Avatar Based Counselling Within A School Setting. Case Study ‘Richard’
Research Report

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Most of all, we would like to thank Richard and his counsellor for allowing us to explore his personal journey towards self-acceptance.
Executive Summary

Aims and Purpose

This case study examined the use of avatar software developed by the UK-based company ProReal (www.proreal.co.uk) in therapeutic school based counselling. The software offers a dynamic array of images, much like a video game, including avatars and various ‘props’. The case was drawn from an initial evaluation that suggested the software may be particularly useful in counselling adolescent boys and clients with Autism Spectrum Disorder (ASD).

Design and Methodology

Richard (a pseudonym) was a 14 year old boy who had been diagnosed with high functioning ASD and seen in school counselling for anxiety and behaviour problems. Assimilation analysis (Stiles & Angus, 2001) centred on screen recordings of avatar software used in a sequence of 9 sessions within a longer treatment period. This was supplemented by interviews with the counsellor and the client, and scores on standard psychological measures.

Results

The analysis focused on the central theme of Richard’s experience of being different, with subthemes related to ‘not being normal’, not fitting in, physical differences and experiences of the supernatural. ProReal software was used to represent both instances of difference and fitting in/belonging. Specific features, such as prop and avatar labelling, posture and proximity were used for emotional and cognitive expression. The software was also used to respond to questions non-verbally. Some of Richard’s use of the avatar software showed characteristic ASD traits such as repetitive use of props or avatars and a preoccupation with building and precision. The digital imagery provided a non-verbal, creative medium for expression and facilitated the therapeutic relationship, providing meaning bridges between the counsellor and the client. This suggested that the use of the digital images facilitated positive change, as demonstrated in the assimilation of problematic experiences.

Research Limitations

Absence of detailed assessment information, information about the client, and the counselling sessions prior to and after the use of avatar software, limited the conclusions about the process of change and impact on levels of distress. The information was further limited by the absence of recordings for the sessional segments during which the client was not using the avatar software.

Conclusions and Implications

ProReal software could provide an additional resource for counselling, particularly for clients with verbal expression difficulties. Further research with clients diagnosed with an ASD could contribute to the development of a specialised digital counselling intervention for this client group.
Background and Aims

Digital mental health interventions have been described as offering great potential to meet the increased worldwide prevalence of mental health problems in children and young people (Collishaw, 2015; Polanczyk, Salum, Sugaya, Caye, & Rohde, 2015). Perceived benefits centre on increasing the accessibility and uptake of services within the ‘tech-savvy’ young population. Most digital interventions have involved adaptations of standard Cognitive Behavioural Therapy (CBT) protocols, and there is some evidence for the effectiveness of this version of CBT in adolescent depression and anxiety (Hollis et al., 2016). We focused, however, on a different digital approach, the use of game-like digital software (ProReal Ltd) as tool in humanistic school counselling. Building on an initial evaluation of effectiveness, we conducted a case study research of a 14 year old boy who was receiving counselling for anxiety, behaviour problems and feeling different from his adolescent peers because of his Autism Spectrum Disorder (ASD). Our aim was to provide a theoretical interpretation of the use and function of this software within the framework of the assimilation model of therapeutic change (Stiles, 2011; Stiles et al., 1990).

Counselling for Autistic Spectrum Disorder (ASD)

ASD is classified by the DSM-5 (APA, 2013) amongst the group of Neurodevelopmental Disorders, which have an early developmental onset and result in impairments in social and personal functioning. ASD leads to a range of symptoms resulting in difficulties in social interactions and functioning, and repetitive patterns of behaviour, interests and activities (APA, 2013). These symptoms have impact on developing and maintaining reciprocal social relationships. ASD can range in the levels of severity and the requirements for support in everyday functioning. However, by the time children reach secondary school, they perform less well than their peers in nearly all areas of school adjustment and are rated as more anxious and withdrawn, as well as more oppositional and aggressive (Ashburner et al, 2010). In his review of research on ASD, Auger (2013) suggests that experiences of young people with ASD in schools go beyond the deficits in social skills and are linked to the difficulties with the ‘Theory of Mind’ (ToM) (DeMurie, et al, 2011), an ability to attribute mental states to oneself and others, something not easily addressed by simply teaching social skills. In a similar vein, research by Samson, Huber & Ruch (2011) found that 45% of adults diagnosed with Asperger’s syndrome (AS) experienced fear of being laughed at, compared to only 6% of adults without the diagnosis. This could be related to the difficulties in recognising intentions of others (ToM), and possibly past experiences of ridicule and shame in social situations. Although aggression has been identified as an issue for adolescents with ASD, there is also evidence that they are perceived as different and become a target for bullying. This is particularly the case for those with high functioning ASD, who attend mainstream schools (Auger, 2013). In addition to this, social isolation exacerbates the effects of bullying (Humphrey & Symes, 2010).

