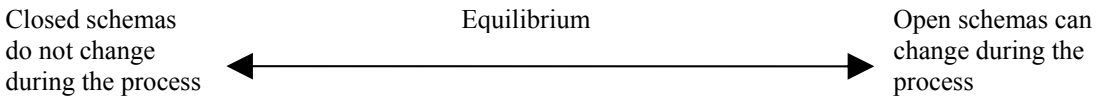
How children orientate among peers

When we look at children orientating among peers, we must therefore approach children as active participants in and creators of their relationships and social situations. The theoretical frame for this research is fairly simple. It includes the ideas of equilibration, adaptation and agency. It has some resemblance to Piagetian structuralism but differs from it in at least one important way. When Piaget studies how children change in interaction with the environment, in this research children's schemas can also change the environment.

The theory of knowing, as first articulated by Piaget, is essentially biological in nature; that is, an organism encounters new experiences and events and seeks to assimilate these into existing cognitive structures or to adjust the structures to accommodate the new information. The cognitive structures, or schemas, are formed and re-formed based on experiences, beliefs, values, socio-cultural histories, and prior perceptions. Children reformulate their schemas to make sense of dissonant information and experience. Growth and development are prompted by discrepancy or 'disequilibrium' between what is believed to be true and what is now revealing itself in experience. Accommodation happens when current experiences can not be assimilated in the existing schema. When children encounter something new, they must either assimilate it into an existing scheme or create a new scheme to deal with it. In assimilation, children's schemas can be described as closed. During assimilation the schemas themselves are not changing. Whereas in accommodation children's schemas are open; they may change along the interactive process. Equilibrium can be described as a balance between accommodation and assimilation and it is illustrated in figure 1.

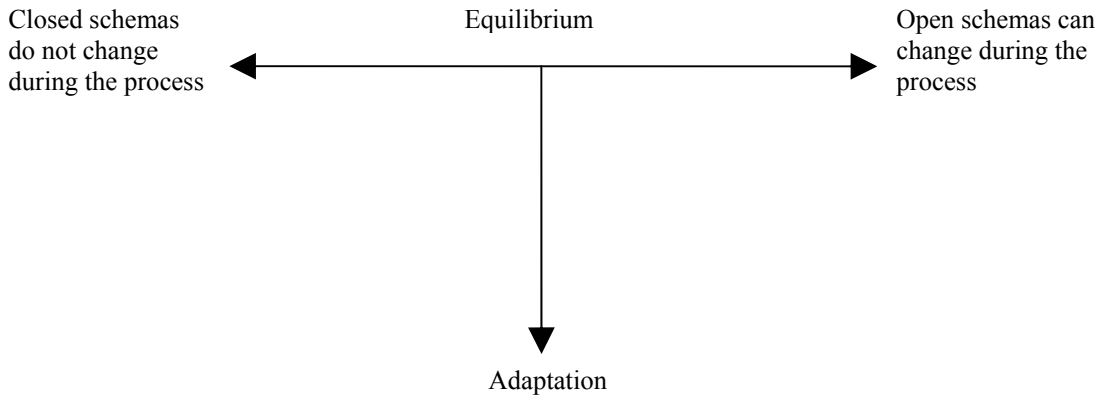
Figure 1 Equilibrium is a balance between open and closed schemas



In closed schemas children's views do not change because of the events. Closed schemas fit in the same structure before and after the process. Open schemas include orientation towards the environment. The open schema has the possibility of the schema to change. When the schema is open towards an element in the environment, the phenomenon can change the schema.

Taken together, assimilation and accomodation make up adaptation, which refers to the child's ability to better adapt to his or her environment in the course of development. The child changes in the processes with the environment. Through adaptation child develops to be even more adaptive than before. Piaget looks at the child developing (changing) through stages. On some occasions children's schemas are inadequate. If the schemas are open the children may adjust his/her schemas or create a new one. If the schema is closed, the child uses his/her current schema and the discrepancy continues until the child is ready to adapt more adequately to the environment. The child compensates his/her inadequate schemas and adapts better through changing and self-organizing his/her schemas. The adaptive process is presented in the figure 2.

Figure 2 The interaction between children and environment is seen through children's adaptation



Piaget also sees the social development through adaptation. Children's social activities are studied in the light of child development. It is the child that changes. Through interaction child learns better ways to adapt to the environment. When the interactive process is studied, only the child's changing is taken in to account. The research and theory concentrates on children's logical, social and moral development. Vygotsky emphasizes more the social aspects of the interaction. In his idea of proximal development the child develops within the socially constituted settings, but even Vygotsky concentrates on the child's development. Vygotsky also looks at the child that is changing.

