DOCUMENT RESUME

ED 457 964 PS 029 774

AUTHOR Singer, Elly
TITLE The Logic of Young Children's (Nonverbal) Behavior.
PUB DATE 2001-09-01
NOTE 15p.; Paper presented at the European Conference on Quality in Early Childhood Education (11th, Alkmaar, Netherlands, August 29-September 1, 2001).
PUB TYPE Opinion Papers (120) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Child Behavior; Cognitive Development; Conflict; Conflict Resolution; Constructivism (Learning); Developmental Psychology; *Logic; Logical Thinking; Nonverbal Communication; *Peer Relationship; Teacher Role; *Young Children
IDENTIFIERS Nonverbal Behavior; *Procedural Knowledge; Social Constructivism

ABSTRACT

This paper asserts that teachers need to understand the logic of young children's behavior in their joint play and in their conflicts in order to respond sensitively, and that children construct logic-in-action (procedural knowledge) long before they are able to verbalize their logic in narratives. The basic assumption of the paper is that there is a functional continuity between the logic-in-action of young children and the verbalized logic of children's narratives. The paper first examines the concept of "logic" and the basic human motive to construct a "logic" world at the subjective level. The paper then discusses young children's logic-in-action of the sensorimotor period, relating this to some studies of children's co-construction of meaning in peer relations and their prosocial behavior during or after peer conflicts. The paper asserts that in peer conflicts, with or without their teachers' help, young children socialize, a natural heritage also shared with nonhuman primates in situations of conflict resolution. Finally, the paper explores the teacher's role in peer conflicts. (Contains 37 references.) (EV)

11th European Conference on Quality in Early Childhood Education (EECERA), Alkmaar, The Netherlands, 29 august to 1 september, 2001.

Keynote address of Dr. Elly Singer, University of Amsterdam and University of Utrecht.
E-mail: E.Singer@fss.uu.nl

The logic of young children's (nonverbal) behavior

Studying videos of free play among toddlers in Finnish and Dutch day care centers, Maritta Hannikainen and I became fascinated by the different educational approaches adopted by teachers to guide peer relationships among these children. The Finnish teachers we observed monitored the children's interactions closely and were actively involved in their play. In the Dutch day care centers, we saw several teachers taking a break during free (i.e.unstructured) play and taking care of the children only on demand. At first we were quite convinced that these Dutch teachers were failing to meet the current standards of high quality care. But studying peer conflicts, we became aware of certain important benefits of their approach. Those teachers who closely monitored the children in their care noticed every conflict arising between the children and were quick to intervene; whereas many Dutch children solved their conflicts on their own, often in a highly creative and pro-social way. We even had to acknowledge that sometimes a disagreement only turned into a full blown quarrel after the teacher had intervened. As a warming up exercise, I will show you a fragment of a fascinating video of conflict behavior among children in a German day care center. This video was made for the in-service training of teachers by Gisela Dittrich, Mechthild Dorfler and Kornelia Schneider of Das Deutsche Jugendinstitut (Dittrich et al., 1999). (Video-fragment)

These observations reminded me of the traditional wisdom of Dutch mothers: refrain from intervening in children's quarrels. I also remembered the intriguing comment made by a Japanese educator on an American preschool in Tobin et al.'s famous book *Preschool in three cultures* (1989). Small classes, he thought, were fine if the teacher was sensitive, but many are not. And 'if the teacher is mediocre (...), in a large class, children can more easily find a kind of safety or haven in the group.' (p. 63) 'Sensitivity' is a key concept both for this Japanese educator and currently for western experts; but what does this concept mean in the context of peer conflicts among young children? This is the question I want to discuss in my lecture. I will argue that teachers have to understand the logic of young children's behavior, that is, in their joint play and in their conflicts. Children construct logic-in-action (procedural knowledge) long before they are able to verbalize their logic in narratives. My contribution to this conference on 'Early childhood narratives' will therefore be to take a focused look at the nonverbal strategies used by young children to construct a shared logic and nonverbal 'story lines'.

The basic assumption of this lecture is that there is a functional continuity between the logic-in-action of young children and the verbalized logic of children's narratives. Firstly, I want to look at the concept of 'logic' and the basic human motive to construct a 'logic' world at the subjective level. I will then discuss young children's logic-in-action of the sensorimotor period (Verba, 1994). Secondly, I shall relate this to some studies of children's co-construction of meaning in peer relations, and their pro-social behavior during or after peer conflicts. In peer conflicts, with or without their teachers' help, young children socialize. This is a natural heritage, also shared with nonhuman primates in situations of conflict resolution. Finally, the teacher's role in peer conflicts will be discussed.

