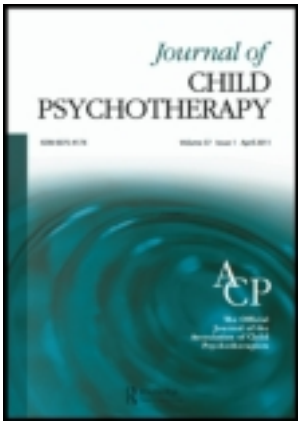

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Interaction structures between a child and two therapists in the psychodynamic treatment of a child with Asperger's disorder

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Leading the charge to link intervention research with clinical practice is the development of process research, which involves a detailed analysis of specific therapeutic processes over the course of treatment. The delineation of interaction structures – repetitive patterns of interactions between patient and therapist over the course of treatment – can inform therapists of what may be expected from patients with particular patterns of symptoms or behaviours in their clinical practice and how interactions change over time. Using the *Child Psychotherapy Q-Set*, this study aims to compare the different interaction structures that emerged in the two-year psychotherapy of a six-year-old child conducted, for one year each, by two doctoral-student therapists in a university-based community mental health clinic. The study allows for exploration of the independent role of the therapist in the psychodynamic therapy of a child diagnosed with Asperger's disorder. The results suggest that four distinct interaction structures between child and therapist could be identified in this psychotherapy and that the interaction structures differed between the two therapists and also differed over time within each treatment. The implications of these findings for training and clinical practice are discussed.

Keywords: child psychotherapy; psychotherapeutic processes; treatment outcomes; treatment adherence; naturalistic study; single-case research

Introduction: the psychodynamic treatment of children with Asperger's disorder

Asperger's disorder is a relatively recent disorder to be officially classified; it was only added to the *DSM-IV* (American Psychiatric Association, 2000) in 1994. It is thought to affect approximately three out of every 10,000 children, approximately one-quarter the prevalence rate of the more widely studied diagnosis of autism (Fombonne, 2005). Asperger's disorder shares many features of autism, but is distinguished by the absence of the severe cognitive and language delays found in patients with autism. It is characterised by, among other symptoms, significant impairment in social interaction and the presence of restricted, repetitive and stereotyped patterns of behaviour, interests and activities (*DSM-IV*; APA, 2000). Comorbid symptoms of attention deficit, anxiety and depression may also be present (Szatmari, 1991).

A typical treatment for a child with Asperger's disorder today may include aspects of behaviour management, behavioural parent interventions, assistive

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technology, curriculum adaptation and vocational training (Klin *et al*., 2000). Early psychoanalytic theories of autism have been largely dismissed due to their implication of maladaptive mothering as the cause of autistic disorders (Mahler, 1952; Bettelheim, 1972). Some psychodynamic therapists, however, have refused to throw the proverbial baby out with the bathwater, continuing to apply psychodynamic interventions in the treatment of the disorder. There is a modest but growing number of published case studies of successful psychoanalytic treatment of adults (Polmear, 2004) and children (Olesker, 1999; Bromfield, 2000; Pozzi, 2003; Cassidy, 2004; Shulman, 2004; Topel and Lachmann, 2008) with a diagnosis of Asperger's disorder. It has been suggested that Asperger's disorder in children shares some similarities with narcissistic personality disorder in adults and thus can be subjected to psychoanalytic intervention (Shuttleworth, 1999). Children with Asperger's disorder have a greater capability for theory of mind than do children with autism (Dissanayake and Macintosh, 2003) and thus may be able to make use of displacement in psychodynamic play-based approaches. It is clear that this work is quite new and thus has not yet been subjected to empirical study. For this reason, the current study describes an empirical investigation of the psychotherapy process in the psychodynamic treatment of a six-year-old boy diagnosed with Asperger's disorder, in order to identify the interaction structures between one child and two different therapists through the use of a valid and reliable measure of the child psychotherapy process.

Empirical studies of the psychotherapy process

Several assessment instruments have been developed to study the psychotherapy process empirically. The *Psychotherapy Process Q-Set* (*PQS*) was developed by Enrico Jones and his colleagues (Jones *et al*., 1988; Jones, 2000) in an attempt to develop an empirical measure of the adult psychotherapy process which could produce findings generalisable to actual clinical conditions. The Q-sort technique breaks down adult therapy sessions into analysable data points through the ordering of 100 qualitative, session-specific statements into a forced-choice normal distribution made up of nine categories ranging from 'most characteristic' to 'most uncharacteristic'. These statements fall into three categories: (1) the patient's attitudes, behaviours, or experience; (2) the therapist's behaviours or attitudes; and (3) the therapist-patient interaction, or the climate or atmosphere of the encounter (Jones, 2000). Items are placed not in relation to any implied norm but are based on their relative value to the other 99 items to capture best the overall 'shape' of the session. The process of therapy, therefore, is characterised by the stability or variability of items in relation to one another during one session. The arrangements of these 100 items form a session profile. These profiles can then be studied across the course of treatment. Although it is applicable to multiple-case research, the Q-sort technique is uniquely qualified to examine a single case in which the *N* of the study is the number of treatment sessions as opposed to the number of participants.

