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VOLUME II

*Peer Relationships among Learners with Autism
in the Educational Context*

Edited by

Neil Humphrey

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Introduction: Peer Relationships among Learners with Autism in the Educational Context

*Neil Humphrey, Caroline Bond, Judith Hebron,
Wendy Symes, and Gareth Morewood*

Introduction

In this volume we examine theory and research relating to a fundamental aspect of education whose importance is arguably magnified greatly for those with autism spectrum conditions (ASC): relationships with other learners. Over and above the general developmental significance of peer relationships (Bierman, 2005) and the fact that learning itself is an inherently social process, this is a pressing issue in relation to ASC because affected students, by definition, experience difficulties in navigating the social world (Humphrey & Symes, 2011). In terms of the conceptual framework introduced in Volume 1 (Bronfenbrenner, 2005), the child's peer group is a key constituent of the microsystem, and his/her relationship with them provides an example of a critical mesosystem element. However, we can also see interaction with more distal elements of the ecosystem. Policy developments in relation to inclusive education at the level of the macro-system have made peer relationships rise to prominence. In particular, the opportunity that mainstream educational placement provides for students with ASC to interact with non-disabled peers is often cited as a key advantage over specialist schooling. It is argued that such experiences facilitate the development of social skills in affected learners, while helping their peer group to become more accepting of children who are different (Boutot & Bryant, 2005).

We begin this introductory text by outlining some core concepts in the study of peer relationships among students with ASC (e.g. peer interactions, friendships), including issues pertaining directly to the peer group (e.g. awareness and understanding of autism). Research on each is discussed in turn. These findings are then synthesised through discussion of Humphrey and Symes' (2011) 'Reciprocal Effects Peer Interaction Model' (REPIM). Finally, we consider the 'downstream' effects of the peer relationships of students with autism in other domains, including their mental health, learning, and participation in school. We do not give space to research on interventions in this area, as these are covered in Volume 4.

Peer Relationships in Autism – A Dual Route Approach

If we return to the ‘triad of impairments’ (Wing, Gould, & Gillberg, 2011) introduced in Volume 1, it is easy to understand why peer relationships may be such a challenging arena for those with ASC. Autism is a condition that fundamentally influences the way in which affected individuals process and act upon social information. Each area of the triad – social interaction, social communication, and social imagination – is important here. So, for example, the oft-cited difficulties experienced by those with autism in understanding the perspectives of others (so-called ‘mentalising’ – Sharp & Venta, 2012) can lead to considerable problems developing and maintaining positive relationships with others. We rely on our ability to interpret and infer what other people are thinking and feeling as a means of understanding (and predicting) their behaviour towards us, and in determining how we respond to them. As children enter and progress through school, expectations around the development of social understanding shift, such that the rules that govern appropriate social behaviour (the ‘dos and don’ts’ of social interaction) become less explicit. Understanding this ‘hidden curriculum’ can be particularly difficult for those with ASC (Myles & Simpson, 2001).

However, social interaction is a reciprocal process, and it is therefore important that we explore not just how children and young people with autism relate to other people, but also how other people relate to them. Doing so balances the focus of our inquiry such that we are not simply placing the problem within the child. A small but important body of research in this field therefore seeks to explore peer awareness, understanding and acceptance in relation to ASC, in particular acknowledging that, ‘the practice of inclusion rests primarily on unaffected schoolmates rather than teachers’ (Ochs & Kremer-Sadlik, 2001, p. 400). Thus, a dual-route approach is taken, in which we examine peer relationships from the perspectives of both those with autism and their typically developing peers. Teachers and other school staff are of course important mediators of this process – we explore their role in Volume 3.

Social Interaction, Networks, and Friendships

Developing a comprehensive understanding of the nature of peer relations among learners with ASC requires us to take a multi-faceted approach. A useful starting point is *social interactions*, a shared process in which children initiate and react to social stimulation from their peers (Bauminger, Shulman, & Agam, 2003), which feeds the development of peer relationships (Bierman, 2005). A number of taxonomies have been developed to assist researchers in codifying these interactions. For example, Hauck, Fein, Waterhouse, and Feinstein’s (1995) behaviour coding scheme for initiations

of social behaviour distinguishes between positive (e.g. greeting, initiating play), negative (e.g. aggression, provocation), low-level (e.g. moving into physical proximity, imitation), and attention-seeking initiations.

