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Interaction Among Young Children — A Review of Literature

In psychology, sociology, and education, there are various conceptual instruments to study and discuss young child/ren's actions in the presence of other child/ren. The discussion revolves around concepts such as *social competence*, *social behaviour*, *social participation*, *coordinated action*, *cooperation-competition*, *collaboration*, *social status*, *social skills*, *prosocial behaviour*, *peer relations*, *play*, and *social interaction styles*, among others.

In this paper, I will discuss a review of the previous literature at a general level with a large corpus of abstracts from the electronic databases in social sciences.¹ The main interests of the review were: how has child-child interaction been studied during the last decades? On the basis of the previous literature, what kinds of discourses have been on the mainstream? What kinds of conceptions of children have been created and maintained in the studies of child-child interaction? Particularly, as the review focuses on studies of children under four years old, how is interaction among children discussed in the early years in children's lives?

Methodology: how was the review proceeded?

As the interest was on child-child interaction, I chose the three major databases in CSA Cambridge Scientific Abstracts related to sociology, psychology, and education that I was able to access using the library services at the University of Helsinki. The databases were *PsycINFO* (1872-6/2002), *ERIC Educational Resources Information Center* (1966-6/2002), and *Sociological Abstracts* (1962-6/2002). In addition to sociology, psychology, and education, these databases cover their related disciplines in the social and behavioural sciences.

Following the structure of CSA databases and collections, the review of child-child interaction was deliberately limited to Social Sciences, excluding the wide areas of Natural Sciences, Arts and Humanities, and Technology. As observed in the search results, some of the articles appeared in various databases. Consequently, I interpreted that most of the articles that appeared in smaller databases, and were of interest to this study, would also appear in ERIC,

¹ This presentation is linked to the paper presented at the BIN-Norden conference in Copenhagen, Denmark 2005. (Rutanen, 2006). See also a more detailed description of the review in Rutanen, 2007, pp. 39-68.

PsycINFO, and/or Sociological Abstracts. However, it is possible that with this focus on Social Sciences, some very particular studies may have been left out, as from the marginal area of Geography of Childhood.

Instead of focusing on the most recent years, the focus was on the time frame from the first electronic record appearing on the databases until the second year after the turn of the century. The aim was to investigate the field during these decades before the raising interest and the rapid increase in the number of the abstracts after 2002.

The review does not cover all the published literature: many of the older records are missing from the electronic databases and only exists in print. The situation is changing rapidly as the older printed versions of the records are transformed into electronic forms. This occurred for example with Sociological Abstracts at the end of the 2005 when the records published in 1952-1962 were added to the database. (More information about the databases, see <http://www.csa.com/>).

Step 1. Large corpus of abstracts as a starting point

At the beginning of the search, 37 keywords in English were chosen to describe the process (such as “interaction,” “co-regulation,” “co-operation”) and to refer to the age of children (such as “2 AND years AND old,” “toddlers,” “preschool”). After preliminary searches in ERIC, PsycINFO, and Sociological Abstracts, the search was limited to 18 keywords (Attachment 1) in order to exclude search results that were impossible to review because of the great number of abstracts; yet, these keywords covered the field sufficiently. In this first step of the review, the 18 keywords produced a corpus of 7,821 abstracts.

This number of studies was still impossible to review in detail. Following this, I started to go through the abstracts with the intention to form a smaller corpus. Even if the aim was to form a more limited corpus, the final corpus of 357² abstracts was only one result of the process. Important results were also the *observations made during the selection process*. As I continuously gained more understanding about child interaction studies on the basis of the 7,821 abstracts, I had to re-define the selection criteria to exclude the irrelevant abstracts and not to include too many works in the review. The final formulation of the criteria was not a starting point, but it was formulated during the process (Attachment 2).

² I am referring to the number of the abstracts. If a study appeared in many databases, only the first mention was taken into account. The majority of the abstracts referred to publications in scientific, peer reviewed journals (307 abstracts). The selection included 39 dissertation abstracts and 11 book chapters.