The meaning of logic in young children's life

Piaget, Vygotsky and current constructivist psychologists assume that the urge actively to adapt to the environment is basic to human development (Emde et al., 1991; Piaget & Inhelder, 1969; Vygotsky, 1978). From the start, the infant explores the environment, seeking what is new in order to make it familiar. Confronted with the environment, there is a basic motive to "get it right". This process of achieving balance, or equilibrium, leads children to develop new, adaptive psychological structures (Piaget, 1967). At a subjective level, this means that children as well as adults need to experience their own actions as logical and sound.

For young children, the environment is first and foremost a social environment. They are focused on understanding their social world. This is probably related to another basic motive, to maintain social relationships, and their need of bonding (Bowlby, 1969; Emde et al., 1991; De Waal, 2000). Infants come into the world preadapted for initiating, maintaining and terminating human interactions (Schaffer, 1977). By 3 months of age, infants and their caregivers are jointly experiencing pleasure in simple face-to-face interactions. (sheet plate 1). Within this familiar frame of joint play infants learn to "read" their mother's faces and they develop particular emotional procedures for monitoring their caregiver's emotional availability. From 10 to 12 months, most infants engage in social referencing. They use their caregiver's emotional expressions as a guide to how they are expected to feel and act in a particular situation. They know that a smiling mother means OK; and a stern looking mother means: Stop it, don't be naughty! It often frightens young children when a trusted parent turns into a 'stranger', for instance by putting on a facial mask.

A child's motive to understand and fit into social relations is most clearly seen in its "why" questions (Miller & Aloise, 1989). Piaget (1930) found that children's earliest "why" questions usually concern human actions. He observed that preschoolers are always looking for causes and more especially for intentions. They seem to believe that all behaviors are deliberate, voluntary, and not accidental. Sometimes young children think that physical events are also magically caused by human intentions: for instance, that the tree has fallen on daddy's car because I was mad at him; or that the sun rises because he wants to give us light. Young children 's urge to understand their social world

leads than to over-attribute to human intentionality. Even in western countries, with their denigrating attitude towards magical thinking, most children do not understand the concept of 'coincidence' or 'sheer accident' before they are eight or nine years old (Kuzmak & Gelman, 1986).

Young children's reasoning is often a source of pleasure and amusement for adults. In Holland we have a popular TV-program, called Praatjesmaker (Little Boasters) especially designed for us to laugh at young children's logic. The host acts as if he is really interested in the child, because the audience derives most amusement from a child seriously linking things up in an irrational way and drawing illogical conclusions. Adults, after all, we assume are logical and superior, and children illogical. This is great fun. Even though Piaget was one of the first psychologists to open our eyes to the specific cognitive structures of young children, his theory also reinforced this denigrating attitude towards young children's reasoning. Piaget's model of cognitive development is serial and hierarchical; it describes a sequence of stages through which the infant and child must pass before he or she can perform truly logical operations at the age of 11 or 12 years old. To perform logical operations means in his view: to reason logically about propositional verbal statements, manipulating propositions and drawing inferences in a deductive manner and to understand probability (Piaget, 1967, 1969). Despite preschoolers great interest in "why" questions, Piaget described their thinking as pre-causal, because they do not follow the procedures of either deductive or inductive reasoning (Piaget, 1930). But thinking propositionally and being consciously aware that one is thinking propositionally are not the same. Even infants are trying out their expectations by active manipulation of their world. Young children construct their logic at a sensorimotor level, long before they can verbalize their logic. The fact that this reasoning does not arrive at a conclusion judged by adults to be true or reasonable does not negate the fact that the process was one of generating hypotheses and arriving at logical, if frequently mistaken, conclusions.

The term 'logic' refers to two different meanings (Collins' Dictionary, 1998; Van Dale, 2000). Firstly, the term 'logic' refers to a method of reasoning, to the principles of abstract thought or to the 'laws of logic'. That is, it describes and prescribes the basic patterns of *consistent thinking,* based on a scientific philosophical system. However, the term 'logic' also refers the *way* in which individuals or social groups *consistently think;* to a particular logic of an individual or social group. Piaget's theory is based on the first notion of logic, and much of the research of his followers was focused on the logical failings in young children's thinking. This line of research has significantly impeded our understanding of the way young children do think. If we take the secondary notion of logic, the way that young children consistently think to construct a sensible and logical world, they are far from being pre-logical thinkers. According to Donovan and McIntyre (1990), they are, in fact, *obligatory slaves of logic* (p. 22). They need to understand their world; they spend much of their energy with playing, experimenting, learning by doing, looking and imitating, and communicating with their caregivers and peers. And young children are slaves of their own 'logic', because they miss the metacognitive skills of older children and adults – their objective logic in the sense of Piaget. Young children are unable to

see the results of their reasoning as a subjective interpretation of the world; they are unaware of the premises of this thinking or of the nature of the inferences they make. For them, their particular logic is 'the truth' and one of the pillars of their existence and of their feeling of security.