Naturalistic studies of social interaction patterns in autism during both childhood (e.g. Bauminger et al., 2003; Hauck et al., 1995) and adolescence (e.g. Humphrey & Symes, 2011) have produced a number of common findings. First, those with ASC generally experience lower quantity *and* quality of social interactions than typically developing peers. For example, they are much less likely to initiate and/or accept social interactions with peers (Sigman & Ruskin, 1999) and spend much more time engaging in solitary behaviour (Bauminger et al., 2003; Humphrey & Symes, 2011). Second, consistent with the 'general differences' framework (Lewis & Norwich, 2005) introduced in Volume 1, such differences hold even when compared to children with disabilities other than autism (e.g. Down's syndrome, dyslexia) (Hauck et al., 1995; Humphrey & Symes, 2011). Third, these peer interaction patterns appear to be unrelated to level of functioning, although early nonverbal communication and play skills may predict the extent of peer engagement (Hauck et al., 1995; Sigman & Ruskin, 1999). Fourth, some evidence has suggested that frequency of interactions is unaffected when adults, as opposed to peers, are the target (Hauck et al., 1995).

While observational studies of social interaction can provide useful insights into the peer relations of children and young people with autism, they are generally constrained by their limited data window (e.g. most studies only provide a 'snapshot', using data from a small number of short observations) and the observer effect (e.g. the presence of a researcher may fundamentally change the nature and frequency of the interactions that take place). An alternative approach is to examine *social networks*, which refer to the peer groups to which an individual belongs (Locke, Ishijima, Kasari, & London, 2010). Such networks are typically examined using socio-metric techniques that highlight the congruence between self- and peer-nominations of friendships, connections, and rejections. Data can be used to produce social network maps (see, e.g. Figure 1 in Kasari, Locke, Gulsrud, & Rotheram-Fuller, 2011, included in this volume) that provide insights into the child's level of involvement in a given social structure (e.g. the classroom). For example, a child may be isolated, peripheral, secondary, or nuclear. Studies using these and other methods (e.g. Kasari et al., 2011; Locke et al., 2010; Symes & Humphrey, 2010) tell us that children with ASC are more likely to be on the periphery of their social networks, and more likely to be actively rejected by their peers. These issues appear to become more apparent from the onset of adolescence, when the nature (e.g. more selective friendship groups) and context (e.g. multiple peer groupings in secondary education) of social networks change (Locke et al., 2010).

Children's social networks comprise multiple relationships, and a recent systematic review by Petrina, Carter, and Stephenson (2014, included in this

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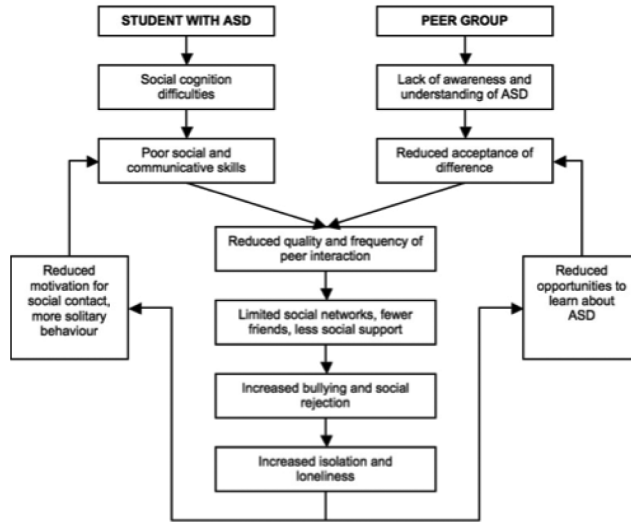