Jones (2000) went on to investigate interaction structures with the *PQS* by identifying clusters of items that tended to co-occur across sessions within particular therapist-patient dyads. He used the *PQS* to identify dyad-specific processes, or interaction structures – repetitive patterns of interaction across sessions. These interaction structures are mutually influencing; that is to say, the behaviour and

experience of each member of the dyad affects the behaviour and experience of the other. Dominant patterns typically emerge between each therapist-patient pair, as evidenced by certain items consistently occurring together longitudinally.

Prototypes of ideal models of adult treatment were also developed by a panel of psychodynamic (PDT) and cognitive-behavioural (CBT) expert therapists (Ablon and Jones, 1998). Eleven PDT and ten CBT therapists, experienced and well-regarded in their fields, were asked to distribute the *PQS* items according to their understanding of an ideal session from their theoretical orientation. High *Cronbach's alpha coefficient reliabilities* were found among both the PDT ($\alpha = .94$) and CBT ($\alpha = .95$) expert prototypes. The distributions loaded onto two distinct factors, one for the ideal PDT, and the other for the ideal CBT psychotherapy process in a session (Ablon and Jones, 1998).

Schneider and Jones (2004) adapted Jones's (2000) *PQS* and created the *Child Psychotherapy Q-Set* (*CPQ*). Drawing from a review of child psychotherapy literature and research, Schneider delineated 100 items most characteristic of processes occurring in child psychotherapy across theoretical orientations. Many of these items closely approximate items from the adult-oriented PQS; however, some items, such as those referring to the quality of the child's play, are specific to the treatment of children. In preliminary studies the *CPQ* has been shown to be valid and reliable (Schneider, 2004a, 2004b; Schneider *et al*., 2009; Schneider *et al*., 2010). Thus far, the *CPQ* has not been used to study the psychotherapy process with children with Asperger's disorder.

As part of the process of developing the *CPQ*, Schneider and her colleagues (Schneider *et al*., 2009) also collected PDT expert prototypes and CBT expert prototypes of the *CPQ*. The child PDT experts described working with affects, looking for recurrent themes, and interpreting warded-off experiences as the most characteristic features of the psychotherapy process from their perspective. By contrast, the child CBT experts described rewarding desirable behaviours, offering reassurance, self-disclosure and exerting control over the interaction as the most characteristic features of the psychotherapy process from their perspective. No items loaded significantly onto both factors – evidence of the discriminant validity of the two prototypes.

Two recent studies using the *PQS* and *CPQ* have found a quite different constellation of interaction structures between the same therapist treating two different patients (one an adult patient, the other a child patient), suggesting that interaction structures are unique to each dyad even when only the patient is varied (Schneider *et al*., 2009; Goodman *et al*., forthcoming). It is unclear, however, whether interaction structures are driven solely by patient characteristics. Would the constellation of interaction structures differ when the patient remains constant and the therapist varies? To date, no studies have compared the interaction structures between one patient and two different therapists in a single treatment.

The purpose of the present study is to identify the interaction structures between a child and two therapists across the course of the two-year psychodynamic treatment of a child with Asperger's disorder, where the first therapist had to end her work with the child after one year. Coding of the video footage of the complete treatment using the *CPQ* yielded four interaction structures, and the independent contribution of each therapist to the process of psychotherapy was assessed by comparing the degree to which the identified interaction structures are present or absent in each of the two therapists' consecutive treatments of the same child.

Research design

Hypotheses tested in the study

(1) We hypothesised that, using the *CPQ*, we could identify several interaction structures that characterised the psychotherapy process of the treatment of a child, S., diagnosed with Asperger's disorder.
(2) We hypothesised that some of the identified interaction structures would significantly differ between the two therapists treating the same child. Previous research has found that the constellation of interaction structures does significantly differ across two adult (Goodman *et al*., forthcoming) and two child patients treated by the same therapist (Schneider *et al*., 2009), yet no study has yet addressed the reverse. We used an independent-samples *t*-test to test this hypothesis. We also hypothesised that some of these interaction structures would become more or less characteristic over time. We used a *Pearson correlation* to test this hypothesis. We then used a within-subjects *MANOVA* to determine which interaction structures predominated in the two-year treatment. Finally, we also tested for differences between the two therapists at the item level, using a series of *Bonferroni*-corrected *t*-tests.
(3) As both therapists were in training and receiving psychodynamically oriented clinical supervision at the time of the study (see below), we hypothesised that adherence to the prototype of PDT would increase over the course of these two treatments, whilst similarities to the CBT prototype would decrease. We used a *Pearson correlation* to test this hypothesis. We also hypothesised that PDT adherence would not significantly differ between the two therapists. We used a *t*-test to test this hypothesis. We also hypothesised that overall, PDT adherence would be greater than CBT adherence. We used a paired-samples *t*-test to test this hypothesis.