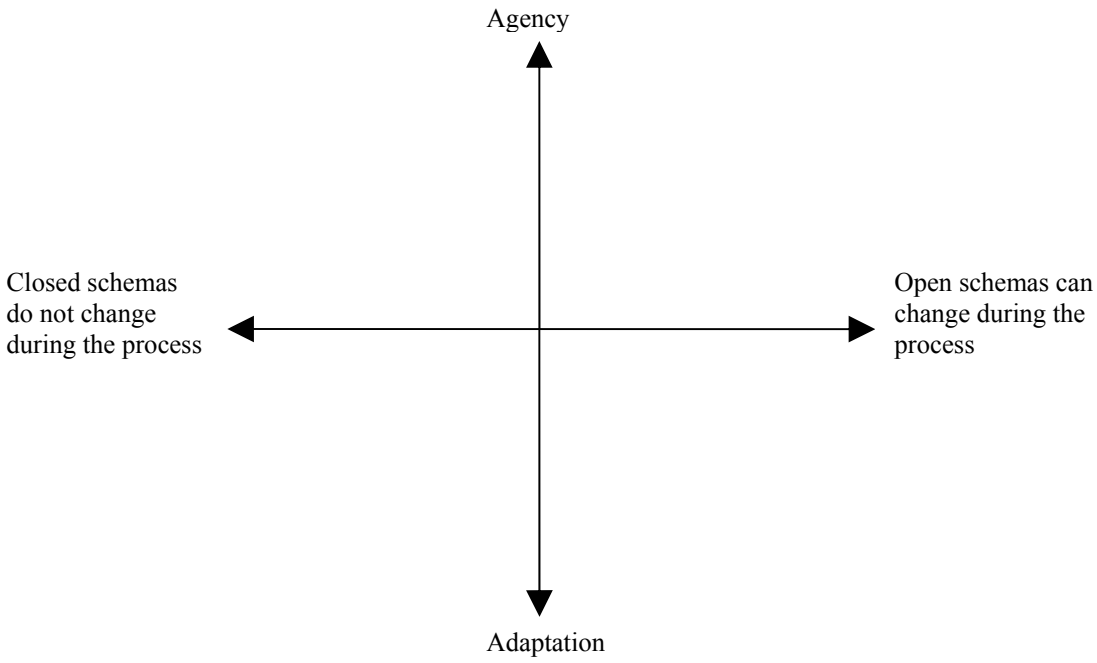
But in the interaction it is not only the child that is changing. The child can change the environment too. James & Prout point out that childhood and children's social relationships and cultures are worthy of study in their own right, and not just with respect to their social constructions by adults. This means that children must be seen as actively involved in the construction of their own social lives, the lives of those around them and of the societies in which they live. (James & Prout 1997, 4-5.)

As Solberg points out, children are involved in and contribute to the organization of everyday life in modern urban families. The content of childhood emerges through the

interaction of parents and children. Although in many ways children's position is a weak one, they do not passively adapt themselves to what their elders say and do. Children are in a position to influence the outcome of the negotiating process in directions which they perceive to be favourable to them. (Solberg 1997, 126-127.)

The children are potential agents of change in the situations within which they interact in their environment. The Oxford reference dictionary defines change as the act or an instant of making or becoming different. So when one says that the child is changing, it should mean both ways: The child can change or the child can be an agent of change. We need to complement Figure 2 to include the child not only as adapting but also as an agent of change.

Figure 3 The children's views as potential agents of change

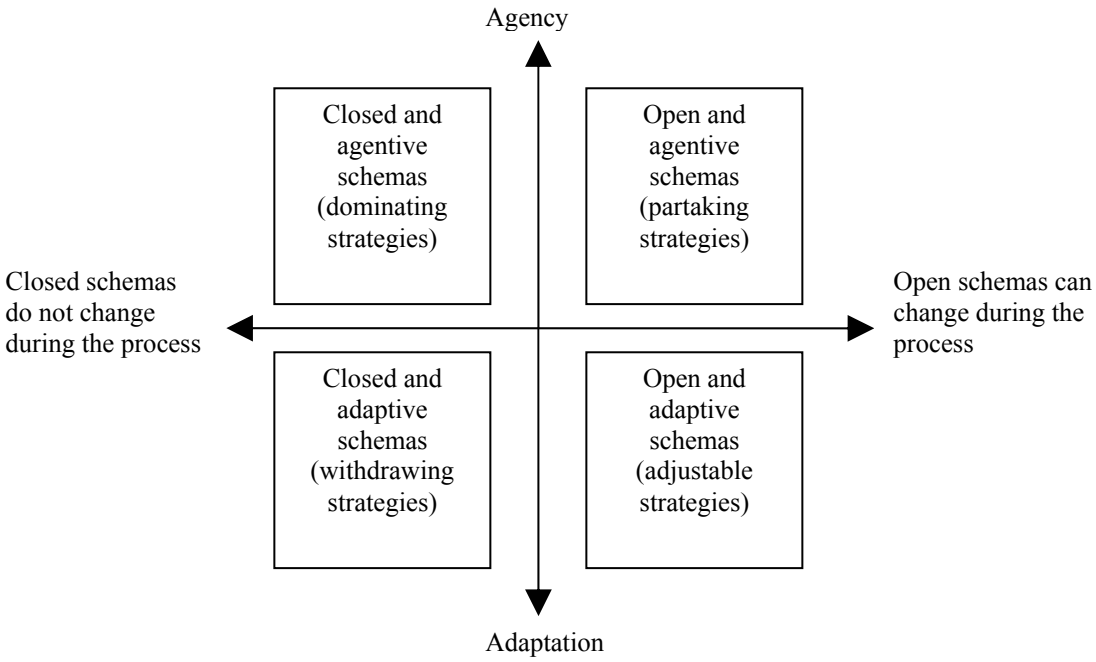


Schema is seen as a cognitive structure or a pattern of mental action. When Piaget discusses schemas it is often in conjunction with the re-organization of intellectual stages. Here they are more in reference to concrete images of concrete situations. Piaget is

interested in the process by which the schemas develop through adaptation. In this research the perspective is partly turned upside down. The centre of this research is to find out how children's schemas change the environment. In this research the schemas are often termed as strategies, but it must be noted that they are referred to as mental images, not as concrete actions. The mental strategies have an effect on the action strategies but they are not the same thing.

These mental images, schemas, or strategies, can have four combinations in the two continuums described in Figure 3. First the strategies can be adaptive and open, which means that children's schemas do not change the conditions of their situation or environment, but the environment may change the children's view of the situation. Second the schemas can be agentive and open, which means that both the children's schemas and the environment may change. Third the children's schemas can be closed and agentive, which means that the children's view of things changes the environment, but the environment does not change the children's schemas. Fourth the children's schemas can be closed and adaptive, which means that children's mental images do not change the environment, and neither do their strategies change. This makes up the theoretical framework of this research, which resembles both the Piagetian ideas of adaptation and the Hegelian tradition in which the process transcends both of the interacting phenomenon, which Engels describes in the following: "The great basic idea that the world is not to be viewed as a complex of fully fashioned objects, no less than the images of them inside our heads (our concepts), are undergoing incessant changes" (see Vygotsky, "*Mind in society,* 1978). The theoretical framework can be seen in Figure 4.