Step 2. Selected corpus for a more detailed investigation

Only 4% of the abstracts (357 out of 7,821) were finally selected for a more detailed review (see the criteria in Attachment 2); 265 of these were from PsycINFO, 71 from ERIC, and 21 from Sociological Abstracts. The majority of the 7,821 abstracts had an emphasis other than interaction among 1- to 3-years-old children or the approach was clinical and therefore not of interest for this review. If a study followed longitudinally the same children from two or three years on, it was included even though the children were older than 4.5 years. From these 357 abstracts, I created a database with Microsoft Access software tables specifying the author(s), year, title, publication, place of study, age of children, objective, framework, method, results, keywords, database, and note(s) on the issues I found interesting.

Results: what do(e)s the field(s) look like?

Step 1. General observations about interaction studies including children

Going through the corpus of 7,821 abstracts while forming the selection criteria and creating the database to Access tables, I was able to make general observations about the mainstream of the studies that in one way or another referred to child-child interaction among young children. The majority of the studies were affiliated to works done in the field of developmental psychology. Two of the main reasons for leaving a great number of studies out from a more detailed reading were that only *child-mother interaction* was investigated and/or the study was based on *assessing the developmental implications* of early social interaction for later life. Many of these studies included diagnostics, assessment of skills, testing, therapy, and/or other interventions.

The abstracts seemed to open up a strong view of normality that referred to an ideal (social) developmental trajectory for a middle-class three-year-old child to follow from first interest to others to later pro-social behaviour in preschool age. In the mainstream of the literature, *positive* interaction referred to harmonious, non-conflictuous and non-ambiguous *exchange* among children.³

Interaction among *infants* was mentioned only on few occasions (e.g., Leavitt, 1994; Vandell & Mueller, 1995). With infants and toddlers, a common research procedure in a laboratory

³ In contemporary research, on the other hand, effective, fluent interaction is seen not only as conflict avoidance; rather, various researchers share an interest in how conflicts are part of negotiations among children (Hännikäinen, 2001; Singer, 2002).

setting has been to compare the frequency of interest in peers (“other directed behaviour”) to the interest in objects when the mother is also present.

Step 2. More limited corpus: countries and changes during the decades

In the second step of the review I investigated the more limited corpus of 357 abstracts and made more detailed observations about the field. The remaining studies were now all focused on interaction among young children.

In the corpus of 357 abstracts, 69% of the studies were reported from the USA. Others were from Italy (21), France (19), Canada (14), United Kingdom (10), Finland (7), Brazil (6), and Germany (5). The rest were from 22 countries, with one to four contributions from each. According to the United Nation’s statistics, US children represent 3.4% of the children in the world (PRED Bank, UN, 2006, *children under 15*). As the majority of the world’s children spend their everyday life outside the USA, the (over)emphasis on North-American scientific production shows a clear lack in the studies of children’s everyday lives within environments and cultural contexts where the majority of the world’s children spend their lives.

Previous reviews on peer interaction research locate the earliest works at the beginning of the last century. For example, Hartup (1983) and Renshaw (1981) both mention Cooley’s (1902; 1909) work on peers as socialization agents. Following these early works, the reviews situate a growth in interest in peer interaction research at the end of the 1920s and the beginning of the 1930s (Hartup, 1983; Renshaw, 1981; see, e.g., Maudry & Nekula, 1939). The electronic databases I used failed to give access to these early studies; the earliest study appearing in this search I performed was published in 1957.

Both this review and the other reviews show, that the period from the end of the 1920s to the 1970s is characterized first by the development of methods in the 1930s (sociometry, observational strategies, and experimental designs), followed by a decline in interest in children’s peer relations for forty years (Hartup, 1983; Renshaw, 1981; see also Carvalho & Beraldo, 1989). This review identifies a second increase in the number of the studies that started around the end of the 1970s with a peak before 1985. The third marked increase in the number of the studies was at the beginning of this century, after 2000. A later check of the databases shows that within five years after the turn of the century, more studies were added to the databases than during all the previous decades (confirmed by entering the keyword: “toddlers AND interaction,” in the PsycINFO 2006).

In 1970-1980, child-child interaction studies started to include descriptive studies of previously overlooked groups (such as infants). New observational techniques emerged, group

structures and special relationships (such as friendships) were studied, and strategies for enhancing social skills were invented. In educational literature, comparisons between the effects of different day care arrangements started to gain space. However, from today's perspective, the range of research topics remained relatively narrow. These studies were characterized by a lack of specific paradigms and attempts to construct tools for analysis (see also Pedrosa & Carvalho, 2005). During the following decades, a variety of approaches, interests, and viewpoints related to children's interaction emerged, such as the interest for qualitative video analysis.