Participants

Both therapists who took part in the study were clinical psychology doctoral students participating in weekly psychodynamically oriented clinical supervision conducted by an experienced child clinical psychologist throughout the duration of both treatments, which took place in a university-based community mental-health clinic. Both therapists were second-year students at the time of the treatment. The first therapist, who treated him during the first year, was female. The second therapist, who treated him during the second year, was male. Both were from European-American backgrounds. The same experienced child clinical psychologist supervised both student therapists in psychodynamically oriented (Lopez and Kliman, 1980; Fonagy and Target, 2000; Jones, 2000) weekly supervision. Both therapists also consented for the videos of their treatments to be viewed and coded for the present study.

The child, S, began therapy as a six-year-old in the first grade. He had been diagnosed with Asperger's disorder at the age of six by his first therapist and her clinical supervisor, and lived with his biological parents and a typically developing biological brother two years younger. Both parents were upper-middle-income professionals who loved each other and their two sons. S presented with behavioural and social difficulties, including difficulty following directions and routines at school,

failure to initiate contact or sustain interactions with peers, and perseverative interests in certain television shows and films. He had a history of developmental delay in several areas, including speech and gross-motor coordination. In spite of these delays, he appeared to be a highly intelligent child, capable of symbolic thinking. He engaged spontaneously in non-directed fantasy play, although often in connection with themes or characters from his perseverative interests. Although diagnosed with Asperger's disorder, S was deemed suitable for psychodynamic play-based psychotherapy. He participated in weekly 45-minute sessions across a two-year time span. S's assent and his parents' signed informed consent were obtained before videotaping his sessions.

Our impressions of S's therapeutic gains are that throughout the course of treatment, S became less impulsive and more tolerant of therapeutic interactions. In particular, S's storytelling and symbolic play became not only more flexible but also less scripted and reliant on external sources (such as certain television shows) that had initially served as perseverative material. Notably, S permitted himself to feel the loss of both therapists at termination. In spite of these advances, S still evidenced social awkwardness and some affective restriction at the end of these two years.

Measure

The Child Psychotherapy Q-Set (CPQ)

The *CPQ* is a new and recently validated measure, adapted for use with children from the adult-oriented *PQS* (Jones, 2000). The 100 items were gleaned from a review of the child psychotherapy literature across theoretical orientations. A series of progressive pilot studies guided the reformulation of the items until the measure was validated successfully for 3–13-year olds of diverse symptomatology, ethnicity and socioeconomic status. All 100 items were carefully rated by expert therapists according to their perceived face validity and relevance to child therapy. Pilot testing verified the measure's clinical validity, item validity and discriminant validity (Schneider, 2004b). Coders, regardless of theoretical orientation, were able to reach consistent inter-rater reliability (ranging from .58 to .88) on child therapy session videotapes (Schneider, 2004b).

As with the *PQS*, the *CPQ* captures three domains of therapeutic process: therapist attitudes, behaviour, feelings and experience; child attitudes, behaviour, feelings and experience; and the nature or climate of the dyadic interaction. Over the course of a treatment, these items tend to cluster together and comprise interaction structures – defined by Jones (2000) as the patterns of reciprocal interaction that go on between the therapist and patient, sometimes without their awareness (what we might think of as the transference-countertransference matrix). In a single-case research design, these interaction structures can then be correlated with weekly measures of structural or symptomatic change to determine which specific interaction structures are therapeutic.

After watching a videotape of a 45-minute session, raters sort the 100 items into nine piles in a forced-choice (ipsative) procedure ranging from most uncharacteristic (pile 1) to most characteristic (pile 9). This ipsative procedure forces raters to place items in a normal distribution that characterises both high and low ends of a construct, with the majority of items placed centrally and increasingly fewer items placed towards each extreme.

Effort was made during development of the *CPQ* to reduce the subjectivity of the items, instead directing coders to base their choices on observable behaviours. The language of the items is meant to be accessible to both researchers and therapists. The items were designed to demonstrate variability across sessions and across patients without significantly overlapping with other items.