Figure 4 Theoretical orientation of the research



The addition of agentive schemas adds a new phenomenon to the equilibrium process. Both closed and open schemas may or may not change the environment. Piaget did not consider the possibility of schemas changing the environment.

Research problem

How do children orientate among peers in kindergarten?

How do the children's schemas about their situational approach relate to children's orientation among peers?

Conducting research

For this research 73 children, aged 3-7 years, from four randomly selected kindergartens in Helsinki, were interviewed. The children were asked fifteen different questions which are listed in Table 1.

Table 1 The interview questions

1. Let's think that somebody else is having the toy you want. What do you do?
2. What do you do when you are playing and somebody comes to disturb you and interrupts your play?
3. Let's think that you are playing with someone and your friend wants to change play. What do you do?
4. What if a friend will not play with you? What do you do?
5. Let us think about a situation that somebody comes to tease you. What do you do?
6. When there comes a situation that teacher comes to stop your play, what do you do then?
7. Let's think that you are playing with a friend and you would like to change play but your friend does not. What do you do?
8. What if teacher will not play with you in the Kindergarten?. What do you do?
9. Let us think that you are playing a game with somebody and the other does not follow the rules. What do you do then?
10. What if you are doing an important work and somebody comes to disturb you, what do you do then?
11. Think of a situation that your work is ruined and you fail. What do you do?
12. What if somebody takes your toy?
13. Imagine that teacher gets annoyed at you and scolds you in Kindergarten. What do you do then?
14. From a kindergarten you may not go home alone in the middle of the day, but you would like to go home already. What do you do then?
15. What if you will be left alone among others in kindergarten. What do you do?

The answers were grouped in to three categories: 1) if the child reports a change in the condition of the given situation or not, 2) if the child takes the environmental condition in account or not, or 3) the answer was unclear of indecisive. Children's actions were observed in a normal kindergarten environment. The systematic sampling was used and the children were observed in two-minute intervals each a total of 1678 times. The observation took place always between 8 am and 12 pm. The third way of getting information was teachers' and parents' evaluations of children's actions: did the children change themselves in the changing situation or did they change their situations. The evaluation was done with a questionnaire in which the child's relation to the changing situation was evaluated from one to six on the Likert scale.

Results

While observing the children one observed variable included children's nearest contact. The child that was most involved in mutual interaction with the observed child was recorded as the child's nearest contact. If there were several children, the closest contact depended on the amount of attention given to her/him. If there was no near-child contact (e.g. the child was alone or looking at an adult) or there was a group of children with equal attention given to them, the nearest contact field was left empty. The average of all observations for one child was 22.7 times (st. dev. 10.3). The average for one child to be observed as nearest contact was 12.3 observations (st. dev. 8.0). When the total number of observations was 1678, a nearest contact was found on 831 (49.5 %) occasions.

At the time of observation the child's name was written down, and at the point of data input the name was replaced by the child's number. The children's information about their average actions, perceptions of agency in different questions and adults' evaluation of them were merged in to the observation data. In this way every data of observation had enclosed the characteristics of the observed children. After that the nearest contact's observation information, classifications of the children's agency perceptions and adults' evaluation data were merged according to the number. In this way every observation (case) had information about the observed situational variables, characteristics of the observed children, and also all the variables concerning the children's nearest contact.

The children's orientation among peers is approached by first looking at how children's perceived agency affects their attraction among peers. Because age and gender are so central in their orientation, they must be checked before we can go on. Children do not orientate only as they please, but also according to their situation and their developmental history. Children's personal orientation is the seed for their personal growth. The central characteristics of child contacts are studied. The relationship between children's views of the situations and their peer orientation is explored.

Gender differences in child contacts

When studying the dynamics of peer relations it is impossible to bypass the effect of the gender. The boys' nearest contact was 87.9 % (379 times) of the time another boy. For girls it was another girl in 87 % (342 times) of the time. In Table 2 the variables most characteristic for the girls in comparison to boys are listed. The order of the variables reflects the proportional amount of difference between boys and girls.

Table 2 The typical characteristics of the girls' nearest contacts when compared to boys' nearest contacts

Variable	Boys nearest contacts	Girls nearest contacts
Role play (percent of observations, b7)	6.7 %	14.8 %
Child's attention is focused on another child (percent of observations, d3)	16.2 %	27.4 %
Work, e.g. child helps at cleaning, does tasks) percent of observations, b10)	4.3 %	6.2 %
My child changes everything all the time, permanent conditions do not satisfy her/him (parents evaluation, p1, scale 1-6)	1.78	2.22
The child is socially bold. Fear does not restrict his/her actions (teacher evaluation, ev8, scale 1-6)	3.13	3.80
The child is socially sensitive and considerate to others (teacher evaluation, ev9, scale 1-6)	3.13	3.71

*Differences are statistically significant at the .000 level (Mann-Whitney test)

The differences are not surprising. Girls play with children who play more at role play (b7) and with children who pay attention more to one child (d3). The girls seem to pay attention to their nearest contacts that help in different tasks, like cleaning and independent tasks (b10). The parents evaluate girls nearest contacts as seeking more for change (p1). The teachers see girls nearest contacts as socially more bold and sensitive (ev8 and ev9). The differences are almost the same when comparing boys and girls, not their nearest contacts. The table thus may reflect more the differences between boys and girls, not just their preference of nearest contacts.

In table 3 the variables with the largest values for the boys (when compared to girls) are listed. The order of the variables reflects the proportional amount of difference between boys and girls.

