Introduction

Autistic Spectrum Disorder (ASD) is defined as a communicative-social disorder (APA, 2013). In the past, children with ASD were described as deliberately avoiding social TEL AVIV THE AVIV AND THE A interaction and as lacking any social abilities (Kanner, 1943). Contemporary research has shown that these children do possess social abilities, and that these depend both on the social partner with whom they are interacting as well as the context of interaction. For example, Kimhi & Bauminger-Zviely friend' rather than with a 'non-friend' partner. Better skills were also found when this friend was a child with typical development (TD) as compared to a friend who also had ASD Methodology findings accentuate the significant impact social partners have on the ability of a child with ASD to execute social skills.

Sibling relationships are often the longest and most significant relationships in a lifetime, with the potential to variety of actions; joint engagement. deeply influence personality, social and cognitive skills (Boer, Dunn, & Dunn, 2013; Gass, Jenkins, & Dunn, 2007; Noller, 2005). Research on paucity of research on these children's interaction with their introduced to the system. siblings is striking.

fewer prosocial behaviors than in the relationships of two TD off task, and synchrony between partners was checked. groups on the basis of averaged data, our aim was to examine International. measuring those variables in great detail.

sibling interactions in a family with a child with ASD.



Objectives *Presenting a set of parameters which 1) appear in interactions between children with ASD and their TD siblings; 2) Enable comparison of the sibling interaction to the interaction of the ASD children with other social partners, (2012) found better social skills with a partner defined as 'a specifically with mothers and TD peers, in an inter-subject design, using INTERACT: a software for collecting and analyzing in detail observational data. ***Presenting data** from 4 case studies analyzed using these parameters.

Literature was reviewed in order to find coding systems used to collect data in sibling interaction studies. A coding system that was used to collect the significant role of sibling interaction as one of the most interactions involving a child with ASD was chosen as a prototype (Abramovitch skills (Brody, 2004; Dunn, 1992). Considering the fact that children with ASD and their TD peers (Bauminger-Zvieli, 2013; Hauck et al., 1995), and communicative-social impairments are fundamental in ASD, the due to the specific needs of our inter-subject design, small changes were In order to evaluate the appearance of the parameters in interactions

Very few studies have looked at sibling interaction where one between children with ASD and their TD siblings, and to test the child has ASD and compared it to interaction between siblings effectiveness of the parameters in the comparison of the sibling interaction who were both TD, or where one had a disability other than versus the interaction with other social partners, we conducted detailed, ASD (Kaminsky & Dewey, 2001; Knott, Lewis, & Williams, 1995; 2007). In such frame-by-frame analyses of four case study videos: 2 dyads of mother-child studies researchers concluded that dyads containing a interactions where one child has ASD and one is TD, and the interaction of a participant with ASD were inferior to both other groups in child with ASD with his mother compared to his interaction with his sister in terms of the intensity, complexity, and reciprocity of their social an inter-subject design. Figure 1. presents the coding system used in the interaction, and also contained less rivalry between siblings present analysis. Table 1. presents the behavioral operative definitions for (Knott et al., 1995, 2007). Relationships between siblings in the each category. In addition, in order to evaluate joint engagement, for every Results experimental group were characterized by less intimacy and moment and for each partner, it was coded whether he or she was on task or siblings or sibling dyads containing a child with Down syndrome The present analysis: Participants: 1st dyad: a preschool-aged TD child (A) (Kaminsky & Dewey, 2001). However, it is difficult to learn about the and his mother. 2nd dyad: a preschool-aged child diagnosed with ASD (B) and unique contribution of the sibling relationship to the social his mother. 3rd dyad: a preschool-aged child diagnosed with ASD (C) and his skills of a child with ASD when using such comparison groups. mother. 4th dyad: the same preschool child diagnosed with ASD (C) and his Such methodology highlights the deficits in the siblings' dyadic older 8-year-old sister. Instruments: *A set of stimuli to encourage interaction-attributed to the disabilities of the child with ASD- interaction during video-recorded observations (a game, a book, free-play instead of highlighting abilities. In our study we utilize a session). *The coding system designed to collect and analyze data from the different methodological approach. Rather than compare observation (see fig.1). *INTERACT software developed by Mangold *Procedures:* All observations were videotaped in the in detail the characteristics of sibling interactions, while children's homes. Every observation was viewed and analyzed three times: identifying variables that require direct attention and 1) Starting points and switching from task to task were marked. 2) For each partner it was coded whether he/she was on task or off task, with reference This poster presents the parameters we used in order to to qualitative remarks regarding joint engagement. 3) Each new action was examine sibling interactions in an inter-subject design. The set coded according to the coding system in order to evaluate the quality of of parameters we present, as well as the description of the interaction. For each action it was coded who is the conducting partner, in procedures we used while analyzing data with INTERACT order to evaluate dominancy of partner. All actions were tallied, and the software, aims to narrow the gap in the literature regarding total time (in seconds) was divided in the total sum of actions conducted, in order to evaluate the **intensity** of the interaction.