The *CPQ* was designed to be pan-theoretical; that is to say, the majority of items capture processes typical of different models of psychotherapy as well as shared qualities. During validation, feedback regarding the items was obtained from 30 PDT and CBT expert therapists. The flexibility of the *CPQ* makes it ideal to study PDT treatment, as other measures have failed to capture its complexity (Schneider, 2004b), but the *CPQ* also includes items that capture CBT and supportive therapy processes.

Whereas outcome research has typically focused on a comparison of 'brand-name' therapies (Shirk and Russell, 1996), process research seeks to understand qualitatively what essential ingredients compose these brand names. In this study, the *CPQ* was used to assess the constellation of interaction structures across both treatments and session adherence to the PDT and CBT prototypes across both treatments.

Procedure

The low-cost, university-based community mental-health clinic where these two treatments took place is staffed by closely supervised clinical psychology doctoral students and located in a suburb of New York City. The treatments under study were conducted in the clinic playroom, which is stocked with a large number of toys suitable for psychodynamic play-based psychotherapy, including dolls, doll houses, vehicles, art and building materials and a sandbox.

Fifty-four treatment sessions, which represented all the sessions conducted during a two-year period, were videotaped and coded using the 100 *CPQ* items. One session was not used because of technical difficulties with the video recording. The coders consisted of eight trained clinical psychology doctoral students who were blind to the diagnosis of the patient and the hypotheses of this study.

The coders Q-sorted practice videos until inter-rater reliability consistently reached *Cronbach's alpha coefficient* of $\alpha = .70$. When this benchmark was established, the coders were paired into teams of two and independently Q-sorted the sessions ($N = 53$) from the videotapes in a randomised order. After watching each session, the coders selected the most characteristic and least characteristic processes of the session, placing them into a forced distribution of nine piles. The four coding teams achieved a mean inter-rater reliability of .77 (range: .55–.89). Each team's Q-sorts of the same session were composited so that each session's process was represented by only one Q-sort in the statistical analyses.

The first stage of analysis was to identify the most and least characteristic items on the *CPQ*, as a way of identifying the overall 'tone' of the therapy. For the second stage of analysis, we submitted the 53 composited Q-sorts to a principal components factor analysis with varimax rotation (using *SPSS*, Version 18), yielding four factors, or interaction structures, present across two years of treatment. The principal components factor analysis meant that strongly inter-correlated *CPQ* items could be clustered together into four process-oriented patterns (see below).

Results

Detailed tables of results are set out in the Appendix. An examination of the most and least characteristic *CPQ* items across all 53 sessions appeared to capture the overall tone of the treatment quite clearly. A look at the items with the highest means suggests that this psychodynamically supervised treatment was characterised by two exploratory, non-directive therapists who demonstrated sensitivity and attunement and who placed particular emphasis on the child's affective states and help with verbalising them. The most distinctive characteristics of the child included fluid and imaginative play (Table 1).

The group of items with the lowest means indicate that the therapists were affectively responsive and not judgemental, didactic or actively rewarding. The child was not perceived to project his feelings onto the therapists or to have gleaned much insight during the treatment (Table 2).

In the second stage of our analysis, the principal components factor analysis of the *CPQ* data yielded four conceptually distinct factors.

Interaction structure one: 'Reassuring, supportive, nondirective therapist with a compliant, curious child building insight and positive feelings' ($\alpha = .91$)

This interaction structure reflects that the child's achievement of insight and positive feelings toward the therapist coincided with the therapist's acting reassuringly and supporting the child's defences, while avoiding a focus on feelings, unconscious wishes, recurrent themes and interpretation of play or defences (Table 3).

Interaction structure two: 'Helpful, mentalising, confident therapist with expressive, comfortable, help-seeking child' ($\alpha = .92$)

This interaction structure reflects that confidence, understanding others' behaviour, tolerance of strong emotion and helpfulness perceived in the therapist coincided with the child's expressing more affect and spontaneous play and feeling happier, more confident and understood (Table 4).

Interaction structure three: 'Judgemental, misattuned therapist with distant, emotionally disconnected, misunderstood child' ($\alpha = .88$)

This interaction structure indicates that when coders perceived the therapist as judgemental, misattuned and bringing up current events and relationships, they perceived the child as excluding the therapist from play, being more resistant to intervention, more distant from the therapist and feeling misunderstood by the therapist (Table 5).

Interaction structure four: 'Accepting therapist with playful, competitive child' ($\alpha = .82$)

This interaction structure suggests that when the therapist was accepting of the child's cognitive distortions and feelings without modifying or linking them, the child was able to risk engagement in imaginative and competitive play with the therapist (Table 6).