Figure 1: The reciprocal effects peer interaction model (REPIM) for autism (taken from Humphrey & Symes, 2011)

volume) revealed marked differences between those with ASC and their peers in the characteristics, perceptions, quality, and reciprocity of their *friendships*. However, is this perhaps to be expected? The understanding and functional role of concepts such as friendship may be different for individuals with autism. Indeed, this would be predicted by Lewis and Norwich's (2005) aforementioned general differences framework. As before, ascertaining the views of children and young people with ASC themselves offers a fruitful route of inquiry. Calder, Hill, and Pellicano's (2013) recent mixed-methods study (included in this volume) provides useful insights, highlighting that while children with autism generally report smaller numbers of friends (consistent with other studies), most are satisfied with their friendships. The functional role of friendship described by children in the authors' sample focused largely on companionship (e.g. '*Someone that you hang around with*', *ibid*, p. 306), as compared to the additional quality of intimacy that is typically reported by youth without autism (see also Bauminger & Kasari, 2000). That is, friendship may be more about sharing company than sharing emotions for children and young people with autism. Given this, it is important that we do not uncritically impose a framework of what we understand as 'normal' behaviour (Milton, 2012). Children and young people with ASC may perceive friendship differently, and thus while their friendships may appear to differ from those of their typically developing peers, they may still meet their individual social needs (Petrina et al., 2014).

One particularly telling quote from a child ('*Sometimes I want to play by myself*' – Calder et al., 2013, p. 306) serves as a salient reminder of the

need to take into account the motivations, needs, and desires of individuals with ASC when we think about whether, when, and how to intervene in this aspect of their lives. Some children prefer solitude and this should be respected; indeed, the expectations of having to frequently engage with other children may be overwhelming (Calder et al., 2013). However, there is also wide variation evident. Many young people interviewed by Humphrey and Lewis (2008; see Volume 1) expressed a desire to form and maintain multiple reciprocal friendships, and those that did reported benefits in terms of increased social support (e.g. *'I do have friends who very often stick up for me'*, p. 35) and positive affect (e.g. *'If people are nice to you, you feel better'*, p. 35). Understanding the role that individual differences play in influencing the nature and degree of the friendships experienced by children and young people with ASC is therefore a critical avenue for future research in this area (Petrina et al., 2014), particularly given that the extant evidence for 'usual suspects' such as cognitive ability and mentalising skills has been inconclusive (Calder et al., 2013). Drawing again on Bronfenbrenner (2005), we tentatively suggest that such research refocus towards the social context – in particular, the peer group – in which those with autism find themselves.

Peer Awareness, Attitudes, and Understanding

Research on peer awareness, understanding of and attitudes towards children with ASC is comparatively limited at the time of writing, perhaps reflecting the traditional focus on the 'within' rather than the 'without' in autism education research. Nonetheless, there exists a corpus of evidence upon which we are able to draw – particularly the work of Campbell and colleagues in the United States (see, e.g. Campbell, 2007; Campbell, Ferguson, Herzinger, Jackson, & Marino, 2004, 2005; Morton & Campbell, 2008). A recent summary of this body of literature is included in this volume (Campbell & Barger, 2014).

The study of typically developing children's understanding of and attitudes towards special educational needs and disabilities is a useful place to start, driven as it has been by policy imperatives and discourse relating to inclusion, inclusive education, and mainstreaming that have yielded such a powerful influence on the education of those with autism. Thus, much of the work published in this area appeared in the years leading up to and following the publication of the Salamanca Statement (United Nations Educational, Scientific and Cultural Organisation, 1994), and we see several themes. First, younger children appear to be the most accepting of disability (Nikolarazi et al., 2005), but there is otherwise no obvious age-related trend (Nowicki & Sandieson, 2002). Second, social contact moderates attitudes. For example, children who attend inclusive schools hold more positive attitudes towards disability than children attending non-inclusive schools (Nowicki & Sandieson,

2002). Third, girls appear to be more accepting of disability than boys, although this is moderated by the gender of the attitudinal target (Nowicki & Sandieson, 2002). Fourth, in terms of awareness, children typically show greater understanding of sensory and physical disabilities than those that are considered to be 'hidden' (i.e. there are no obvious physical signs) (Magiati, Dockrell, & Logotheti, 2002).