Table 3 The main characteristics of boys' nearest contacts (when compared to the largest proportional differences with girls)

Variable	Boys' nearest contacts	Girls' nearest contacts
Forbidden action (e.g. teasing, breaking or disturbing, b11)	1.3 %	0.4 %
The number of closed and changing (dominating) answers in the interview	1.95	1.07
Other action (action that does not fit in other categories; Situations that often include waiting, a lot of people, and confusion, b12.)	2.1 %	1.4 %
Adult (e.g. the child follows the adult's narrative, discusses with the adult, d2)	27.5 %	18.7 %
Rule play (e.g. playing football or board games, b8)	7.3 %	5.5 %
Child defines also what others do, child uses his/her influence on others (teacher evaluation, ev3)	3.62	2.74
Toy & material play with others (e.g. playing side by side at the sand box, building a hut with others, b5, % of all action)	19.7 %	15.2 %

* Differences are significant at the .000 level except "other action" which is significant only at the .016 level

The greatest difference between boys' and girls' child contacts is the proportion of forbidden action. Boys also tend to orientate towards children that act in a way that does not fit in the predefined categories. These variables indicate that boys actions more often do not fit in the general actions of the kindergarten than girls' actions. The boys' relationships with their nearest contacts seemed to deal more with power than girls'. The boys give more attention to the child contacts with more closed and changing (dominating) strategies. Teachers also evaluate the nearest contacts as more influential than others. As with boys, the differences are almost the same when comparing boys and girls, not their nearest contacts. The table thus may reflect more the differences between boys and girls, not just their preference of nearest contacts.

The boys and girls seemed to encounter different kinds of kindergartens in their everyday relations. Girls encounter more considerate and social interaction. Boys encounter more action that does not fit well in the general kindergarten setting and their

interaction is more power related. The power is also evident in rule play. Boys' play often involves open competition and trials of strength.

Next we look at how boys' and girls' described strategies differ from each other. Children's answers were classified according to dimensions (agency-adaptation and closed-open, see Figure 4, above). In Table 3 the answer types most characteristic for the girls are listed. The order of the answer types reflects the differences in percentages of the answer strategies between boys and girls.

Table 4 Difference between boys' and girls' child contacts' schemas in different situations.

Situation	% of boys' answers	% of girls' answers
10. Somebody comes to disturb you, what do you do then? (answers with agency)	72.4 %, N=304	54.6 %, N=196
10. Somebody comes to disturb you, what do you do then? (adaptive answers)	19 %, N=80	42 %, N=154
10. Somebody comes to disturb you, what do you do then? (indecisive answers)	8.6 %, N=36	2.5 %, N=9
14. You would like to go home already but are not allowed, what do you do? (answers with agency)	33.8 %, N=142	14.8 %, N=53
9. The other child does not follow rules, what do you do? (indecisive answers)	12.6 %, N=53	22 %, N=79
9. The other child does not follow rules, what do you do? (unchanging answers)	34.8 %, N=146	20.3 %, N=73
4. A friend will not play with you, what do you do? (indecisive answers)	6.2 %, N=26	0 %
8. The teacher will not play with you, what do you do? (answers with agency)	3.6 %, N=15	10 %, N=36
15. You are left alone among others, what do you do? (adaptive answers)	61.2 %, N=257	49 %, N=176

*All differences are significant at the .000 level according to Pearson's chi-test.

The biggest difference between boys' and girls' strategies is in the disturbance situation. Girls adapt more, boys give more indecisive or answers from the agency point of view. Girls' answers have more avoiding strategies, like "I'll go someplace else", "I change play" or "I play with another". Boys' strategies include more agency-oriented answers like "I tell the teacher", "I tell him not to disturb" or "then I tease him back". Girls tend to see teasing situations as avoidable and boys either do not know what to do, or they see themselves more as acting on the matter at hand.

The second biggest difference is in the situation where the child wants to go home already but is not allowed to do so. The boys' child contacts report more agency-oriented

answers like “I ask for permission, “I just go” or “If I want to go, then I’ll go”. Girls’ answers are more adaptive: “I wait for mummy”, “I have to stay or “I soothe myself”. Although boys more often express a strategy with agency, the strategy is rarely put in to action in the kindergarten. In general, boys and girls did not differ in their number of strategies with agency; the tendency must be situation-specific. Does this indicate that boys feel more agency vis-à-vis the kindergarten rules?

The girls are more indecisive in situations where a friend will not play with them and in situations where the other child does not follow rules. It is interesting that boys in a similar situation more often embrace an adaptive strategy. The boys seem to accept the situation that rules are not always to be obeyed: “”I just play” or “we play without rules”. Boys seem to be in conflict with the kindergarten rules more often and they seem to take the rules more easily as something that can be bent or ignored altogether.

On the other hand, in a situation where teacher will not play with the child, girls exercise more agency than boys. Does this mean that girls see more agency in adult related situations? With regard to social practices and official, adult related situations, the girls seem to have more agency. In a situation where the child is left alone among others in the kindergarten, boys seem to accept the situation as it is more easily than the girls. Girls say that they “tell them that you may not leave a friend alone”, or “I tell something they like, then they play with me”.

The role of age in children’s peer relations

Age is an important factor when children orientate in kindergarten. The partial correlation (when gender is controlled) with children’s nearest contact is .570 (p=.000). This means that 32 % of children’s orientation among peers is influenced by the children’s age. Table 5 shows the partial correlations for the nearest contact’s age (after controlling for the observed child’s gender). In other words the age of the child contact (824 observations) has correlated with other variables and the effect of gender has been removed.