The research following the beginning of the 1970s encompasses various partly overlapping approaches to child-child interaction which I have organized under three general titles:

1) *Individual-centered approaches*: in which appropriate and effective interaction is a goal and a norm. This includes the assessment of children's social skills, the observation of individual's behaviour in groups, the analysis of social networks, and friendship studies. The interest is to assess and evaluate the individual's adaptation to the constraints of the social world or to investigate the role of the social others to the development of the individual. Interaction is measured by observing the individual in different social and physical contexts focusing on the exchange with others. Most of the works that appeared in the review were in line with this title. (See also Brown, Odom & Holcombe, 1996; Goudena & Vermande, 2002; Mueller & Lucas, 1975.) (Figure 1).

2) *Instrumental approaches*: in which interaction is seen as context and a means (instrument) of cognitive development and learning. The interest is to investigate interaction from the point of view of learning and/or evaluate the results of interaction, often with specific problem solving tasks. The hypothesis is that when working/being/discussing together children can create some levels of understanding that they would not be able to create when working alone. (See Stambak & Verba, 1986; Verba, 1993.)

3) *Dialogical approaches*: in which interaction is seen as co-constitution and co-construction of the self, identity, meanings, symbols, frames, and/or peer culture. In these works, following the systemic and relational approaches, the unit of analysis has been an episode, a relationship, a dyad, or a group. Only a few studies that appeared on the review were in line with the dialogical approaches. (See Branco & Valsiner, 1997; Oliveira & Valsiner, 1997; Singer, 2002; Strandell, 1997.)

1970-2002	Individual-centered approaches	Instrumental-approaches	Dialogical approaches
Core concepts	Attachment, Socialization, Interactional styles	Transfer, Learning in context, Tutoring, guidance Co-elaboration	Play, Peer culture, Field, Intersubjectivity
Focus	Social skills, Individual's behaviour	Innovations, Learning, Knowledge construction	Meanings, Emotions, Signs, Internal dialogues
Starting point	Individual who participates in various groups	Individuals' viewpoints together	Ambiguity and indeterminism Bidirectionality
Main interests about interaction	Quantity, effectiveness	Results of interaction (skills, learning)	Microgenesis, Co-action, Emergence

Figure 1. Core features of the three approaches present in the child-child interaction literature (1970-2002).

In summary, even if the mainstream of the studies followed the individual-centered approaches, *dialogical approaches* was an emergent field in the studies on child-child interaction. In line with the dialogical approaches, for example in socio-interactionist and co-constructivist framework (e.g. Branco & Valsiner, 1997), the question whether interaction exists among young children has been substituted by the question of how does interaction occur and what is being constituted and constructed among children.⁴

Summary and discussion: the Nordic child as the marginal child?

On the basis of the abstracts and the chosen articles, it seems that the mainstream of the studies on young children's interaction have placed the evaluation of the individual's skills and capacities at the centre. These studies affiliate with the conception of human development as linear and deterministic as the individual is observed with the other child detached from the wider historical, material, cultural, and social context. One should notice that the most recent years are not included in this review.

On the other hand, with the raise in the number of the studies since the peak in the 1980s, a more varied image has emerged. A variety of approaches, interests, and viewpoints related to children's interaction have emerged during the last two decades. Corresponding with changes in

⁴ For a more detailed description and elaborated discussion of the review, see Rutanen, 2007, pp. 39-68.

social sciences paradigms, qualitative, interpretative studies on peer interaction have gained more importance than observation with predefined codes. Children are understood to construct and be members of social networks. Not only there is interaction among children, but qualitative differences were observed in the relationships and interaction patterns the children establish. Contemporary studies have revealed that even young children suffer from the loss of a friend and that they have preferences as to their willingness to play with boys or girls.

The *dialogical approaches* that emphasize the dynamic, dialogical nature of human constitution have been more visible in other fields in social sciences than child-child interaction studies. Various metaphors that address this complexity (field, network, systems, nonhuman-actor-networks) already exist and there are some contemporary applications in the studies with young children. Various works show openness to the discussion of child-child interaction not as an exclusively separated entity, but analyze the interlinkedness of the system and the context.