What, then, is the lesson of this discussion of the logic of children's thinking and its significance in their lives? The main question in my lecture was: what does the 'sensitivity' of teachers mean in the context of peer conflicts in day care centers? With regard to that question, we have learned that teachers have to be sensitive to children's ways of thinking. If they do not respect children's logic, they will be a threat to these children's feeling of security. Later I will discuss what happens when teachers intervene in conflicts between children without understanding their logic. But first I want to look more closely at the caregiver's role in creating a shared, logical world.

The caregiver's role in the construction of a shared logical world

The child's development takes place in the context of an intense dialectical relationship with the world, a relationship of mutuality. I have already mentioned the caregiver-infant interaction. (plate 2). That the infant learns to "read" his or her mother's different faces is the result of a joint activity to construct a shared world (Schaffer, 1977). The mother, as the more experienced party, attributes certain meanings to the infant's diffuse movements. She mirrors and imitates her child. She interprets her child's movements as communicative cues that suggest some joint course of action. If the child constructs some kind of logic in their joint play, this is not the result a purely cognitive activity, even less the achievement of a lonely thinker. It is also an affective achievement. I want to discuss this insight in more detail for two reasons.

1. Respecting the child's logic is not enough. Caregivers also have an active role in co-constructing a shared logic.
2. The basic motive to "get it right", to construct a consistent and logical world, is not purely cognitive. This motive is deeply related to the co-construction of rituals and routines; moral and social rules; the development of a self; emotional security; and a sense of belonging to a cultural group.

Constructivist psychologists assume that thoughts, affects and (social) behavior form an indivisible whole in human behavior. In line with Vygotsky and Piaget they emphasize that all our activities, including our thinking, are motivated (Piaget, 1967; Vygotsky, 1934/1987); and that all our emotions and moral affects suppose cognitive processes to signal that important interests are at stake (Frijda, 1986). They try to overcome the dichotomy within traditional developmental psychology of studying cognitive development and social-emotional development as separate domains. This requires new theoretical concepts. Fischer at al. (1990), for instance, use the concept of *'script'* to refer to the socially embedded knowledge of children as to how to act, to feel and express their emotions in

specific situations. Another example is the concept of *'cognitive-affective structures'*, by which is meant complex synthesizing structures integrating *cognition* (in the form of appraisals, expectations, and beliefs) with *motivation* (in the form of needs, interests, goals, emotional action tendencies), *affect* (in the shape of physiological arousal and sensory and bodily feeling) and *actions* (in the form of motor responses and social procedures and methods for acting (Miltenburg & Singer, 2000). Personally I prefer the concept of 'cognitive-affective structures', because 'structure' directly refers to the self-evident frames in which a person observes, feels and acts, i.e. to their 'inner logic'.

These new conceptualizations of the relationships between cognition, motivation and (social) activities leads to new insights into the development of a self. The cognitive-affective structures of infants are sensorimotor structures. According to Emde et al. (1991) these structures are stored as procedural knowledge of the infant's most emotionally engaging experience with their caregivers. They argue that the co-construction of procedural knowledge is crucial for the development of a 'moral self' in infants and a sense of belonging to a parent, family and cultural group. As a result of face-to-face turn-taking behavior with caregivers, infants learn rules for reciprocity, for give and take, together with the powerful motive for using these rules: 'together' is so pleasurable. They argue that this procedural knowledge is a basic form of morality, long before the child is able to verbalize moral rules. 'All systems of morality have a sense of reciprocity at their center with a version of the Golden Rule: "Do unto others as you would have them undo you"' (Emde at al., 1991, p. 261). Procedural knowledge and the experience of togetherness are also constitutive of other aspects of the developing self. Because of shared regularities, infants know how they can influence their caregivers; this gives them their first sense of control and agency. Later on, shared procedures, for consolation for instance, are put to use by the toddler as tools for self-regulation of his or her emotions. One might think here of children who imitate with their teddy-bear the rituals of consolation they have constructed with their caregiver, or of those little rituals that children have with their special piece of cloth before they fall asleep.

Emde et al. (1991) conclude that early morality is surprisingly positive. It is based on a strong motivation to share and to connect, and to construct shared rules. Even conflicts between parents and their toddlers often happen in a positive relational context. We all know of the 'terrible twos'. But these obstinate toddlers repeatedly look at their caregiver, either after or before a prohibited act. When they transgress parental rules, they often produce that special smile of naughty children (Juen & Banninger-Huber, 1999), partly as an attempt to induce their parents to relent, partly as a strategy to repair the relationship in advance. After a conflict young children often show an enormous need to be kissed and cuddled, to "make it right again" and to restore the feeling of togetherness.

