Participation of communication partners when supporting physical exploration and instruction by aided communicators

Background and Aim
Gaining knowledge about the world is an essential part of children’s development and a basis for secure attachment (Bowlby, 1982). Disabled children may to a larger extent than non-disabled children experience that they are not understood, that their needs and interests are not recognized, and that caregivers are not available for support in exploration. They tend to show lower levels of secure base behavior and physical contact with their mother than non-disabled children (Howe, 2006). This may be related to the fact that children with severe movement disorder and limited use of the hands are unable to explore or have difficulties exploring the environment on their own. They have to use language to make partners help them manipulate objects and explore the physical world.

Motor-impaired children with little or no speech will have to use communication aids to instruct others when they need to investigate or move or construct something (Batorowicz et al., in press). However, in interactions involving aided communicators the naturally speaking communication partner is often taking the lead, giving the aided communicator little opportunity for exploration. The strategies of naturally speaking partners may include many binary choices, yes-no questions and guesses (Kent-Walsh and McNaughton, 2005; Light, Collier and Parnes, 1985; von Tetzchner and Martinsen, 1996).

Many of the turns are co-constructed (von Tetzchner and Martinsen, 1996; Kent-Walsh and McNaughton, 2005). One reason may be limited experience by communication partners being directed to perform physical actions for young aided communicators. Moreover, interactions may vary considerably, depending on the age of the communication partner, their communication and language competence and style, their experience with aided communication, and their attitude towards aided communication (Ferm, Ahlsén and Björc-Ákesson, 2005). The present study investigates strategies used by naturally speaking communication partners when constructing physical models instructed by aided and by naturally speaking communicators.

Method
The study is a part of an international project (Becoming an aided communicator) which explores the development of aided communicators. It was approved by the ethics committees in each country (von Tetzchner et al., 2014).

The participants were 18 aided and 18 naturally speaking communicators, aged 5–15 years, from Brazil and Norway. All the aided communicators had a diagnosis of cerebral palsy, most used a wheelchair for mobility, and the majority had limited ability to handle objects and perform other motor actions using their hands. The communication partners were parents, peers and professionals. They were naturally speaking and familiar with the child and the use of aided communication.

The data were collected between 2011 and 2014, in the university laboratory, at the child’s school or in the home. The physical models included loading several items into a lorry, dressing a doll, making a string of geometrical shapes, building Lego tower and creating a pattern of domino bricks. There
were two models of each type, ten in total. The communication dyads were video-taped and the recordings were transcribed and coded.

Results and analyses
Both groups were able to instruct the partner to make physical constructions. The aided group completed significantly fewer constructions correctly than the comparison group (50.5 vs 96.3%). The lower number in the aided group may reflect both insufficient instruction from the aided communicators and a lack of adequate partner strategies. The aided dyads used significantly longer time than the comparison dyads (414.1 vs. 85.1 seconds).

During the construction, partners used open questions like “Can you tell me more?”, binary choice questions like “Is it the big or small one?”, and specific yes-no questions, like “Is it this shirt?” The partner also took over by instructing the child “First you tell me the colour, then the shape”, or telling the child to report missing content. The partners of the aided communicators used significantly more open questions (2.7 vs. 0.03), binary choice questions (1.1 vs 0.1) and specific yes-no questions (18.4 vs 1.5) per task. The partners of the aided communicators also engaged significantly more often in “teaching” (3.4 vs 0.1) and instructing the child to report missing content (0.6 vs 0.0). Similar interaction patterns have been found in other studies (von Tetzchner and Martinsen, 1996; Midtlin et al., 2014).

Conclusion
The strategies of naturally speaking communication partners differ when instructed to construct physical models by aided and naturally speaking communicators. Although both the aided and the naturally speaking communicators managed to instruct the partners to construct the models, the partners of aided communicators used more diverse strategies and asked and instructed more often than the partners of the naturally speaking children. The results indicate that aided communicators are able to use language to manipulate and explore objects with the help of others, but may have limited experience using language for this purpose. Aided communicators and their communication partners were more dependent on each other, there was more interaction between the partner in the dyad, and a co-construction of meanings in the construction of physical models was observed.

Declaration of Conflicting Interest
The authors disclose they have no financial or other interest in objects or entities mentioned in this paper.

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References


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Program Planner/Instructional Personnel’s Name: Munique Massaro

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Program Planner/Instructional Personnel's Name: Kristine Stefanek

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For what role?

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Participation of communication partners when supporting physical exploration and instruction by aided communicators

Program Planner/Instructional Personnel's Name: STEPHEN VON TETZLAFER

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