On the basis of this review, it seems that in the last decades there has been a space and need for approaches where all the participants, as the teachers and the researcher, are taken into account and included in a culturally sensitive analysis of the situation and meaning making — even if the main interest is on child-child interaction. Neither the (physical) research setting nor the role of the researcher has been widely discussed as part of the studies. Not many studies have addressed the question of how does the researcher change as a participant of the process, even reflexivity is widely emphasized, particularly in qualitative studies on children.

In the context of BIN-Norden conference series, it is interesting to point out the lack of studies from the Nordic countries. A corpus of 357 abstracts (1872-2002) included seven studies from Finland (Hännikäinen, 1998; 2001; Lyytinen, 1991; Lyytinen, Laakso, Poikkeus, & Rita, 1999; Lyytinen, Poikkeus, & Laakso, 1997; Strandell, 1994; 1997), one from Norway (Løkken, 2000), and one from Sweden (Williams, 2001). Even various analyses (such as Brembeck, Johansson & Kampmann, 2004; Kristjánsson, 2005) discuss the leading role of the Nordic countries in childhood and child research, politics and practices, and particularly, in the interest on children's participation and perspectives, in international literature these discussions have remained in the margins. The reasons could have been the Nordic publication politics and discussions in other forums than peer reviewed journals and books that encourage publication in English.

To appear in the database, the publication needs to be published in a journal linked to the CSA databases. These international databases have preference to include English journals to their listing; only some journals in Scandinavian languages appear in the databases. Following this, even high quality research done in the Nordic countries may remain unknown to the English

speaking public. (Source: Sept 24, 2007, email from the Information Specialist, Jyväskylä University Library).

Another reason for the hidden status in this review might be the selection of the databases and the keywords, and the lack of use of terms such as *culture*, *participation*, and *agency* in the search. The numbers might also be different if one included the most recent years. The tendency of the researchers is towards publishing more and more in English language journals. For example, in some departments, the PhD students are nowadays encouraged to publish their results in peer reviewed journal articles instead of writing monographs in their native language.

The review on databases is by no means flawless, as was indicated by the scarce results for the year 2002. Based on other reviews and sources, I am aware that there are more studies published in 2002, as well as in previous years. An unresolved question remains why some of the studies did not appear in the databases at the point of the search. Problems with access, selectivity, and/or the slow update of the electronic databases will be faced by all scholars and students interested in particular questions concerning children and childhood.

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Attachment 1. Number of abstracts encountered from the three databases (18 keywords).

Key words	PsycIN	ERIC	SosAb.
Interaction AND toddlers	468	303	19
Interaction AND dyads	779	349	371
Peer AND infants	430	145	20
Peer AND coordinated action	8	2	-
Play AND toddlers	453	440	15
togetherness	108	51	91
Co-construction and children	39	24	-
Int. AND childre AND 2 AND year	601	200	92
Int. AND childre AND 3 AND year	590	213	72
Interaction AND child-child	60	13	10
Interaction among children	36	24	-
Peer interaction	834	366	68
Toddler peers	13	4	3
Microanalysis and children	45	18	6
Micro-analysis AND children	4	6	6
Microgenesis AND children	16	4	3
Observ. AND child. AND day care	92	192	40
Nonv. AND Child. AND day care	18	44	13

Attachment 2. Criteria for literature review selection

Criteria for the selection:

The study is related to child(ren) 0-4,5-years old.

Excluding the ones in which focus is on psychopathology, psychodiagnostic, testing, assessment, screening, or diagnosis of developmental disabilities, therapy, or intervention. Studies of Theory of Mind (unless discussed in relation to pretend play). Also excluding mother-child interaction, childrearing, or social coaching, contribution of attachment security to social adjustment, assessment of social competence, teacher ratings, teacher-child interaction (unless the teacher is interacting with more than one child), caregiving by adults.

OR/AND

Nursery school, day care, or preschool as a context and focus of the research on children. Also kindergarden if the children's age is under four years. Excluding same as above; teachers' and adults' perceptions, interview with children or task performance measurement (unless related to play or interaction).

OR/AND

Videorecordings, observation or/and microanalysis as a method and focus on children.

OR/AND

Development of children under four years, related to interaction. Excluding same as above.

OR/AND

Focus on children's interaction or play. Excluding same as above; teachers' or parents' understanding, children older than 4,5 years (unless methodologically related), promoting positive interaction, intentional teaching, training or developing motor, social, cognitive, emotional, or literacy skills or play behaviour by teachers.