of being a student in different cultural settings.

Students noted cues that were not mentioned by the teachers. For instance, they noted the fact that in the Dutch episodes, most teachers were male. Other cues related to perceived "unconventional" behavior of teachers and students in the Dutch episodes: "the teacher sat on the desk;" "teachers look at their watches;" "a student chewed gum in the lesson." The gender cue may be interpreted as shaping the classroom climate, the unconventionality cues reflect certain anticipations that students have regarding teachers' responses. Unconventionality cues, signifying departures from accepted classroom norms, are examples of cues created in a specific cultural context. Cues used by students seem to differ from teachers' cues, based on their own personal knowledge of classroom situations. Their focus on teacher's gender and on unconventional behavior reflects



issues and concerns that are relevant to their experiences of classroom realities and to their sensitivity to the creation of classroom norms. It would be interesting to extend the study to include students in The Netherlands.

Teachers and students alike were interested and highly motivated to participate in the study. They were curious about foreign classroom settings and eager to interpret them and to reflect on the cues they used.

## Findings in the Netherlands

As described in the methodology section, a category system was developed, and the responses of the Dutch viewing teachers to two Israeli teaching episodes I1 and I5 were coded and quantified. Table No. 3 presents teachers' descriptions of the teaching episodes.

(insert Table 3 about here)

Table 3: Description of the teaching episodes

### Categories and specific aspects of classroom events

	Freq. I1	Freq. I5		
	-----	-----		
	N=64	%	N=47	%
	-----	-----	-----	-----
1) <u>Teacher</u>				
1.1.1 teacher's activities	47	73%	36	76%
1.1.2 quality of teacher's activities	12	19%	24	51%
1.2 characteristics of teacher	1	2%	5	11%
1.3 teacher's authority	11	17%	13	28%
1.4 teacher attracts attention	8	12%	7	15%
2) <u>Student</u>				
2.1.1 students' activities	58	91%	24	51%
2.1.2 quality of students' activities	15	23%	8	17%
2.2 students' characteristics	24	37%	7	15%
3) <u>Instructional strategy/atmosphere</u>				
3.1 instructional strategy	28	44%	19	40%
3.2 general atmosphere	15	23%	6	12%
4) <u>Subject Matter</u>				
4.1 subject matter area	10	16%	7	15%
4.2 detailed description of substance	3	5%	7	15%

As may be seen in Table 3 the viewing teachers focus on several aspects of classroom events to interpret and describe the classroom in action. It is interesting to note that nearly half of the teachers specifically refer to the kind of instructional strategy that is going on. Perhaps here is where their professional knowledge applies. The sort of teacher's and students' activities, structured and evoked by a certain pedagogy, may form a point of reference for the interpretation of alien classroom situations. The relatively high percentage of Dutch viewing teachers referring to this category may be due to the amount of attention paid to instructional strategies in teacher education program in The Netherlands.

Teachers referred only in small measure to the subject matter on hand, due to the fact that they had few little cues from the Israeli teaching to do so, since a definite interpretation needs knowledge of the spoken communication.

It is furthermore interesting to note the differences between the two episodes. The male teacher in I5 (see Appendix 1) is very expressive, this seems to attract the attention of the viewing teachers. We see a raise in attributions to teacher's activities and in the interpretation of his characteristics and a decline of attention to students' activities and characteristics. This may imply that differences in the alien culture, as opposed to one's own culture of teaching, do seem to dominate teachers' search for explanation.

Table No. 4 presents teachers' use of cues.

(insert Table No. 4 about here)

Table No. 4 Teachers' use of cues

<u>Categories of cues used</u>	<u>I1</u>		<u>I5</u>	
	<u>N=64</u>	<u>%</u>	<u>N=47</u>	<u>%</u>
5.1 facial expressions of teacher	16	25%	9	19%
of students	44	68%	24	51%
in general terms	29	45%	16	34%
5.2 movement/gestures of teacher	18	28%	17	36%
of students	45	70%	42	89%
in general terms	27	42%	25	53%
5.3 paralanguage characteristics				
of teacher	11	17%	16	34%
of students	44	68%	38	81%
in general terms	33	51%	22	46%
5.5.1 use of learning material	4	6%	3	6%
5.5.2 use of blackboard	5	8%	3	6%
5.6.1 classroom organization	31	48%	9	19%
5.6.2 ornaments	8	12%	-	-

From Table 4 differences between the use of cues in the interpretation of the two teaching episodes can be seen. Compare, for instance, the relative balance of references to facial, movement and voice cues of teacher for the I1-episode. It is worth noting, conversely, that movement and voice cues of the teacher dominate over facial cues for the I5-episode.