The teacher's role in the construction of a shared logical world in day care centers

What do the foregoing insights have to do with the role of teachers in day care enters? Firstly, teachers have to offer procedures at group level in which young children can join in and actively participate to construct a shared logical world. The tools available to teachers are well-known: the daily routines, the structuring of time, space and play material and some explicit 'dos' and 'don'ts' (Jones & Reynolds, 1992). Secondly, it means that teachers have to create procedures that create a strong sense of belonging and togetherness. This is not merely a matter of shared togetherness between the teacher and an individual child, as is assumed in many studies of the teacher's sensitivity and attachment behavior (Singer, 1998). What is equally important are the feelings of solidarity between the children and in the whole group. Rituals are powerful tools to give shape to communal life and shared values (Butovskaya et al., 2000; Corsaro, 1988, 1997). For instance, rituals to welcome a new child in the group; rituals to celebrate birthdays and (religious) feasts; often with the active involvement of the parents; and also rituals for the regulation and sharing of emotional events; for consoling a hurt child or for keeping in touch with a sick play-mate who has to stay at home for a long period.

This emphasis on the importance of structure, rules and rituals also serves to highlight certain pitfalls for teachers in daycare centers. I want to mention here three that are related to the above theoretical discussion. Because the child's construction of cognitive-affective structures is a co-construction, involving the active involvement of the child and indivisible relations between cognition, motivation and social activities, teachers' structures should not be based solely on their need to control, and their rules should not merely relate to the day care center as an institution. Routines that are mainly based on institutional rules can make children feel powerless or obstinate (Jones & Reynolds, 1992; Hakkarainen, 1991). They are not helpful to the child's development of a sense of agency. A simple strategy to make children co-constructors of a consistent, logical, shared life in which they actively participate, is to ask their opinion and to give them responsibility in solving problems. For instance when John is ill: shall we make a present for him? What shall we make?
A second pitfall is that the routines easily become boring, everything becomes too predictable and too safe. Children strive to make *new* things familiar, and therefore they need risks and new challenges. They want to understand the whole world!
A third pitfall has to do with the processes of co-construction between the children themselves. Peer relationships differ from the teacher-child relationship. Teachers should give young children room for their own jokes, their own style of constructing a shared life and strategies for solving problems. In the following I will discuss in more detail the teacher's role in the development of children's peer-relationships.

Studies of peer interactions

Until the 1980's, in mainstream developmental psychology the peer relations of children under three years of age were considered to be rare, short-lived and often aggressive (Schaffer, 1984; Verba, 1994). That opinion was hardly based on research. But since the increase in use of day care facilities for very young children, peer interaction research has been receiving more attention. In Europe, important and innovative research for studies of peer interactions of young children, has been conducted by the CRESAS in Paris (Centre de Recherches de l'Education et de l'Adaptation Scolaire); often in cooperation with Italian researchers like Bonica and Mussati (Stambak et al., 1983; Stambak & Sinclair, 1993; Stambak & Verba, 1986; Verba, 1994). In former East Germany and other east and west-eupopean countries there also were (small) groups of researchers who have done innovative work in this field; because of languages barriers, these studies only have become recently available for an international public (Lamb et al., 1992). These psychologists try to understand how babies and toddlers are able to construct shared meanings during their social play, mainly through nonverbal means. Reading their studies, one cannot but be impressed by the way very young children manage their interpersonal relationships, being attentive to their playmates, either waiting patiently or taking the initiative, by accepting proposals or modifying them. Far from being aggressive, they found that young children invest a lot in sharing and social participation.

One of the most radical defenders in the USA of the value of peer relations is the sociologist Corsaro (1997), who studied children's peer cultures in day care centers. His studies show that toddlers spontaneously construct specific routines (run and chase; rough and tumble; building things) that give them a 'we-feeling' and an escape from their teacher's control. His analyses reveal how children creatively appropriate adult's roles and routines, and how they use information of the adult world to deal with practical problems in their peer culture.

Personally, I owe a great deal to Brazilian researcher Zilma de Oliveira. During her stay in Holland, she taught me how to observe a collage of different stories lines in the cooperative play of young children (see for an extensive analysis of joint play episodes (Oliveira & Rossetti-Fereira, 1996). As a result of discussing a video of two girls, Vania (21 months) and Telma (23 months) in a Brazilian day care center, I came to a better understanding of the theories I was already familiar with. I am therefore happy that she has given me permission to share this video with you. The two girls in this video are too young to discuss in advance a script for a joint play. Nevertheless they succeed in co-constructing a joint play by enacting fragments of well-known routines and roles daily experienced in their homes or in the day care. In their play you can see, among other things, fragments of a birthday singing ritual, a combing-and-washing-the-baby-routine and the game of building up a pile of blocks and knocking it over. These young children's use of rituals and routines seems to confirm the importance of procedural knowledge I have discussed before (Emde et al., 1991) and Corsaro's emphasis on routines. (the video, 4 minutes).