What then of peer awareness, understanding, and attitudes towards children with ASC specifically? A first point of interest is the evidence showing clear chronosystem influence. In the aforementioned study by Magiati et al. (2002), no child reported having heard of autism. Unsurprisingly, this has changed over time, most likely as a function of developments in educational policy relating to inclusion and increased media exposure and general public awareness of autism. Thus, a recent study by Campbell and Barger (2011) revealed that nearly half of middle school students had heard of autism. Even among those who were unaware of the condition, many scored well on a (rudimentary) knowledge-based questionnaire about its cause, course, symptoms, and communicability. However, a significant minority of students, both with and without prior awareness, incorrectly endorsed items suggesting that autism was communicable.

This offers the beginning of a possible causal chain, as follows: a lack of awareness of (or, indeed, incorrect beliefs about) autism among peers means that they have insufficient information with which to construct an adequate understanding of the condition, and thereby struggle to empathise with those affected, ultimately leading to negative and exclusionary attitudes and behaviour (Humphrey & Symes, 2011). An elegant experimental study by Campbell et al. (2004 – included in this volume) offers support for this proposed process. Children viewed footage of a boy engaging in 'autistic behaviours' accompanied by descriptive (e.g. age, preferred activities) or combined descriptive and explanatory (e.g. basic information about autism) information. Provision of the latter had a positive effect on children's attitudes and behavioural intentions (e.g. willingness to engage in social, academic, and recreational activities with the child shown in the footage), an effect replicated in other research by the lead author (Campbell, 2007).

However, looking solely at the effects of provision of explanatory information about autism is insufficient. To develop a more comprehensive understanding of the process of attitudinal formation and change, Campbell (2006) suggests that we turn to social persuasion theory. Here we consider source (e.g. the 'who'), message (e.g. the 'what', as in descriptive vs. explanatory information noted above), channel/medium (e.g. the 'how'), and receiver/target/audience (e.g. the 'whom'). With regard to source, Morton and Campbell's (2008) study found that older students were more likely to display positive attitudes towards autism when the information they received came from a higher credibility source reflecting greater perceived expertise (e.g. a teacher or doctor vs. a parent). In relation to the target

audience, Campbell et al. (2005) found differences among children in different sociometric groups (e.g. popular, average, neglected, rejected) in terms of both their initial attitudes/behavioural intentions and their responsiveness to explanatory information about autism.

Bullying and Victimization

Thus far, we have highlighted research evidence that children and young people with ASC experience reduced quality and frequency of interaction with their peers. We have hypothesised that this is driven by both their established social difficulties and a lack of awareness and understanding (and subsequent exclusionary attitudes) among peers. This parallels what Milton (2012) refers to as ‘the double empathy problem’. We propose that this dual process serves to segregate those with autism from important sources of social support in the peer group microsystem, making them more vulnerable to bullying and victimisation. Our own research supports this. Humphrey and Symes (2010a) found that adolescents with ASC attending mainstream schools reported significantly lower social support from both classmates and friends than children with other or no disabilities. Significantly, this study also demonstrated that social support from classmates acted as a protective buffer against bullying and victimisation.

Bullying can be thought of as a form of social aggression, characterised by an imbalance of power between perpetrator and victim, with the intention to cause harm, and involving repetition over time (Hebron, 2012).¹ It can take on multiple forms, including physical, verbal, relational, and electronic (also known as ‘cyber-bullying’). Victimization refers to the experience of being the target of such aggression (Hawker & Boulton, 2000). Thus, bullying and victimisation are inextricably inter-linked. In Klin, Volkmar, and Sparrow’s (2000) terms, children with ASC are considered, ‘perfect victims’ (p. 6), and indeed our general differences framework would predict this. For example, the aforementioned difficulties in mentalising may mean that children do not report incidents of bullying because they wrongly assume that their teachers and/or parents already know what has occurred (Moore, 2007). Alternatively, children may find it very difficult to articulate what has happened and how they feel. In addition, provision of in-class adult support (e.g. teaching assistants) can inadvertently reduce opportunities for productive social interaction and increase social distance from peers (more on this in Volume 3). Finally, research on the typical ‘victim profile’ from general bullying research demonstrates that victims of bullying often exhibit difficulties in social understanding (Garner & Hinton, 2010), occupy low social status (Card & Hodges, 2007), and are perceived as ‘different’ or deviating from peer group norms (Horowitz et al., 2004). The social experience of youth with ASC reads remarkably similarly.