It is interesting also to see that the viewing teachers describe and use paralanguage cues stemming from the oral communication though they cannot understand the spoken language.

Another point to be stated here, is the rather high amount of reference (48%) to the organization of the classroom for the I1-episode. Teachers refer here to the apparently "crowded" setting of students' seats. This may be explained by the way of recording of the Israeli teaching episodes for which the furniture was moved to one side of the classroom. We see a decline of attention to this in the responses to the I5-episode.

As for learning material, blackboard and ornaments, we see little reference made to these cues. The 8 teachers relating to the I1 episode refer to the geography maps hanging on the wall as cues for interpreting the nature of the subject matter. These remarks are not repeated for the interpretation of the I5 episode though the maps are still there.

Relating to the lesser reference to learning material and blackboard use, we might reason, that these are not considered by teachers to be as useful for interpreting what is going on. In both cases, cues from the teacher's activities and use of voice seem to be more informing.

Table No.5 presents data on teacher's judgements of the effectiveness of the two teaching instances, I1 and I5.

(insert Table No. 5 about here)

Table No. 5 : Teachers' judgement of Effectiveness

Categories of judgements

	I1		I5	
	N=64	%	N=47	%
<u>6.1 Overall judgement</u>				
6.1.1 positive	49	76%	22	47%
6.1.2 doubt	10	16%	12	25%
6.1.3 negative	0(1)	-	5(2)	11%
<u>6.2 Terms in which the judgement is stated .</u>				
6.2.1 stated in teacher's terms	17	26%	25	55%
6.2.2 stated in students' terms	30(3)	47%	25(4)	53%
6.2.3 stated in general terms	4	6%	7	15%
<u>Reasons Stated</u>				
6.3 characteristics or conditions of instructional strategy	13	20%	11	23%
6.4 subject matter (conveyed)	3	5%	3	6%
6.5 students' attention	29	45%	10	21%
6.6 teacher's intention	1	2%	2	4%
6.7 variation in activities	8	12%	1	2%
(1) missing (number of teachers giving no evaluation): 5				
(2) missing: 8				
(3) 6 out of these teachers stated their judgements in both teacher's and students' terms				
(4) 16 " " " " "				

The difference noted above in the perception of the two episodes cumulates in the teachers' final judgement about teaching effectiveness. Clearly, the second episode seems to be more controversial in this respect. Students' attention and instructional strategy are aspects that seem to determine teachers' judgements. It is worth noting that the Dutch teachers refer to their knowledge of the instructional strategy for their final judgement. This knowledge could be a central point of reference for judging their own teaching activities as well.

Another issue is the role of students' attention in judging the effectiveness of the teaching seen. In comparing the responses to the two episodes we might infer a relative high level of reliance on this cue. But in cases of puzzling teaching activities such as in I5, attention to students' attention drops. Could it be that teachers' attention goes to students' participation when and if all conditions for it seem to be fulfilled according to the viewers' perception? The fact that there is no empirical difference between attention of the students in the two episodes (see Appendix 1) does seem to speak for this hypothesis.

Some concluding comments on the Dutch findings:

Although the viewing teachers explicitly know the alien character of the teaching episodes, relative little reference is made to possibly differing cultural aspects. For the I1 episode, 7 teachers refer to this, the substance of the remarks dealing with the perceived high degree of discipline of the students (4) and the fact that it is an exclusive girls' class (3). For the I5 episode 3 teachers state perceived cultural differences, 2

dealing with the teacher's acts, and one with the discipline of the students.

Another point worth notifying concerns the teachers' way of referring to the students. Mostly this is done in class or group terms. Only in the responses to the II-episode, teachers refer to the four students participating in the role play. In the I5 episode only one teacher refers to an individual student. This seems to confirm the already known tendency for teachers to refer to the students as a group.