In the most dramatic part of this joint play episode, Vania uses various strategies, trying to involve Telma in the role of baby-to-be-taken-care-of. Vania acts as a mother in a very expressive

way. She looks at Telma, smiles to persuade her and touches her in a gentle way. But she also assumes an authoritarian postural attitude, trying to force Telma into submission, and is quick to reconcile the ensuing disagreement to prevent any escalation. Telma initially remains more passive, but later on she tries to escape from the script proposed by Vania by introducing a new script of her own. At the moment of crisis, both girls look at the researcher. Telma is almost crying and seems to ask for help, while Vania produces a kind of vague smile that is characteristic of naughty children (see Bonica (1997) for an analysis of social referencing by young children during quarrels). Though the researcher refrains from intervening, Vania probably knows that she has gone too far. In any case, she gives way and for a while complies with Telma's proposal to play with the blocks.

Prosocial behavior in peer conflicts

Both video-fragments I have showed, the German and the Brazilian video, illustrate the way young children negotiate and their ability to find creative solutions for their conflicts. Recently researchers have become aware of the pro-social behavior of young children during conflicts. Surprisingly, perhaps, we owe this new interest to researchers of nonhuman primates, specifically to the work of De Waal on chimpanzees (De Waal, 2000; Aureli & De Waal, 2000). De Waal and his colleagues argue that, whereas aggression in chimpanzees was traditionally considered to be an antisocial instinct, we have to replace this notion of aggression with a conceptual framework in which it is a tool of competition and negotiation. When survival depends on mutual assistance, the expression of aggression is constrained by a need to maintain beneficial relationships. De Waal and his colleagues found that chimpanzees kiss and embrace after fights, and that other nonhuman primates engage in similar acts of "reconciliation" (sheet plate 3 and 4). According to them, in human groups (families, day care centers and schools) aggressive conflict is subject to the same constraints as those now known in cooperative animal societies. Wherever social relationships are valued one can expect the full complement of checks and balances. This new theoretical approach to aggression has led to cooperation between nonhuman primates ethologists and researchers of preschoolers in day care centers. These studies confirm the insights mentioned above of the French and Italian researchers: that young children are focused on a project of sharing and a concern for continuation of their interactions with peers (Verba, 1994). Among preschoolers, peaceful associative outcomes, in which both opponents remain together and work things out on the spot are very common. Forms of child reconciliation, expressed in invitations to play, body contacts, offers of objects, self-ridicule and verbal apologies, all serve to enhance tolerance (Killen & De Waal, 2000; Verbeek et al., 2000). In addition to these resources, young children also use verbal strategies to construct a sense of togetherness, for instance by using nicknames for each other (De Haan & Singer, 2001).

In our study of peer conflicts, Maritta Hannikainen and I arrived at comparable conclusions. In our study we distinguished three types of conflicts:

- *bad luck* when the 'victim' hardly reacts to being hit, pushed or rejected;
- *disagreement* when children persist in their resistance or communication of their ideas and feelings, either nonverbally (hitting, smiling, giving an object) or verbally (directing, clarifying and justifying), until a compromise is found or one of the children gives way;
- *crisis* when children show strong emotional reactions, such as crying, getting angry or showing remorse.

We studied almost 40 hours of videotaped data of two- and three years olds during free play, in nine Dutch day care centers and in one Finnish day care center. We found that crises were rare. Of a total of 222 conflict episodes, the children developed a crisis in only 47 (21%) of these episodes. Most of these crises (75%) lasted less than one minute. The young children in our study seemed to be aware of the relational dangers of crises. Their use of nonverbal strategies for de-escalating a disagreement were characteristic. Three year-old Jan, for instance, wants to participate in Bert's play with a xylophone. Jan keeps on trying for more than 20 minutes before he manages to be accepted by Bert as a playmate. The whole time he follows Bert around while Bert wanders round the room with his xylophone, playing a bit, then walking on again. Sometimes Jan is allowed to touch the xylophone, but Bert is keen to keep his control over the xylophone. Every time Bert resists Jan's advances by pushing him away or hitting him, Jan withdraws and gives in. But he does not give up. After a few seconds he tries again. In our data, this pattern of withdrawal, giving up and trying again, belonged to the most common strategies of the children: to stick to their own activity and ideas and to prevent a disagreement escalating into a crisis.