We also examined trends of the four interaction structures such as their relative importance to the treatment over time, and their relative importance to each of the

two therapists' treatment years. The independent contribution of the therapist to the process of psychotherapy was assessed by comparing the relative degree to which the four identified interaction structures contributed to each of the two therapists' treatments of this same child.

We found that for Therapist One, who conducted the first year of treatment, Interaction Structure Three ('Judgemental, misattuned therapist with distant, emotionally disconnected, misunderstood child,') became more characteristic across the year, $r = .41$, $p < .05$, while Interaction Structure One, ('Reassuring, supportive, nondirective therapist with compliant, curious child building insight and positive feelings,') became less characteristic across the year, $r = -.56$, $p < .01$. We also found that the overall magnitude of Interaction Structure Three (*Judgemental, misattuned therapist with distant, emotionally disconnected, misunderstood child*) was significantly higher for Therapist Two than for Therapist One $t(51) = -2.72$, $p < .01$. Interaction Structures 1, ('Reassuring, supportive, nondirective therapist with compliant, curious child building insight and positive feelings,') and 4, ('Accepting therapist with playful, competitive child,') both became less characteristic during the second year of treatment conducted by Therapist Two, $r = -.45$, $p < .05$, and $r = -.65$, $p < .001$, respectively. These results confirm the hypothesis that the constellation of these interaction structures fluctuated over time within treatments and differed across therapists treating the same child. These findings suggest that the therapist does make an independent contribution to the process of psychotherapy, when we hold the patient constant.

A within-subjects *MANOVA* followed with *Bonferroni pairwise comparisons* between every pair of the four interaction structures indicated significant mean differences in this order: Interaction Structure Four > Interaction Structure Two > Interaction Structures One and Three, $p < .0001$. In other words, *accepting therapist with playful, competitive child* was more prominent across both years of treatment than *helpful, mentalising, confident therapist with expressive, comfortable, help-seeking child*. These two interaction structures were in turn more prominent than both *reassuring, supportive, non-directive therapist with compliant, curious child building insight and positive feelings*, and *judgemental, misattuned therapist with distant, emotionally disconnected, misunderstood child*. In spite of the inherent difficulties in working with a child diagnosed with Asperger's disorder, both therapists favoured an accepting attitude over a judgemental attitude.

We also examined significant differences in each therapist's treatment at the item level. We found that the two therapists significantly differed on six individual *CPQ* items (using a *Bonferroni correction*, $p < .0005$). Therapist One was rated as more likely to make statements about the end of the hour ($p < .0001$), and her interaction with the child was rated as more humorous ($p < .0001$). The child was also rated as seeking greater intimacy ($p < .0001$) with Therapist One.

We next turned to exploring our hypothesis that each therapist's method of treatment would become increasingly similar to the prototype of PDT treatment as the year went on. As explained above, the *CPQ* was designed to be pantheoretical; that is to say, the large number of items captured both shared and distinct process characteristics typical of different theoretical orientations. CBT and PDT prototypical distributions have been developed for the *CPQ* based on the ideal session hour Q-sorted by experts representing each theoretical orientation. We correlated the 53 *CPQ* session Q-sort ratings for this two-year treatment with both the PDT and CBT prototypical distributions to determine session adherence to

each theoretical orientation. In both years of treatment, contrary to our hypothesis, there were no significant correlations between time and adherence to PDT or CBT. There were also no significant differences in PDT or CBT adherence between Therapist One and Therapist Two. There was, however, a significant difference overall between PDT adherence and CBT adherence, paired-samples $t(52) = 13.57$, $p < .0001$, with much greater adherence to PDT than to CBT by both therapists.

Discussion

This study represents a first attempt at identifying specific interaction structures in the treatment of a child diagnosed with Asperger's disorder conducted by two different therapists. Four different interaction structures were identified. Three of these interaction structures (One, Two and Four) represent various aspects of a positive transference-countertransference matrix, while the other interaction structure (Three) represents an aspect of a negative transference-countertransference matrix. One could imagine that this negative matrix could derail a treatment if not identified and addressed both in treatment and in supervision. In the present study, both periods of treatment contained varying quantities of these four interaction structures. The different constellations of interaction structures between the two treatments suggest that therapists can significantly influence the therapist-patient interaction structures in any given treatment. Patient characteristics are necessary but not sufficient to determine the contours of the psychotherapy process. Rather, the therapist's personality, childhood history, knowledge base and previous clinical experience appear likely to contribute to the formation and maintenance of an interaction structure.