Table 5 Children's age and its relationship with the characteristics of the child contact

Variable	The correlation with the age of the child contact
9. The other does not follow rules, what do you do? (uncertain answer)	-.309
Nearest contacts' strategies are classified as closed and not having agency (withdrawing)	-.290
Work, e.g. child helps at tasks, does educational tasks (percent of observations, b10)	.293
12. Somebody takes your toy, what do you do? (answer with agency)	.297
Other action, action that does not fit in other categories (Percent of observations, b12)	.298
2. Somebody comes to disturb you, what do you do? (answer with agency)	.315
Nearest contacts' strategies are classified as open and having agency (partaking)	.360
Nearest contacts' strategies are classified as having agency	.369
Nearest contacts' strategies are classified as open	.450

*The correlations in column two are partial correlations controlling for gender, the significance of all of the correlations is .000, all the correlations above .27 are included

Correlations in Table 5 are heavily age related. When both the nearest contacts' age and gender are controlled for, none of the correlations above are more than .27. This means that the connections in the Table 5 concern phenomenon that are related to the nearest contact's age. The nearest contact's age determines many of the correlations found in Table 5. Observed children tend to find their way to children near their own age. The results fit in the old tradition of Piagetian development from egocentrism towards more diverse perspectives and the view seems to be more partaking too. The perceived agency with children's peers is particularly increased in a disturbing situation, and in situations where somebody is trying to take a child's toy. This is easy to explain as a fact. Bigger children can more easily defend themselves.

Younger children seem to relate to peers who are uncertain about what to do when others do not follow rules and they tend to have withdrawing answers. This can also be explained by peers' age as the young children's idea about fixed rules in games is not yet well developed. Also the correlations found in the peers' actions – they do more work

tasks and act in ways that could not be defined beforehand – are related to the age of the peers.

The children's attraction among peers

The number of the observations of a child classified as a child contact to other children was tallied. It describes the attraction that child has among peers. The attraction is revealed in terms of how many times other children in average pay attention to the child in question. The attraction can depend on many things, however. Some children are more appreciated than others, or some children may dominate others and demand attention. To find out what typical characteristics of the attractive child (or of a child who gets attention for some other reason), the largest Spearman correlations with children's actions and adults' evaluations are presented in Table 5. Because some children were observed more than others, the number of observations as a nearest contact has been divided by the total amount of observations.

Because a child contact was found in 824 cases, even very low correlations get to be statistically very significant. Even a correlation of .104 is statistically very significant (p=.000), but then the effect of the variable is only a little bit more than one percent, which hardly ever makes the correlation in the light of research results interesting. To prevent the list of significant correlations from getting too long, only correlations larger than .27 are presented.

Table 6 Children's attraction among peers and its relationship to children's actions and adult's evaluations

Variable	Correlation with the number of times a child is observed as the nearest contact
The child orientates, observes, but does not partake in the action (percent of observations, b2)	-.486
The child withdraws and seems not to contact others. (teachers' evaluation, ev1)	-.326
Non-social play with toys or material, e.g. playing with cars alone at the sand box (percent of observations, b4)	-.285
The number of a child's answers classified as closed and having an element of change in them (dominant)	-.277
The number of a child's answers classified as open (answer includes considerations of the condition of the situation)	.278
The child's attention is focused on another child (percent of observations, d3)	.290
The child is socially skilled, whereby different situations, interests and feelings do not inhibit the child (teachers evaluation, ev5)	.298
Hanging about together, e.g. discussing with others, walking around with others (percent of observations, b6)	.308
Role play, e.g. playing with Barbie, playing Spider Man (percent of observations, b7)	.409
The child partakes in the development of his/her situation (percent of observation, c2)	.456

*The correlations are partial correlations controlling for age and gender, the significance of all of the correlations are .000, all the correlations above .27 are included.

The correlations show that a child observing action but not taking part in it gets less attention from peers. The same goes for withdrawing children and children who are playing more non-social play. Children who report more inflexible strategies in the agency interview get less observation as nearest contacts. Stubbornness alone seems not to guarantee attention from peers. These correlations are not surprising. Withdrawing, non-social behavior and children that look at situations one-sidedly, get less attention from peers in kindergarten.

When children partake in the development of their action, join in role play and generally hang out a lot with other children they are apt to get more attention from peers. Also the children that the teachers evaluate as socially skilled get more attention from peers.

The children's perception of the situations also seems to play a role in children's attraction among peers. Those children whose answers in the agency interview often include an open answer (an answer that also considers the given condition of the situation) get more attention from peers. When children are apt to consider the situational factors when they choose their strategy, they are more considerate towards others. This would make it easier for those children to make connections among peers. All measurements (observation, interview and adults' evaluations) give coherent picture of the children's attraction among peers. Partaking, role playing, child oriented, socially skilled, and children with socially open schemas all add to the attraction of the children. This result also gives a new perspective to the Piaget's idea of equilibrium.

Children with accommodative social schemas are easier to relate to. Equilibrium thus describes not only children's way to adapt to the environment, but the way the environment adopts to children's schemas. Open schemas seem to attract even more varied and subtle interaction. We must question the Piaget's very idea if equilibration. It is not possible to consider children's equilibration without the differences in children's orientation. The children's difference in the balance between assimilation and accommodation seems to result in different development, as the accommodating children seem to encounter more open environment than their assimilating peers. Accommodating perception leads to accommodative encounters. Equilibration happens not only in children's minds but in their relationship with the environment. Children with different schemas seek different situations. Accommodation is now seen as a distinct way of seeing, of orientating, and of changing the world. Even if assimilative and accommodative children encounter similar situations (as in this interview), they see them differently and the course of events change their experiences even further.

It would be interesting to observe accommodating and assimilating children in a repetitive succession to unfold the orientation and the course of events further. In this research the child was changes after each observation.

Children's contacts among peers, in any case, is a two way street. They get attention and they pay attention to others. The picture is not full if we look only at the children who get the attention. We also have to look at the children paying attention. For this reason the amount of times a child was observed paying attention to some other child was

tallied. In Table 7 is the children's orientation towards other children presented in the same fashion as in table 6, where children are getting attention.