Almost all conflicts started with simple forms of resistance, that is pushing, hitting, saying or shouting 'no' or 'don't'. But during the negotiations there were also a lot of positive gestures and smiling, and the children often proposed and accepted alternative objects or activity ideas. Though the children did use verbal directives and arguments, the solution was mainly found at a nonverbal level. (Perhaps you remember in the German episode, the researcher's advice: 'Have you said that you want to sit on that chair?' And the girl who responds to this advise by shouting in a loud and angry tone, "I want to sit on my chair again". That didn't work. But the practical solution of the little boy – offering his seat - did work). It is very difficult for young children to verbalize their plans in advance or to discuss proposals for resolving their conflict; at least without help of their caregiver or teacher. But they are masters in nonverbal communication and in using procedural knowledge of give and take. Most conflicts between the children arise during joint play or parallel play (60%), and of these conflicts only 10% end by splitting up. One of the best predictors of peacemaking seems to be the degree of positive contact between the children before the conflict erupts (De Waal, 2000).

The teacher's role in peer conflicts

If young children are so skilful at solving peer conflicts on their own, what then is the teacher's role? In our study, teachers intervened in a third of all conflict episodes; 79 episodes compared to 143 episodes without teacher intervention. Our data clearly show that, in general, teachers are no better at resolving conflicts than young children. When children are playing together and the teacher intervenes in their conflict, they end by separating in 20% of the cases; in similar conflict episodes without teacher intervention that happens in only 8% of the cases. Nor is this is because teachers tend to intervene in more serious conflicts. Many crises are resolved without the assistance of the teacher, and teachers often intervene without any appeal from the children. Moreover, it happens quite frequently that a crisis develops only after the teacher has begun to intervene (in almost a third of the episodes in which a teacher is involved in a crisis between the children). These crises tend to last longer (there was a teacher involved in all but one of the crises that lasted longer than a minute). Should we conclude from these data that teachers ought to refrain from intervening in conflicts? Yes, I think it is often better to refrain than to intervene. But I also think that teachers need to develop a special sensitivity and skills for solving children's peer problems.

First of all, teachers have to ensure that they do not become part of the conflict. In this respect, teachers often failed, mainly because they resorted to high power strategies (Singer & Hannikannen, 2000). Half of the teacher's interventions could be classified as a form of high power strategy, in which the teacher is following her own agenda solely to restore order. In the other half of the interventions the teacher tried to mediate between the children. When the teacher takes side by helping the 'victim', blaming the 'wrongdoer', or by imposing a solution, she runs the risk of destroying the balance of power between the children. Often she (unintentionally) reinforces the power of one of the children. The child who has the support of an omnipotent adult tends to stick to his or her position. Some of the children, we noted, took advantage of the teacher by crying loudly to enlist her support. Any unfair treatment by the teacher appeared to evoke more violent emotions by the 'victim' than unfair treatment by a peer. This was probably because a 'victimized' child feels more powerless against the teacher; and because the violation of the child's moral logic by a teacher who is supposed to take care and to protect, induces fear. We saw several examples of children who take their revenge on a peer after an unfair intervention by the teacher. Unfair treatment of the teachers merely fuels further conflict between children.

For teachers, it is hard to know what solution will be acceptable for all children involved. In most cases she will not know the full history of what happened before the conflict erupted. Even the children often do not know the lines of their script before they are acted out; so how could the teacher know what's best? And most conflicts cannot be resolved by applying social or moral rules, because contradictory rules could equally be applied. When a child wants to participate in the play of another child, what rule should be applied? 'Children should learn to share and play together'; or 'children should not disturb each other'? (for analysis of this apparent contradiction, see Corsaro, 1997).

Of course, in cases where children are bullying each other teachers have to intervene immediately. In such a situation she has to forbid the means (biting, spitting, hitting that causes pain) that children sometimes use to enforce their will. In her role as protector and guardian of the rule 'you should not harm each other', the teacher is accepted by all children. In fact, most children look to the teacher or the researcher before or after that rule is violated. But the teacher can do more to participate in the resolution rather than become involved in the conflict. On the basis on my previous thoughts on the logic of young children's nonverbal behavior, five obvious suggestions can be made.