In summary, our three hypotheses were partially supported. We were able to identify four empirically derived interaction structures from the 53 sessions of the treatment of S, which taken together were able to describe the 'shape' of this therapeutic treatment (hypothesis one). We found that these interaction structures fluctuated over time and that Interaction Structure Three was more prominent in Therapist Two's work than in Therapist One's work, suggesting that the therapist makes an independent contribution to the formulation of an interaction structure (hypothesis two). These therapist differences also existed at the *CPQ* item level. Finally, we also determined that although PDT adherence did not fluctuate over time or differ between the two therapists, PDT adherence was overall greater than CBT adherence in both treatments (partial confirmation of hypothesis three).

One aspect of these findings that merits attention is the gender difference between Therapist One, who was female, and Therapist Two, who was male. One theory to account for the differences between the two years of treatment, as manifested in the higher quantities of Interaction Structure Three in Treatment Two, is that S responded differentially to the therapist's gender. Perhaps S felt more distant, emotionally disconnected and misunderstood by Therapist Two because he felt more conflicted about his relationship with his father. These issues were perhaps then recapitulated in the paternal transference with Therapist Two, a male. Similarly, S might have felt closer to and more vulnerable with Therapist One because the maternal transference was more benign, and being a female, Therapist One was an unwitting beneficiary of this transference. This scenario is unlikely, however, because

both therapists reported that the mother seemed more predisposed to negativity toward the child than the father did.

An alternative theory is that S might have felt more distant, emotionally disconnected and misunderstood by Therapist Two than Therapist One because S was missing the relationship with Therapist One. In the university-based student clinic where this child was treated, students rotate through the clinic on an annual basis, thus having to terminate, often awkwardly and artificially, with their patients at the end of the academic year. S, who had been developing a tentative relationship with Therapist One, abruptly experienced this artificial termination and was forced to forge a new relationship with Therapist Two. Diagnostically, we know that autism-spectrum children form attachment relationships with caregivers (Rogers *et al.*, 1993; Capps *et al.*, 1994; Rutgers *et al.*, 2004). S had formed an attachment relationship with Therapist One, who left him after one year. Understandably, S might have wanted to protect himself from a second abandonment by Therapist Two, now knowing not just intellectually but also experientially that student therapists do leave after a prescribed length of time. Other possible interpretations of this finding include maturational factors or unknown family or personal factors that might have modified S's reaction to psychotherapy in unforeseen ways. The observation that this child formed an organised attachment to a therapist and experienced what could be interpreted as a protest reaction during the second year of treatment must be considered a developmental achievement of the first order and a successful outcome of his treatment. With the *CPQ*, many hypotheses pertaining to the psychotherapy process can be clearly articulated and further explored, not only in research studies such as this one but also in clinical supervision where the *CPQ* is routinely used (Goodman, 2007). Knowledge derived from both the *CPQ* and from clinical supervision can be considered together in modifying treatment strategies.

We are underscoring the possibility that although the identity of the therapist was responsible for the shift in the constellation of interaction structures between the two treatments, the patient himself might have responded differently to the two therapists based on a host of factors outside the therapist's control. Thus, the present study does not formally settle the question of the therapist's influence in the establishment and maintenance of interaction structures. What we can say, at a minimum, is that a different therapist can arouse a different set of feelings within the patient that ultimately influence the establishment and maintenance of the interaction structure.

Another lesson learned from this study is that interaction structures can wax and wane over time during the course of a treatment, as had been suggested in a previous study using the *CPQ* (Schneider *et al.*, 2010). In the first year of treatment, for example, we see how Therapist One became less reassuring and supportive and simultaneously more judgemental and misattuned during the course of the year. In spite of Therapist One's increase in judgment and misattunement across the year, Therapist Two was still overall more judgemental and misattuned during the course of his treatment than Therapist One. In Treatment Two, we see how Therapist Two became less reassuring and supportive and simultaneously less accepting during the course of his treatment. Perhaps sensing that S was not responding to these therapists as they had hoped, the attitudes of both therapists gradually changed, which in turn negatively affected their interactions. When these negative spirals become entrenched, the psychotherapy often stagnates until some outside influence

such as clinical supervision can analyse the stalemate and put the treatment back on track (Goodman, 2007, 2010b).

Changes in session adherence to PDT and CBT did not change over time as expected. Although both therapists were doctoral students in clinical supervision, their knowledge of PDT was quite sophisticated for their level of experience. The findings from the *CPQ* analysis suggest that they were both practising PDT from the beginning of their respective treatments with little room to grow in adherence. In other words, they had reached a ceiling effect as implicitly defined by the *CPQ*. Anecdotally, because of their high level of sophistication, both therapists were learning more advanced techniques in supervision such as interpreting the patient's moment-by-moment facial expressions, behaviours and tone of voice for clues about the transference and the patient's reactions to the therapist's verbal and behavioural interventions. Use of these advanced techniques in sessions might escape detection by the *CPQ*, which is a broad-based instrument designed to assess the psychotherapy process at a molar level of investigation. Thus, both therapists might have improved in their clinical practice of PDT over time, but this improvement was not detected by the *CPQ*.