Table 7 Children's orientation toward other children and its relation to children's action and adults' evaluations

Variable	The correlation with the number of times child is observed orientating towards another child
Non-social play with toys or material, e.g. playing with cars alone at the sand box (percent of observations, b4)	-.396
The number of a child's answers classified as closed and having an element of change in them (dominant)	-.336
The child orientates, observes, but does not partake in the action (percent of observations, b2)	-.328
The number of a child's answers classified as not changing and open (adjusting)	.272
The child takes part in action but adapts, and does not take initiative (teachers' evaluation, ev2)	.283
Role play, e.g. playing with Barbie, playing Spider Man (percent of observations, b7)	.330
The number of a child's answers classified as open (considers the condition of the situation)	.340
The child partakes in the development of his/her situation (percent of observations, c2)	.355

*The correlations are partial correlations controlling for age and gender, the significance of all of the correlations are .000, all the correlations above .27 are included.

The associations look similar but also have differences. Still the children who orientate more towards non-social play pay less attention to other children. The child that is not observing, that is, not partaking in the action seems to orientate less towards another child. The orientation is probably more unfocused. The child with more inflexible strategies not only gets less attention from others but also gives less attention to others. On the other hand, a child with more open strategies, taking into account other factors in the situations, not only receives more attention but also gives more attention to others. The openness of children's strategies seems to reflect their contacts. It is interesting that children's accounted strategies resemble the picture of their relationships with their peers. The measurements themselves are independent of each other, so that the two variables are indeed associated. Open strategies go together more with peer relationships. The children's strategies are conscious descriptions. The children may not think of their

strategies as open or closed, but they seem to know what they do in different situations and are also competent to describe them with a degree of comprehension.

The other variables complement the picture of a child actively orientating among peers. A new phenomena arises, which was not present before. The children who attracted other children have not more adjusting answers, but children who orientate more towards another child do.

The interaction is not only about getting attention and giving attention. In human interaction one can not always get what one wants. To study the disparity of getting/giving attention, the number of times the child received attention was divided by the number of times the child was giving attention to another child. In this way the relation between giving/receiving attention can be contrasted (see table 8)

Table 8 The proportion of receiving/giving attention among peers and its relation to children's actions and adults' evaluations

Variable	Correlation with the proportion of receiving/giving attention among peers
The child takes part in action but adapts, does not take initiative (teachers' evaluation, ev2)	-.359
The child orientates, observes, does not partake in the action (percent of observations, b2)	-.305
My child determines the situations she/he is in, my child forces his/her views through (parents evaluation, p5)	-.296
My child prefers familiarity and security in his/her interactions (parents evaluation, p2)	.281
The child partakes in the development of his/her situation (percent of all action, c2)	.292
My child is adaptable, adjusts easily to changes. (parents evaluation, p6)	.305
The child defines also what others do, the child uses his/her influence on others (teachers' evaluation, ev3)	.314

*The correlations are partial correlations controlling for age and gender, the significance of all of the correlations is .000, all the correlations above .27 are included.

An adapting child seems to give more attention than receives it. The same applies for an observant, not partaking child. Those children that are dominant, forcing their actions through at home, also get proportionally less attention from their peers. Adaptive behavior does not make children popular but neither does forceful action. But an influential child, who easily adjusts to the forthcoming changes, gets most attention among peers. The influential child is different from the forceful children. Forceful action indicates action without much interaction or the taking others in to account. Whereas an influential child has a real impact on others and the impact seems to rely on some other factor than using force. Proportionally the child receiving the most attention is also socially active and adjusts easily in forthcoming changes.

Children that, according to parents' evaluations, prefer more familiar and secure actions get more attention than they give compared to other children. There seems to be different types of peer relations, as some children orientate towards partaking children and others towards children who seek out for familiar and secure situations. The observed partaking variable and the variable reflecting the parents evaluation do not correlate with each other significantly (.053. p=.051). They are two different types of phenomenon.

Active children get attention but so do children who seek stable conditions at home. The connection remains obscure, but one guess could be that children who seek stable conditions are easier to relate to. It is easier to focus to another child that does not change his/her orientation all the time. Their actions reflect the characteristics of consistency that such children seek. A coherent person is easier to relate to.

The most striking thing is that children's home behavior correlates so much with children's proportional attraction among peers in kindergarten. Usually the connection between the children's home and kindergarten behavior is hard to detect. And the correlations come forward only in those situations in which the proportion between getting/giving attention is examined. I think that this reflects the discrepancy between the home and the kindergarten. At home children partake in their own family life and every family differs from one another. In kindergarten the rules and surroundings are more similar. The proportion of getting/giving attention reveals the discrepancy in children's orientation. Some children get more attention, some children get less attention, and some children get less attention even though they pay more attention to others. When children find a role at home where they can easily adjust to changes, they are better prepared to adjust to the new situations in the kindergarten as well.

On the other hand the familiarity and security-seeking child finds it easier to relate within a socially diverse kindergarten. At home the interaction involves only a few people. So do the attention discrepancies between children. Such discrepancies reflect the action whereby only two or a small amount of people are interacting.

Children's attraction among peers and its relation to their schemas

Children do not orientate only according to their gender and age. Their inner insights, motivation and perceptions of the situations affect their orientation. Because in kindergarten there are many boys and many children, the children's innate strategies and visions of the situations are important. In Table 9 the correlations between the number of observations as child contacts and the strategies described by the children are presented.