1. The natural tendency of young children to use nonverbal strategies to de-escalate a conflict should be strengthened by fostering a sense of belonging. Teachers can foster this sense of belonging by introducing rituals and routines in which the children actively participate.
2. The teacher can offer 'tools' for the cultivation of this natural tendency for pro-social behavior during conflicts. For instance by using maxims like "don't hurt", "use your words" and "take turns", that can be adopted by the children; and by teaching songs or ritualized gestures for reconciliation (Butovskaya et al., 2000).
3. The teacher has to understand that conflicts are a natural part of social life and playing together. By structuring the room, time and play objects, she can prevent an excess of conflict, but conflicts over the content of joint play, or the use of objects and over the rejection of children who want to join in, are normal phenomena in day care centers. In general, young children are well equipped to resolve these conflicts on their own.
4. In the case where the teacher has to intervene, she has to respect the logic-in-action of all children involved. She has to mediate between the children and aim to ensure that the children's play continues (for a further discussion of mediation, see Singer & Hannikainen , 2000).
5. In cases where the teacher wants to discuss the conflict with the children, she has to function as a more experienced other who actively helps the children to verbalize their feelings and activity ideas: she has to ask questions. And she has to be careful not to obstruct their nonverbal skills of communication.

In conclusion

Children younger than four years old construct and co-construct a shared logic during their play and they rarely discuss the ideas that underlie their play in advantage. This can result in conflicts and in a collage of different story lines that seem illogical or even without sense to an adult. But adults usually cannot get things 'straight' for young children. In my introduction I quoted a Japanese educator who held the view that small classes are only fine if the teachers are sensitive. He warned against too much interference of the wrong kind. I think this educator makes a valid point: it is not at all unusual for teachers to fuel peer conflicts. But I do not agree with his plea for large groups. As Stambak and Verba (1986) have argued: young children need teachers who are nondirective, but

nevertheless highly interested. When they are playing together, young children often look to the teacher for reassurance, especially during conflicts.

Working with very young children in groups is a relatively new profession, a profession that demands the development of skills that are different from the skills of caregivers at home. Therefore teachers need training to understand the logic inherent in young children's behavior. They need someone who teaches them to look at young children differently, just as Zilma de Oliveira did to me. Teachers have to develop a day care culture, in cooperation with the children, that fosters the construction of a shared logical world.

References :

Bonica, L. (1997). *Regulating processes between children in group situation: children's observation of an adult consoling another child.* Paper presented at the 7th European Conference on the Quality of Early Childhood Education, Munich 3-6 September 1997.

Bowlby, J. (1969). *Attachment and Loss: Vol 1.. Attachment.* New York: Basic Books.

Butovskaya, M., Verbeek, P., Ljungberg, T., & Lunardini, A. (2000). A multicultural view of peacemaking among young children. In F. Aureli & F.B.M. de Waal, *Natural conflict resolution* (243-258). Berkely: University of Calofornia Press.

Corsaro, W. (1988). Routines in the peer culture of American and Italian nursery school children. *Sociology of Education, 67*, 1-26.

Corsaro, W. (1997). *The sociology of childhood.* Thousand Oaks, Cal.: Pine Froge Press.

Donovan, D.M., & McIntyre, D. (1990). *Healing the hurt child. A development-contextual approach.* New York: Norton.

Dittrich, G., Dörfler, M., & Schneider, K. (Eds.) (1998). *Konflikte unter Kindern beobachten und verstehen.* Munich: Deutsches Jugendinstitut.

Dittrich, G., Dörfler, M., & Schneider, K. (1999). *Konflictverhalten von Kindern in Kindertagesstatten. 5 Materialbeispiele fur die Fortbildung.* 50 Min., VHS/PAL, Munchen: Deutsches Jugendinstitut.

Emde, R.N. van, Biringer, Z., Clyman, R.B., & Oppenheim, D. (1991). The moral self of infancy: affecitive core and procedural knowledge. *Developmental review, 11,* 251-270.

Fischer, K.W., Shaver, P.R., & Carnochan, P. (1990). How emotions develop and how they organise development. *Cognition and Emotion, 4,* 81-127.

Frijda, N.H. (1986). *The emotions.* Cambridge: Cambridge University Press.

Haan, D. de, & Singer, E. (2001). Young children's language of togetherness. *International Journal of Early Years Education, 9,* 117-124.

Hakkarainen, P. (1991). Joint construction of the object of educational work in kindergarten. *The Quaterly Newsletter of the Laboratory of Comparative Human Cognition, 13,* 80-97.

Jones, E., & Reynolds, G. (1992). *The play's the thing. Teachers' roles in children's play.* New York: Teachers College Press.

Juen, B., & Banninger-Huber, E. (1999). *Conflict regulation in early mother-child dyads.* Paper presented at the 8th European Conference on "Facial Expression, Measurement and Meaning", University of the Saarland, Saarbrucken (Germany), September, 27-30, 1999.

Killen, N., & Nucci, L. P. (1995). Morality, autonomy, and social conflict. In M. Killen & D. Hart (Eds.) *Morality in everyday life. Developmental perspectives* (pp. 52-85). Cambridge: Cambridge University Press.