In this study, we wanted to highlight the various uses to which the *CPQ* can be put. Future research into the child psychotherapy process, specifically, the vicissitudes of interaction structures in treatment, must establish links to outcomes both within and outside of sessions. Such research will help to determine which interaction structures are most therapeutic for which phases of treatment and for which patient populations, such as children on the autism spectrum. Our lab is currently coding these same 53 sessions for autism-spectrum behaviours to determine whether shifts in these behaviours follow (or perhaps even precede) the activation of specific interaction structures over time.

Single-case naturalistic research holds tremendous promise (Midgley, 2006). This kind of research could ultimately identify empirically derived change processes that future therapists could consider using. Working together, we could usher in a new era of best practice based on naturalistic single-case research rather than on the outdated medical randomised controlled trial model (Goodman, 2010a). When rank-and-file therapists are excluded from the process of empirical validation, empirically validated treatments become politically validated treatments (Duncan, 2002). Rank-and-file therapists need to band together to study 'what works for whom' in their own consulting rooms, using the naturalistic single-case research design recommended by the present study.

Conclusion

In summary, we hope that these findings will prove valuable to both researchers and therapists. The finding that unique therapeutic processes are in fact at work in every dyad, despite holding the patient and the theoretical orientation constant, could help both researchers and therapists to become aware that a treatment that proves effective in one dyad might not work in another due to therapist-specific and dyad-specific effects. Student therapists need to be empathically attuned to their patients' unique treatment needs so that they can become aware when their treatment approach becomes counterproductive. Training in global clinical skills such as empathy, countertransference awareness and potential interaction structures (viz., enactments) would more suitably position students to become effective therapists

than simply training them how to apply a treatment manual. Our field needs fewer technicians and more artists.

At the same time, however, empirically derived knowledge of potential interaction structures might aid therapists (both neophyte students and seasoned professionals) in their conceptualisation of similar cases or in their interpretation of processes as they develop in their own clinical work with children diagnosed with Asperger's disorder. We also hope that this study will promote greater interest in process research and in the importance of linking process to outcome to identify the effective ingredients of treatment. Perhaps this study will further interest in the development of evidence-based research of psychodynamic therapy with children and in the possibilities of effective psychodynamic treatment for high-functioning children with autism-spectrum disorders.

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Appendix

Table 1. Ten most characteristic *CPQ* items across 53 sessions.

CPQ item	Mean
(T: therapist, C: Child)	
Item 31: T asks for more information or elaboration	8.25
Item 65: T clarifies, restates, or rephrases C's communication	8.07
Item 97: T emphasises verbalisation of internal states and affects	8.01
Item 71: C engages in make-believe play	7.74
Item 77: T's interaction with C is sensitive to C's level of development	7.58
Item 6: T is sensitive to C's feelings	7.47
Item 3: T's remarks are aimed at encouraging C's speech	7.31
Item 29: The quality of C's play is fluid, absorbed	7.21
Item 81: T emphasises feelings to help C experience them more deeply	7.21
Item 28: T accurately perceives the therapeutic process	7.15

Table 2. Ten least characteristic *CPQ* items across 53 sessions.

CPQ Item	Mean
Item 9: T is nonresponsive (vs affectively engaged)	1.53
Item 18: T is judgemental and conveys lack of acceptance	2.13
Item 17: T actively exerts control over the interaction	2.72
Item 89: T acts to strengthen defences	2.75
Item 57: T attempts to modify distortions in C's beliefs	2.78
Item 37: T behaves in a didactic manner	2.84
Item 95: C's play lacks spontaneity	2.88
Item 51: C attributes own characteristics or feelings to T	3.30
Item 55: T directly rewards desirable behaviours	3.33
Item 32: C achieves a new understanding or insight	3.34

Table 3. Reassuring, supportive, non-directive therapist with compliant, curious child building insight and positive feelings.

CPQ Item	Factor Loading
Item 66: T is directly reassuring	.807
†Item 89: T acts to strengthen existing defences	.786
Item 67: T interprets warded-off or unconscious wishes, feelings, or ideas	−.739
Item 50: T draws attention to feelings regarded by C as unacceptable	−.737
*Item 81: T emphasises feelings to help C experience them more deeply	−.729
Item 36: T points out child's use of defences	−.613
Item 1: C expresses negative feelings toward T.	−.600
†Item 55: T directly rewards desirable behaviours	.589
†Item 32: C achieves a new understanding or insight	.588
†Item 17: T actively exerts control over the interaction	−.583
Item 76: T makes links between C's feelings and experience	−.573
Item 62: T points out a recurrent theme in C's experience or conduct	−.561
Item 8: C is curious	.560

(*continued*)

Table 3. (*Continued*).