Table 9 Children's attraction among peers and it's relationship to children's strategies in different situations

Strategies described by the children	Correlations with the children's number of observations as nearest contact
11.Think of a situation that your work is ruined and you fail. What do you do then? (uncertain answer)	-.317
The total amount of uncertain answers	-.292
3. Let's think that you are playing with someone and your friend wants to change play. What do you do? (uncertain answer)	-.275
14. From a kindergarten you may not go home alone in the middle of the day, but you would like to go home already. What do you do then? (uncertain answer)	.281
The total amount of open answers	.329

*The correlations are partial correlations controlling for age and gender, the significance of all of the correlations are .000, all the correlations above .27 are included.

Children that do not know what to do when their work is ruined, and they fail, get less attention from peers. The same happens when children are uncertain what to do when they are playing with someone and their friends want to change play. The answers were often "I don't know" or "I feel irritated" with no hint what the child would do. Also the total amount of uncertain answers lessens the child's attraction among peers. The uncertainty reflects the children's unsure and insecure attitude in kindergarten situations. The connection seems clear. Without a clear picture of the possibilities various situations provide it is not easy to see or make the connections with other children. The general tendency to answer open strategies correlate positively with the amount of attention children are receiving.

The interesting question is number 14, where the indecisive attitude attracts other children. The questions of numbers 14 and 15 were control questions for testing the way children answer the questions. In question number 14 children are asked what they would do when they would like to go home but are not allowed to do so. The other questions are such that there is a real possibility to influence the outcomes of the situations. But here when the child may not go home, there is really no option. When the children are not allowed to go home by themselves, they usually can not go home. Here the uncertainty manifests the children's sense of realism. The task is impossible, so it is quite valid to

give an indecisive answer. Answers like “I kill myself. As an angel I fly home”, “If I want to go home I’ll go”, or “I’ll walk away if nobody sees me”, are not hopefully realistic strategies in a situation where the child wants to go home, but may not. Uncertainty here reflects realism. Realistic children can deal more easily with the existing possibilities.

One way to look at children’s orientation among peers is to see which children get the most attention. Another way to look at children’s orientation is to see how much they orientate towards another child. In Table 10 the number of observations where a nearest contact was observed is correlated with the strategies children gave at the interview.

Table 10 Children’s orientation toward other children and its relation to children’s situational strategies

Strategies described by the children	The correlation with the number of orientations observed towards other children
Children’s number of closed answers and answers with agency (dominance)	-.335
10. Somebody comes to disturb you, what do you do? (answer with agency)	-.332
Children’s amount of open and adaptive answers	.272
1. Somebody else is having the toy you want, what do you do? (uncertain answer)	.301

*The correlations are partial correlations controlling for age and gender, the significance of all of the correlations are .000, all the correlations above .27 are included.

When children feel uncertain what to do when somebody else is having the toy they want, they tend to spend more time orientating towards another child. There is no clear connection to orientation and we have to look at the contents of the children’s answers to understand the correlation. Eleven children answered the question “I don’t know” or something like it. Three children gave no answer at all. 3 children answered in a way that could not be classified e.g. “I show him what kind of book Superman book is”. The most typical answer was an answer with no agency. Children in 27 cases just accepted the situation “I’ll change play”, or in four cases adapted to it “I’ll wait until it’s free”. Children felt agency in the situation 17 times. In the situation of agency 16 answers were considerate e.g. “I ask nicely” and in only one situation a child felt agency in a closed (dominating) way: “I take it from her hand”. Most often children just accept the situation

or attempt to acquire the toy in a considerate manner. The uncertain child is stuck with the situation although the situation is full of consideration and acceptance towards others.

The generally open and adaptive aspect of orientation is easy to combine with orientation toward another child. When one's attitude in situations is open and adaptive, one orientates towards others more. But the open and adaptive orientation does not explain the former correlation in the situation where the other child was having the desired toy, because open and adaptive orientation correlates negatively with the uncertainty in the desired toy situation.

Children that give closed and agentive (dominant) strategies, orientate less toward other children in general. These children are maybe more egocentric than other children. Those children that report no agency in a situation where they are disturbed orientate less towards another child. This may be due to the children's greater need of privacy. When children do not know how to maintain their territory, they also have an interest to avoid other children. All in all the picture of a child that orientates toward another child is not very clear. Anyway it can be said that an open and adaptive general attitude increases children's orientation towards another child and children's generally closed and agentive strategies decreases it.

There were no correlations greater than .27 when the proportion of receiving/giving attention among peers and its relation to children's strategies in different situations. Gender and age define much of children's orientation, but because there are many boys and girls and many children of the same age, the children's innate characteristics also acquire importance. But what are the most central characteristics of the nearest contacts and how do they relate to children's actions and strategies?

The child contacts' characteristics and the connections of their mutual strategies

To get a general view of the characteristics of the child contact, an experimental factor analysis was conducted. It must be noted that 18 children were never observed as a child contact and one child was observed to be a child contact 35 times. Because every

observation is a case and all the child contacts information is merged in to the observation data, 18 children's data are not included in the factor analysis at all,whereas one child's data are included in the analysis 35 times. This arrangement weights the characteristics of children with a lot of child contacts.

Different numbers of factors, rotation methods, and analysis methods were used to get as easily interpretable a solution as possible, but in so doing, still keeping the solution as statistically valid as possible. After experimenting with different solutions, Maximum likelihood method (Oblimin rotation, Kaiser Normalization) including a three factor solution was selected. The correlations differed from zero adequately when tested with the Kaiser-Meyer-Olkin measure of sampling adequacy test (.632) and according to Bartlett's test of spherity (.000).

The original communalities were low for some variables, indicating, that not all variables were reliable meters for the factors. In the final solution the initial communalities varied from .382 to .822 and extracted communalities varied from .154 to .833. In table 11 the eigenvalues of the factors are presented.