A last remark concerns the role of students' participation in interpretation of the classroom in action. Although specific statements are subsumed here in more abstract categories, teachers do seem to have several cues to interpret the students' involvedness with the teaching process. Students' attention is one of these cues, but quality attributions to students' activities and to the students themselves are also related to and seem to imply participation in the lesson. For instance, "full and alert attention", "students' sustained and close listening", or "the class works hard", "motivated participation in discussion" and "lovely, good and obeying girls", are terms used by Dutch teachers to interpret the viewed classroom situations.

The interpretation of teacher activities also includes aspects that relate to concern for student participation, indicated by remarks such as: "a fascinating lecture", or "a structured and clear discussion that is easy to follow", or for instance, "the teacher does involve the students well with the lesson", and "he



is a sympathetic and nice teacher, the students seem to like to be with him."

It would be interesting to investigate the relationship of teachers' background characteristics, beliefs and attitudes to their interpretations.

### Discussion

On the basis of the data collected up to now it seems that teachers use personal cues, part of their personal knowledge, to infer classroom meanings in cross-cultural settings. The different cues used by individual teachers represent their personal knowledge and are shaped by their own experience.

In our discussion we shall relate to the following issues:

- commonalities in the interpretation of classroom situations in The Netherlands and in Israel
- generation of concepts that may be fruitful for further research
- additional research questions to be raised.

A number of commonalities could be detected. Teachers in both countries tended to base their interpretations of classroom situations in a foreign settings on their own, personal experiences, and on their own views about the nature of classrooms and of teaching.

The richness and variety of cues used by teachers is noticeable in both countries. Analyzing teachers' responses one gets a distinct sense of professionality. Teachers make rather fine

distinctions, such as, "students are listening but they are not interested" or "students' participation is only in response to teachers' initiative, it is not self-initiated". We suspect that non-teachers would use different cues and would suggest different interpretations.

There seems to be a culture of teaching that is shared by teachers in The Netherlands and in Israel, which provides them with insights into each other's classroom situation. Conceivably teachers in very different cultural settings may tend to use different cues and arrive at radically different interpretations. Still, it is important to note that even in the same culture the personal knowledge of teachers shapes their interpretations. Different teachers arrived at diverse interpretations, based on the same cues.

It seems that teachers tend to respond in an evaluative manner, whether we ask a direct question on teacher effectiveness or not. It is sometimes difficult to distinguish between the description of the situation and its evaluation by responding teachers. This may be the result of the internationality of teaching, which leads teachers to constantly evaluate their students and their own teaching. It may also be that pressures of accountability, as well as the nature of the research task requirements, combine to produce an evaluative stance.

We suggest two concepts for further inquiry. One, the concept of crucial cues. Could it be that teachers use, in fact, a limited number of crucial cues, to serve in their interpretation of

classroom situations? Such overriding, illuminating cues would help to simplify the interpretative process. The high noise level in the Dutch episode No.3 would be such a crucial cue. Crucial cues could be cues which are easy to grasp and which can be interpreted on the basis of prior personal knowledge and experience. Conversely, crucial cues could be baffling and difficult to interpret. An example of a baffling crucial cue would be the calling of four girls to the front of the class in one of the Israeli episodes (No. 11). Though difficult to interpret, it became the focal point for responding teachers. It seems to us worthwhile to study the notion of crucial cues in further investigations.

The second concept is the concept of particular versus universalized cues. Some of the teachers' personally determined cues may be particular, related to individual students and situations. These cues serve teachers in their daily attempts to interpret their own classroom interactions. Other cues, though probably originating in specific contexts, acquire universal functions and serve teachers to interpret classroom situations other than their own, even in cross-cultural settings. Particular cues are those cues that serve teachers or students, to interpret specific classroom interactions. Thus, teachers may come to know the meaning of the classroom behaviors of Ann or Johnny. Universalized cues are those cues that serve teachers to interpret student behavior in general. The noise level cue is a good example. It may have originated in relation to specific classroom situations, becoming part of teachers' personal

knowledge, and serving teachers in the interpretation of foreign classroom situations. An interesting issue relates to teachers' balance between particular and universalized cues. Some cues are probably only used in relation to specific persons or events, whereas others serve to interpret a wide range of situations. The transformation of cues from particular to universal functioning requires further study.