CPQ Item	Factor Loading
*Item 97: T emphasises verbalisation of internal states and affects	−.558
Item 78: C is compliant	.551
Item 46: T interprets the meaning of C's play	−.520
Item 11: Sexual feelings or thoughts emerge	.512
*Item 31: T asks for more information or elaboration	.505
Item 98: The therapy relationship is discussed	−.461
Item 75: Interruptions, breaks in the treatment, or termination of therapy are discussed	−.435
*Item 65: T clarifies, restates, or rephrases C's communication	.408

Note. *One of the 10 most characteristic *CPQ* items across 53 sessions.
Note. †One of the 10 least characteristic *CPQ* items across 53 sessions.

Table 4. Helpful, mentalising, confident therapist with expressive, comfortable, help-seeking child.

CPQ Item	Factor Loading
Item 40: C communicates without affect	−.770
Item 43: T suggests the meaning of the behaviour of others	.765
Item 27: There is a focus on helping C plan behaviour outside the session	.728
Item 82: T helps C manage feelings	.696
Item 61: C feels shy and embarrassed	−.675
Item 19: C asks for advice or information	.651
Item 26: C is socially misattuned or inappropriate	−.634
Item 7: C is anxious and tense	−.623
Item 47: When the interaction with C is difficult, the T accommodates C	.620
Item 70: C struggles to control feelings or impulses	−.579
Item 94: C feels sad or depressed.	−.573
*Item 3: T's remarks are aimed at encouraging C's speech	.563
Item 56: C is distant from his or her feelings	−.550
Item 44: C feels wary or suspicious	−.540
Item 68: Real rather than fantasised meanings of experience are actively differentiated	.531
Item 91: An earlier developmental phase is a topic	−.530
Item 86: T is confident, self-assured	.526
†Item 95: C's play lacks spontaneity	−.518
*Item 77: T's interaction with C is sensitive to C's level of development	−.510
†Item 37: T behaves in a didactic manner	.505
Item 45: T tolerates C's strong affect or impulses	.489
Item 48: T sets limits	.451
Item 12: T models unspoken or unelaborated emotions	.415
Item 59: C feels inadequate and inferior.	−.411

Note. *One of the 10 most characteristic *CPQ* items across 53 sessions.
Note. †One of the 10 least characteristic *CPQ* items across 53 sessions.

Table 5. Judgemental, misattuned therapist with distant, emotionally disconnected, misunderstood child.

CPQ Item	Factor Loading
*Item 28: T accurately perceives the therapeutic process	−.831
*Item 6: T is sensitive to C's feelings	−.827
†Item 18: T is judgemental and conveys lack of acceptance	.752
Item 10: C seeks greater intimacy with T	−.741
Item 64: C draws T into play	−.670
Item 93: T is neutral	−.645
Item 80: C behaves in a dependent fashion	−.614
Item 49: C conveys or expresses mixed or conflicted feelings about T	.544
Item 87: T informs C of the potential impact of his or her behaviour on others	.525
Item 33: C expresses feelings about needing someone or being close to someone	−.523
Item 100: T draws connections between the therapeutic relationship and other relationships	.522
Item 74: Humour is used.	−.487
ZItem 41: C does not feel understood by T	.459
Item 15: C makes physical contact with T	−.456
Item 24: T's emotional conflicts intrude into the relationship	.453
Item 58: C appears unwilling to examine thoughts, reactions, or motivations related to problems	.450
Item 69: C's current or recent life situation is emphasised	.416

Note. *One of the 10 most characteristic *CPQ* items across 53 sessions.
Note. †One of the 10 least characteristic *CPQ* items across 53 sessions.

Table 6. Accepting therapist with playful, competitive child.

CPQ Item	Factor Loading
*Item 71: C engages in make-believe play	.785
Item 72: C is active	.753
Item 13: C is animated or excited	.632
Item 39: C is competitive, rivalrous with T	.569
Item 92: C's feelings or perceptions are linked to situations or behaviour of the past	−.532
Item 63: C explores relationships with significant others	−.484
†Item 57: T attempts to modify distortions in C's beliefs	−.466
Item 54: C is clear and organised in verbal expression	.458
Item 83: C is demanding	.417
Item 4: There is discussion of why C is in therapy	.408

Note. *One of the 10 most characteristic *CPQ* items across 53 sessions.
Note. †One of the 10 least characteristic *CPQ* items across 53 sessions.