Given the above, what does the research on bullying prevalence tell us? Multiple studies – summarised in a recent systematic review by Schroeder, Cappadocia, Bebko, Pepler, and Weiss (2014; included in this volume) provide confirmatory evidence that those with ASC are much more likely to be bullied than their typically developing peers (e.g. Wainscot, Naylor, Sutcliffe, Tantam, & Williams, 2008), and in many cases their peers with other disabilities (e.g. Humphrey & Symes, 2010b). However, consistent with the individual strand of the general differences framework, children with autism do not all experience the same levels of bullying and victimisation. ‘Risk factors’ are individual, relational, or contextual differences that increase the likelihood of bullying exposure. For children with autism they include *age* (with a peak in early adolescence – Cappadocia, Weiss, & Pepler, 2012; Hebron & Humphrey, 2013) *attending mainstream schools/classes* (Hebron & Humphrey, 2013; Sterzing, Shattuck, Narendorf, Wagner, & Cooper, 2012), *social vulnerability/naivety* (Sofronoff, Dark, & Stone, 2011) and/or *poorer social skills* (Sterzing et al., 2012), *co-morbid externalising problems* (Hebron & Humphrey, 2013; Sterzing et al., 2012) and a *diagnosis of Asperger syndrome* (Zablotsky, Bradshaw, Anderson, & Law, 2014). These factors do not operate in isolation from one another. For example, Rowley et al. (2012) found an interaction between educational placement and level of social impairment, such that children with lower levels of social impairment experienced higher levels of bullying in mainstream settings than in specialist schools, with no difference apparent for those with higher levels of social impairment. Furthermore, Hebron (2012) found evidence of a cumulative risk effect, with an exponential increase in bullying following exposure to approximately three risk markers of the kind noted above.

Bringing It All Together – Reciprocal Effects in Peer Interaction and Their Downstream Consequences for Students with Autism

How may we bring together and make sense of all of the above? Humphrey and Symes’ (2011; included in this volume, see Figure 1) REPIM theorises a set of processes through which aspects of peer relationships interact to influence social processes in the class and peer group microsystem (e.g. bullying) that then trigger downstream effects on learning, participation, and social-emotional wellbeing. The model follows a dual-route approach that provides equal focus on children with ASC and their peers. At the child level, although the motivation for social interaction is initially intact in many cases, problems in social understanding lead to a lack of appropriate skills to build positive relationships. At the level of the peer group, a lack of awareness and understanding of autism can mean that acceptance of difference is reduced (Campbell et al., 2004). The combination of these factors is theorised

to culminate in the reduced quality and frequency of positive peer interactions reported earlier in this text. The issues highlighted above in relation to impoverished social experience (e.g. more limited social networks, reduced social support) are a logical next step, given that such interactions feed the development of peer relationships (Bierman, 2005). Without the protection and resilience conferred through such relationships, a greatly increased likelihood of exposure to bullying and victimisation ensues.

These processes produce reciprocal effects that feed back into the peer interaction process, affecting future behaviour. For the child with ASC, negative social experiences reduce the motivation for further interaction with peers, creating a pattern of avoidance and solitary behaviour that does not provide adequate opportunities for the development of social and communicative skills. For the peer group, reduced social contact with those with autism further limits the development of understanding and awareness, accentuating feelings of difference. Ultimately, this produces a 'vicious circle of social isolation' (Bauminger, 2002, p. 283). It is perhaps unsurprising, therefore, that research demonstrates greater experience of loneliness among children and adolescents with ASC (e.g. Bauminger & Kasari, 2000; Bauminger et al., 2003; Locke et al., 2010). What remains unclear is the mechanism(s) through which these feelings of loneliness emerge. The intuitive explanation is that loneliness is a direct consequence of impoverished peer interaction in the context of motivation for positive social contact. However, this may be too simplistic and as before, runs the risk of imposing a framework based on 'neuro-typical' behaviour. The aforementioned research by Bauminger and colleagues found fewer and weaker associations between peer interactions and/or friendships and loneliness in children with ASC than was seen in their typically developing peers. This suggests a distinct process, perhaps created through a combination of different conceptual understanding of the relations between social interaction and loneliness among those with autism (Bauminger et al., 2003), and the weight of external pressure to conform to normative expectations for social behaviour in childhood and adolescence (Calder et al., 2013). Research highlighting links between social functioning, anxiety, and loneliness in autism provides tentative support for this explanation (White & Roberson-Nay, 2009).