Killen, M., & Waal, F.B.M. de (2000). The evolution and development of morality. In F. Aureli & F.B.M. de Waal, *Natural conflict resolution* (352-372). Berkely: University of Calofornia Press.

Kuzmak, S.D., & Gelman, R. (1986). Young children's understanding of random phenomena. *Child Development, 57,* 559-566.

Lamb, M.E., Sternberg, K.J., Hwang, C.P., & Broberg, A.G. (1992). *Child care in context. Cross-cultural perspectives.* Hillsdale NJ: Lawrence Erlbaum Ass.

Miller, P.H., & Aloise, P.A. (1989). Young children's understanding of the psychological causes of behavior : a review. *Child Development, 60,* 257-285.

Miltenburg, R., & Singer, E. (2000). A concept becomes a passion. Moral commitment and the affective development of the survivors of child abuse. *Theory & Psychology, 10,* 503-526.

Oliveira, Z. Moraes Ramos de, & Rossett-Ferreira, M. C. (1996). Understanding the co-constructive nature of human development : role coordination in early peer interanction. In J. Valsiner & H.H. Voss (Eds.), *The structure of learning processes* (pp. 177-204). Norwood NJ: Ablex Publishing corporation.

Piaget, J. (1930). *The child's conception of physical causality.* London: Routledge & Kegan Paul.

Piaget, J. (1967). *Six psychological studies.* New York: Vintage.

Piaget, J., & Inhelder, B. (1969). *The psychology of the child.* London: Routledge & Kegan Paul.

Schaffer, H.R. (1977). *Studies of mother-infant interaction.* London: Academic Press.

Schaffer, H.R. (1984). *The child's entry into a social world.* London: Academic Press.

Singer, E. (1993). Shared care for children. In M. Woodhead, D. Faulkner & K. Littleton (Eds.), *Cultural worlds of early childhood* (pp 64-83). London: Routledge in association with The Open University.

Stambak, M., Bonica, L., Maisonett, R., Musatti, T., Rayna R., & Verba, M. (Eds.) (1983). *Les bébés entre eux: Découvrir, jouer, inventer ensemble.* Paris: Presses Universitaires de France.

Stambak, M., & Sinclair, H. (1993). *Pretend play among 3 year olds.* Hillsdale NJ: Erlbaum.

Stambak, M., & Verba, M. (1986). Organization of social play among toddlers: An ecological approach. In E. C. Mueller & C. R. Cooper (Eds.) *Process and Outcomes in peer relationships* (pp. 229-247). Orlando: Academic Press.

Tobin, J.J., Wu, D.Y.H., & Davidson, D.H. (1989). *Preschools in three cultures.* New Haven,: Yale University Press.

Verba, M. (1994). The beginnings of peer collaboration in peer interaction. *Human Development, 37,* 125-139.

Verbeek, P., Hartup, W.W., & Collins, W.A. (2000). Conflict management in children and adolescents. In F. Aureli & F.B.M. de Waal, *Natural conflict resolution* (34-53). Berkely: University of Calofornia Press.

Vygotsky, L.S. (1978). *Mind in society. The development of higher psychological processes.* Cambridge, Mass: Harvard University Press.

Vygotsky, L.S. (1987). Thinking and speech. In R.W. Rieber, A.S. Carton and J.S. Bruner (Eds.), *The Collected Works of L.S. Vygotsky, Vol. 1 Problems of general Psychology* (pp. 39-285). New York: Plenum Press (original work published 1934).

Waal, F. de (2000). Primates. A natural heritage of conflict resolution. *Science, 289,* 586-590.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: The logic of young children's (non verbal) behavior	
Author(s): Elly Singer	
Corporate Source: Department of Developmental Psychology University of Utrecht	Publication Date: 1 Sept 2001

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1 ↑ ☒

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A ↑ ☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B ↑ ☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature:	Printed Name/Position/Title: Dr. Elly Singer
Organization/Address: Department of Devel. Psych. PO box 80140, 3508 TC Utrecht The Netherlands	Telephone: ++31 30532900 / FAX: +31 302534770
	E-Mail Address: E.Singer@fss.uu.nl / Date: 9-10-2001

11th Annual EECERA Conf. (Alkmaar, The Netherlands, Aug. 29 - Sept. 1, 2001. *(over)*

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:	Karen E. Smith, Assistant Director ERIC/EECE Children's Research Center University of Illinois 51 Gerty Dr. Champaign, IL 61820-7469

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: ericfac@inet.ed.gov
WWW: http://ericfac.piccard.csc.com

EFF-088 (Rev. 2/2000)