Interaction among siblings that one of them has ASD - parameters for examination This poster is based on: Yonat Rum, Professor Esther Dromi



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(Bauminger-Zvieli, 2013). Children with ASD were found to have more Based on previous literature on TD sibling interaction (Abramovitch et al., 1986; reciprocal conversations when talking with other children as 1987), sibling interaction where one of them has ASD (Knott, Lewis, & Williams, 1995; opposed to when talking with adults (Nadig et al., 2010). These 2007), peer interaction regarding ASD children (Bauminger-Zvieli, 2013; Hauck et al., 1995), and mother-child interaction (Adamson, Bakeman, Deckner & Romski, 2009), the

following set of parameters was selected for our study: Intensity of interaction; quality of interaction; dominancy of partners; types of actions;



l=initiation: R=response

Table 1: Behavioral definitions of the coding system categories

'less-effortful' siblings than towards their parents. They suggested L. Low Level interaction: Verbal or nonverbal behaviors that denote communicative intent to participate in an ||that parents try to compensate for lacks in the communication, interaction, however the initiation is not completed: the participant makes it only 'halfway', and his partner is not necessarily aware of the initiation: vague looking while siblings allow a less didactic, more reciprocal interaction. without eve contact; imitating or verbalizations with no addition of spontaneous social behaviors; echolalia; move This explanation relates to another finding in the present analysis: the development of TD young children's social skills highlights data from sibling interactions, and from dyadic sibling interactions, and from dyadic sibling interactions, and from dyadic sibling interactions. In both dyads of mother-child with ASD (2,3) a large part of the provocative); ritualized interaction (an initiation that starts a preset specific interaction). interaction was coded as discourse-related (i.e., mostly questions) enhancing contexts for acquiring communicative and social et al., 1986; Knott, Lewis, & Williams, 1995). In light of literature on interactions of 2. Imitation: Following the partner to another room or another area in room; performing the same behavior as and answers), while in the case of dyad 1 (mother-TD child) and partner within 10 seconds (though not if an act is apparently elicited by the environment, such as bouncing a ball). dyad 4 (sister-child with ASD), a much larger part was coded as 3. Pro-soc ||play-related. 3.1. Initia

3.1.1.0 3.1.2.0 3.1.3. F 3.1.4. 3.1.5. C 3.1.6. P 3.1.7. L 3.2. Resp 3.2.1. P 3.2.2. N 3.2.3. N

The set of parameters was found to be effective and informative. The coding system was abilities of children with ASD, by providing a description of applied successfully into INTERACT, and allowed to analyze the data from 4 dyads and draw informative analyzed case studies, and more importantly, by some interesting conclusions. Table 2. Present data collected using INTERACT from 4 case outlining a path and supplying tools for studying sibling studies, focusing parameters: intensity, quality, dominancy, joint engagement.