Our study is to be seen as exploratory, combining two separate investigations in which teachers were asked to use their professional knowledge cross-culturally. Many further questions arise:

- what cues are shared by students and teachers in the same class and which cues are different, reflecting different attached meanings? How do other respondents, parents for instance, interpret classroom situations?
- what are some of the cues and interpretations in more radically different cultures? What are the boundaries of sensing classroom "sameness"?
- how do cues originate? How do they relate to past and present teacher experiences and personal histories? How do cues acquire universalized or crucial functions? What are the differences between cues used by student teachers and experienced teachers?
- what, if any, is the impact of temporal or other contextual factors on cue interpretation, how would the interpretation of cues change if specific contexts of time, for instance, were assigned to the videotaped episodes?

And, last but not least, a theoretical issue. We would like to continue our work on teachers' interpretation of classroom situations in the framework of viewing classrooms as "theatre".

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## Appendix 1

Description of teaching episodes recorded and selected.

Each takes about 5 to 7 minutes.

### The Israeli teaching episodes

The episodes I1 to I4 were taken during one lesson of which the theme was religious philosophy. Episodes I5 to I7 were videorecorded in the same school and in the same classroom, in a lesson Bible Studies.

#### I1 Opening lesson

This is an opening lesson for the subject of religious philosophy. The teacher makes the point about the possibility of many different ideas existing concerning a specific subject. In order to take a stand the students should be alert to other opinions. To illustrate this, the teacher organizes a role play in which 4 pupils participate representing a different opinion each. The task for the students is to convince others that their opinion is the right one.

After this the teacher holds a very short discussion during which all the students take a stand about what has happened. This process comes to an end and the four students return to their seats.

During the last stage of this episode, the teacher concludes and clarifies that if one wants to reach a certain outlook, it is necessary to know other opinions and to refer to them. The teacher is very balanced and the students listen carefully. The teacher is very dominant and leads and initiates all events. The pupils respond.



### 12 Clarification by means of discussion

The teacher wishes to clarify the meaning of "Religious Philosophy". She wants to characterize this discipline and to distinguish it from other disciplines like Literature, Bible Studies or Oral Bible Studies. The students listen carefully. It can be noticed that the teacher is dominant and it is she who initiates. She asks a series of questions and the students try to answer. A short discussion is going on. Gestures supporting what is said are obvious. The teacher summarizes and explains that what will be studied is religious philosophy within a framework of some basic assumptions which originate in the Pentateuch. Here too, the authoritarian approach of the teacher is obvious, she is talking most of the time. The atmosphere is quiet and students listen.

### 13 Utilisation of the blackboard

This episode starts with the video focussing on the classroom decoration. Subsequently to the other former two episodes, the teacher now compares the concept of rationality in Judaism with that of the Islam and explains these using the blackboard. Students listen less concentrated now. The teacher calls the girls to attentiveness. After that it seems that the teacher herself is slightly tired as she looks at her watch. One pupil does not take notes and the teacher points out to her that she has to write. Then she asks a student to give her a page of paper. Following that the teacher writes concepts on the blackboard referring to the discussion.

#### I4 "Awakening" - a discussion initiated by the students

This is the last part that ends the lesson. A discussion takes place here that has been initiated by the students. It is a discussion among themselves, the teacher tries to interfere in the beginning but later on only students proceed. After a while, however, the teacher joins into the discussion, refraining a girl by laying a hand on her shoulder and addressing in particular a girl who is most talkative. The discussion more or less escalates because one girl does not accept the teacher's explanation. All other pupils are against her. However, the discussion is to the point and not personal. When the bell rings, the discussion stops in a pleasant atmosphere.

#### I5 Opening lesson

The teacher asks everybody to take out pages and write. He dictates a few sentences from the Bible and asks the students "to guess" what the subject of the lesson is going to be. The teacher bends down at a certain moment to pick up a piece of paper which belongs to one of the girls, this seems a normal act. He continues to dictate and explains why he does not define the subject of the lesson. All this supported by many gestures of the hands. The pupils are very alert, curious and cooperative.