Table 11 Eigenvalues of the factor solution concerning the child contact

			Rotation Sums of Squared Loadings
Factor	% of Variance	Cumulative %	Total
1	23.10128	23.10128	3.109916
2	13.66023	36.76151	2.940158
3	9.454499	46.21601	2.081293

There were clearly three factors that emerged, since the fourth largest factor's initial loading was only 1.13. These three factors can explain 46 % of the variance among the variables.

In Table 12 the structure matrix of the three factors can be seen. The structure matrix tells the correlation between the variables and found factors. Only correlations greater than .40 are presented.

Table 12 Structure matrix of the three factors concerning child contacts

	Factor 1	Factor 2	Factor 3
The child withdraws and seems not to contact others (teacher evaluation, ev1)	-.890		
The child takes part in action but adapts, does not take initiative (teacher evaluation, ev2)	-.628		
The child is in the center of the developing action, child changes situations together with others (teacher evaluation, ev3)	.628	.588	
My child is always in the middle of the action, creating things together with others (parents' evaluation, p2)	-.582		
The child partakes in the development of the situation and its conditions (observation, c2)	.518		
The child is socially bold, where fear does not restrict his/her actions (teacher evaluation, ev8)	.457	.432	
The child is socially creative, the child has enough action strategies (teacher evaluation, ev7)	.485	.792	
The child is socially skilled, where different situations, interests and feelings do not prevent the child (teacher evaluation, ev5)	.524	.677	
The child is socially sensitive and considerate to others (teacher evaluation, ev9)		.643	
The percent of a child's action that was forbidden (e.g. teasing or disturbing, b11)		-.633	
The percent of the time an adult is the child's center of attention (observation, d2)		-.424	
Gender			
The number of action strategies with agency (interview)			.675
The number of action strategies with no agency or openness			-.673
The percent of a child's action that could not be categorized (observation, b12)			.612
The child's attention is focused on two or more children (observation, d4)			.575
Child's age			.449

*Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization.

Children who do not withdraw, are socially creative, or report a lot of agency, are the central factors of the child contacts. Children's tendency to see situations as agentive seems to be a central factor in children's orientation among peers. This tendency has been neglected almost totally in research concerning children. When we look only at how children develop in a given environment, not at how the children's development changes the environment, we lose this factor altogether. Without an agentive perspective,

children's true subjectivity and personal growth and orientation can neither be studied nor perceived.

When the factor scores are saved as variables and then viewed with regard to how the factors correlate with children's characteristics, many correlations for each factor can be detected. But when the child contact's age and gender are controlled with partial correlations, none of the correlations are above .27, which has been the criterion for selecting variables for inspection thus far in this chapter.

But in the process of searching for patterns in the relationships, another pattern emerged. There seemed to be a tendency for similar children (variables) to attract or reject each other. To check this assumption, partial correlations of similar variables (e.g. the amount of role play of the observed child vs. the amount of role play of the child contact) were calculated controlling the child contact's age and gender. This approach resulted in some interesting connections between children and their child contacts. But only two of these connections were above .27. They are listed in Table 13.

Table 13 Correlations of the children's reported strategies between children and their contacts.

The strategy for child and child's contact	Correlation between the two strategies
9. The other does not follow rules, what do you do? (adapting answer)	.393
12. What if somebody takes your toy (uncertain answer)	.371

*The correlations are partial correlations controlling for age and gender, the significance for both of the correlations are .000

Children that adapt to the breaking of rules tend to attract each other. There were seven children who gave an adaptive schema. The answers were in the style of "I do what he says" "we play without rules" or "we play otherwise, I don't care". The children were from two groups and they played a lot with each other. Four of the children were boys, three were girls. The new rule is: no rules. Children agree that the bending or breaking of the rules is accepted. This same attitude probably makes interaction easier between children. Similar moral or practical ways of seeing what can or should be done make it easier to get along with each other.

The other connection between schemas is different. When children are indecisive about what to do when somebody takes their toy, the children tend to seek each other's

company. Again children with the same attitude attract each other. There were only three schemas recorded as uncertain: One child said nothing at all, the other said “my friends are nice” and the third said “I feel bad. I don’t know”. These three children were all girls between ages three and four. The girls were all from the same group and played a lot with each other. Clearly the answers reflect girls’ experience and their interaction. These girls do not encounter situations where other children take their toys. They are also young and they all report a lot of uncertain answers. The correlation reflects the culture the girls encounter in kindergarten.

These two views are mostly independent from each other. A partial correlation (age and gender controlled) is -.074 (p=.047). The correlation is weak and explains only 0.55 percent of the variation. In practice it means that these two views are independent of each other. They deal with different phenomenon. Children that adjust to breaking rules stick together as do children who feel uncertain when somebody takes their toy.

These two groups may represent two types of social climates or cultures in peer relationships. The tendency is also a strong one in the light of numbers. The connection explains 13.8 percent of the variance in child contacts, even when age and gender are controlled. The same applies for children who adjust to rule breaking. These children attract each other so much, that 15.2 percent of the variance is explained by the children’s similar view of the rule-breaking situation, even though age and gender are controlled.

These connections highlight the importance of children’s views in different situations. Children, who see or regard situations differently, may orientate differently among peers in kindergarten. They may interact with different kinds of children and the quality of the interaction is thus different. The three girls, who do not take toys from each other, see things differently and also encounter different interaction. This affects their further development and shapes their future orientation in social environment. If we study this orientation we may explore the linkage between children’s personality and development. The seven children that adjust to rule breaking stick together. They also come across as a distinct social environment that is unique to them alone. These children’s orientation in their future interests and their patterns of action develop during this interaction.

The children’s views are not important only because we need to understand how children’s view things or how they develop, but to understand how the subjectivity of the

self takes shape. At the heart of studying human subjectivity – it the genesis of personal motivation and goals – it is not only to see how children develop, but to see how the interaction between children and their environment develops. At the core of seeing children as the subjects of their development, there is the connection between children's views and their personal orientation.