Azrieli - <u>Azrieli</u> Foundation

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*Please see bibliography attached

Discussion

In line with other studies (Adamson et al., 2009) the present analysis clearly demonstrates that children with ASD are capable of some joint engagement tend to be engaged with their social partner for a substantial amount of time. The pattern of joint engagement in the interaction of a child with ASD and his sister resembled that of a TD child and his mother, with joint engagement for nearly the entire period of observation. This finding supports the assumption made about the special role played by TD siblings of children with ASD, in terms of the impacting the social abilities of these children.

Intensity of interaction in all three mother-child dyads was similar, while the interaction in dyad 4 was less intense. In all four dyads the child was less dominant than his partner. This findings may indicate that the interaction in the sibling dyad was more balanced than the interactions in mother-child dyads. It is possible that the fact that the interaction in dyad 4 was less intense was due to intuitive matching done by the sister to her brother's pace of action initiation. If this is the case, it is in line with findings of El-Ghoroury and Romanczyk (1999), who noted that children with ASD directed more verbal initiations towards their

cial	4. Play related	5. Discourse	6. Agonistic
ation	4.1. Initiation	5.1. Initiation	6.1. Initiation
Give/share	4.1.1. Initiate play	5.1.1. Asking	6.1.1. Physical aggressior
Cooperate/help	4.1.2. Initiate rough & tumble	5.1.2. Sharing	6.1.2. Object struggle
Request.	4.1.3. Clowning	5.2. Response	6.1.3. Command
Praise/approval	4.1.4. Establishing roles	5.2.1. Answering	6.1.4. Insult/disapproval
Comfort/reassurance	4.1.5. Establishing rules/turn taki	ng 5.2.2. Taking turns	6.1.5. Verbal threat
Physical affection	4.2. Response	5.2.3. No response	6.1.6. Tattling
_augh/smile	4.2.1. Positive		6.1.7. Competitive stater
oonse	4.2.2. Negative;		6.1.8. Bribing/bargaining
Positive	4.2.3. No response		6.1.9. Physical tease
Vegative			6.2. Response
No response.			6.2.1. Submit
			6.2.2. Counterattack.
			6.2.3. No response

All three dyads involving a child with ASD included actions **coded** as agonistic, while the interaction between a TD child and his mother did not include even one agonistic action observed. **Communicative difficulties are core characteristics in ASD, and** those may influence the actions of both partners, as well as the **quality of the interaction. It is important to keep in mind the restrictedness of drawing conclusions** from a few case studies, especially considering the huge variety among children with ASD and their families.

To conclude, despite its limitations, this study makes an important contribution to the study of social-communicative **interaction in families of children with ASD.**

Meticulous analysis In average a new action occurred in the interaction every 6 seconds of recorded observations using the INTERACT fig. 6: Quality of interaction dyad 3 fig. 7: Quality of interaction dyad 4 software can contribute significantly to learning about social quality~agonistic communication of children with and quality~low level quality~discourse quality~play quality~proscoail quality~agonistic quality~imitation without ASD. The sister was found to be more dominant in the interaction **Dominancy** The mother was found to be more dominant in the interact pint Engagement was demonstrated for almost all of the observation <u>Yonatd@Hotmail.com</u> fig. 9: J.E dyad 4 fig. 8: J.E dyad 3 ttp://fellows.azrielifoundation.org/pages-en-29 The dark brown line represents duration of sibling being 'on task' The light green line represents duration of mother C being 'on task' Special thanks to Dr. Anat The **red** represents duration of sibling being 'off task' The dark brown represents duration of mother C being 'off task' Žeidman-Zait For her help in The light brown line represents duration of child C being 'on task' The <mark>light brown</mark> line represents duration of child C being 'on task The green line represents duration of child C being 'on task' The dark green line represents duration of child C being 'on task' shaping the coding system. Sister was on task during almost the entire observation. Qualitative Yonat Rum is grateful to the Azrieli Nother was on task during almost the entire observation, while ch notes indicate that the few seconds in which the sister was off task were was on and off task alternately. Qualitative notes indicate that the Foundation for the award of an Azrieli when she tried to catch child C's attention and bring him back to seconds in which mother was off task were in a transition point from Fellowship. engagement in the task.

Interaction among siblings that one of them has ASD - parameters for examination

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