#### I6 Individual seatwork:

The teacher wants to know what conclusion may be drawn referring to Jewish Law, from the paragraph that he dictated before. Through individual work, each pupil is asked to reach to a conclusion. The teacher walks along the rows and helps

everybody. It is obvious that he is dominant, likes to talk and to explain the same issue in different ways. During this lesson the former teacher (I1-I4) participates too helping with the individual work. When the individual work has ended the teacher leads a discussion in a very dynamic and pleasant atmosphere using the blackboard.

### I7 Discussion leading

A discussion is going on about the sentence which has as its meaning that a person should not leave his place on a Sabbath. The girls appear to be very alert. The teacher asks the girls to raise a finger in order to get the right to speak. The teacher tries to explain, but the girls do not always accept his explanation. The teacher uses the blackboard. At a certain stage, all the girls are against the teacher's opinion, but he succeeds to quiet them.

### The Dutch teaching episodes

As has been explained in the text, the Dutch recording was done by means of two steady cameras - one viewing the teacher, one the students. In the first episode the teacher is shown first then the perspective is changed to the students. All other episodes except for D6 show the teacher. D6 is the same episode as D5, however from the perspective of the teacher viewing the students only.

### D1 The start of the lesson

Here students enter class and the male teacher and some of the students are talking in a general sense about the recording being

done, before actually starting the lesson. It is a last grade of senior high school. The subject is history and the lesson deals with the structure of U.S. administration, such as the role and power of the president, the relationship of the ministers with the president's office and the people's representation in Congress and Senate.

The teacher starts the lesson by telling an analogy of the president's function with that of a coach-keeper-etc.-roles in a soccer team. Then he asks the students questions that they should have prepared for this lesson as homework. However, the student addressed did not do his homework, the other students laugh, probably because of his excuse - he said to have forgotten to look at his calendar. The teacher reprimands the student and turns to the student sitting next to him.

### D2 Instruction

This episode shows the same teacher in the same lesson but at a later point in time. He now is typically lecturing using the blackboard extensively. Students are constantly taking notes. However, the lecturing does not seem to proceed in a very interesting way - one of the students is yawning. Whether or not the teacher might have seen this, he addresses this student with a question that he answers correctly. The atmosphere is very quiet.

### D3 Instruction

This episode has been taken from a science lesson in the second grade of Junior high school level. Children's age is around 13 years. The subject of this lesson is concerned with the circle

and computation of the radial. The male teacher in this episode first tells the students to lay down their pencils and to listen first to his instruction and to try to understand it. But, as is shown, he has to repeat this more than once. He also lets himself be interrupted frequently by students' questions. The atmosphere in the classroom is very noisy and one could wonder whether the students are seriously participating. Some talk to one another, and one student walks through the class to get something from another student.

#### D4 Classroom practice

This episode is from a second grade again of Junior high school level, from a class in foreign language - English. The teacher with his students is doing an exercise in translating Dutch sentences into English. Students are getting turns one by one. Everything is going disciplined and smoothly, although rather fast. The teacher repeats the translated sentences in English. The students note these in their exercisebooks but keep looking into their neighbour's books, probably to keep track.

#### D5 Instruction and seatwork in pairs

This is a part of a Dutch language (mother tongue) lesson on grammar. The female teacher in the second grade of a secondary advanced general education level sits on the desk and gives a short instruction on "synonyms", "homonyms" and "homophones". At a certain time, when giving a definition of "synonyms" as opposed to "homonyms" she confuses the definitions by mistake. But after a second she notifies it and corrects the mistake supported by

gestures of the hand. Following this, the students are doing an exercise on these concepts from the workbooks and may do so in pairs. The teacher walks along the seats and helps some children. After three "walk-arounds" she writes sentences on the blackboard by which children are side tracked from their work. After a while the children ask what the sentences are for.

#### D6 Idem

This is the same episode as D5, however viewing the students instead of the teacher. It was mainly selected for reasons of control for the selected view.

#### D7 Introduction of subject matter

In a last grade of Senior high school level, a teacher in a religious studies class introduces the work of Thomas van Aquino and explains some of his philosophy. The teacher and students sit at a square setting of tables in a corner of the canteen, no other persons being present.

Materials, information sheets, are being handed out and the teacher displays some of the books of and about the author. Sometimes he asks questions to the students, but they do not seem to respond seriously. The teacher very often mentions the name of a certain student to call him to attentiveness. Sometimes there is laughter among the students about some remarks of some students.