What are the consequences of the above processes? That is, how do peer relationships for young people with autism influence other aspects of their lives? Returning to our bio-ecosystemic framework introduced in Volume 1, the centrality of the peer relationship mesosystem in childhood and adolescence means that we can confidently predict powerful cascading effects to other aspects of the individual's functioning. Reduced emotional well-being in both the short and long term is an obvious starting point, especially given the elevated levels of anxiety, depression, and other mental health difficulties that have been documented among youth with ASC (e.g. Hebron & Humphrey, 2014). The evidence suggests that peer relationships and social functioning

more generally do play an important role. For example, Vickerstaff, Heriot, Wong, Lopes, and Dossetor (2007) reported an inverse association between self-perceived social competence and depressive symptoms in their sample of high-functioning children. Furthermore, Hebron and Humphrey's (2014) interview study of adolescents with ASC found that, 'the social relationships of the young people were among the most significant influences on their mental health' (p. 28).

Learning and participation in school may also be affected. Negative peer-related experiences of children with autism have been highlighted as key drivers of increased absence from school, school placement changes, and school refusal (Reid & Batten, 2006). In a classroom observational study conducted by two of the authors of this text, differences in peer-related behaviours that support effective learning were seen to be affected – for example, those with ASC were significantly less likely to work collaboratively in the lesson, get along with other classmates, listen to them, and support them in their learning than their typically developing peers (Symes & Humphrey, 2012). However, it is important to note that the presence of in-class support (e.g. teaching assistants) was observed to be a key mediator of social participation in class (see Volume 3). Furthermore, it is unclear whether peer relationships yield any influence on the academic attainment of learners affected by ASC, as the majority of studies exploring educational outcomes have focused on cognitive, as opposed to social, differences as explanatory variables (see, e.g. May, Rinehart, Wilding, & Cornish, 2013). One study explicitly focusing on peer relationships failed to find any association with academic attainment among students with autism (Bulman, 2012), despite this having been established for children with special educational needs and disabilities more generally (Humphrey, Wigelsworth, Barlow, & Squires, 2013). It is possible that, in line with the general differences framework, the distinct profile of needs and strengths characterised in ASC renders peer relationships less significant in determining their academic success. Further research is clearly warranted.

Summary

The peer relationships of children and young people with autism have been closely scrutinised by researchers in the last two decades. Studies have focused on different aspects of these relationships, including peer interactions, social networks, friendships, and bullying. Most studies have highlighted differences from learners with no and other disabilities that coalesce into an overall profile of negative peer-related experiences. In parallel, a small but growing body of research has begun to consider peer awareness, understanding, and attitudes towards autism. This work has demonstrated that

awareness and understanding of autism has increased in recent years, but is still relatively low. Attitudes may vary as a function of the extent to which explanatory information about autism is provided, and how this is communicated. Our theoretical model of peer interaction in autism – the REPIM – synergises these findings and proposes a dual route sequence to aid our understanding of these important processes. We also propose downstream consequences for other aspects of development, including emotional wellbeing, learning, and participation in school.

Note

1. These three features – power, intention, and repetition – are generally accepted and feature in most definitions of bullying. Other potential ‘essential ingredients’ include a social setting and lack of provocation, although these are more controversial. For example, bullying researchers have increasingly recognized the existence of aggressive/provocative victims, or more commonly ‘bully-victims’.

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