The complex picture of adolescents with ASD could also include comorbid conditions of anxiety, depression, OCD and sleep disturbance, alongside difficulties with social interactions. About 50% suffer from clinical depression as adults (Bakken et al., 2010) The comorbidity for anxiety in children and adolescents with ASD is 40% (Van Steensel, Bögels, & Perrin, 2011) considerably higher than other children (2.2-2.7% Costello et al. 2005 ). The anxiety varies with ASD severity, and it is greater amongst young people with less severe ASD symptoms, and this is explained by the higher awareness of their condition (MacNeil et al. 2009). This complexity
highlights the needs for support and intervention in different contexts, and throughout the developmental process. Although there is currently a number of specialist interventions, such as various forms of social skills training, targeted after-school programmes, CBT and school-based interventions, the research into their efficacy has a number of limitations particularly in relation to their generalizability to naturalistic settings and maintenance of gains (Schreiber, 2011). Moreover, the wide range of manifestation of autism and the difficulty in establishing homogeneous samples in research make it difficult to generalise the results across the whole spectrum. Although the interventions vary in type and context, there is a paucity of research into talking therapies, apart from CBT (Andeberg, 2016; Coxon, 2016). However, a project which compared the outcomes of college counselling service with ASD clients to the outcomes of clients without this diagnosis, suggested that they improved in a similar way (Andeberg, 2016). The college in this study employed a range of therapeutic approaches, including CBT.

Research is also limited on psychodynamic interventions (Chalfant, Rappee, & Carroll, 2007), although there is evidence that psychodynamic play therapy can also lead to improvement. In six case studies with young clients with ASD, where the therapists used psychodynamic play therapy (Coxon, 2016, p15), there is evidence of improvement in anxiety, depression and social skills. A recent discussion, relating to the fitness of psychodynamic, relational oriented and behavioural interventions for ASD clients, strongly suggests that modifications to the usual interventions are needed to suit this clients group, and take into consideration the ASD traits such as the stereotypical behaviours (Andeberg, 2016, Wilson 2017). Adaptations made by the CBT include the use of visual and written tools in order to make abstract concepts and thought more visible in order to meet the predominantly visual thinking style of this group (Anderson and Morris, 2006; Donoghue, Stallard and Kucia, 2011; Paxton and Estay, 2007). Another suggestion focuses on the need to adjust to the pace of communication and the rhythm of processing emotions and ideas by the therapists (Wilson, 2016; Bromfield, 2000). Current studies focusing on the expectations and lived experiences of clients stress the importance of the therapist’s understanding of the condition (Cousins, 2002; Romano, 2011; Wilson, 2016) to avoid being misunderstood and feeling dismissed, as they have often experienced. This is of particular importance because these clients often have a narrow tolerance for processing emotional material and could easily feel overwhelmed by emotions (Romano; 2011; Wilson, 2016).

In the UK, school counselling is one of the prime settings to deliver mental health interventions for young people, with a potential to reduce its associated stigma (Kavanagh et al, 2009). Humanistic school based counselling is the most common type of counselling for young people in the UK (Cooper, 2013) and focuses on empowering clients to make changes in their life by exploring their inner world and expressing emotions with an empathic and attuned adult. This could pose some difficulties for young people with ASD and there is a need for research into possible adaptations to treatment that could facilitate the counselling process.

**Avatar Software as a Therapeutic Tool**

The use of digital avatars (virtual bodies or people) is an emerging adjunct to psychological therapy, along with other digital approaches, such as virtual (or augmented) reality (VR). The proposed psychological benefits of varied digital approaches to therapy (see Gorini, Gaggioli, Vigna, & Riva, 2008; Rehm et al., 2016) include greater self-disclosure due to the disinhibition through anonymity (Joinson, 2001), having a therapeutic alliance with a virtual therapist within
the virtual world, providing alternative channels of communication and expression (e.g. visual imagery or text as alternatives to verbal), capitalising on some clients’ familiarity or comfort with digital media (e.g. participants with ASD; Kandalaft et al., 2013), and offering an arena to explore and experiment with identity (Gilbert et al., 2014).

Avatar-based approaches, usually in the form of a virtual world populated with avatars on a computer screen and manipulated using a keyboard and mouse, have been used to investigate, teach and enhance positive inter- and intra-personal relating. Online avatar software, such as Second Life™, has been used to deliver traditional psychotherapy for social anxiety and mindfulness-based stress reduction to remote locations, with some evidence for its effectiveness (Hoch et al., 2012; Yuen et al., 2013). In this approach, the therapist and the client are represented by customised avatars within a virtual space such as a virtual mental health centre. The avatars can be manipulated to interact with the environment and communicate with each other in real time via text or audio. Kandalaft, Didehbani, Krawczyk, Allen, and Chapman (2013) also used Second Life™ as an adjunct to face-to-face therapy with eight young adults with ASD, delivering five weeks of social skills training. During the training, the therapist, who was physically present, coached the client through role-playing scenarios (e.g. a virtual job interview) using avatars. The results showed an improvement in participants’ abilities to recognise emotion. Likewise, Peyroux and Franck (2014) and Peyroux and Franck (2016) have used avatar software to aid cognitive remediation in schizophrenia. Guided by a physically present therapist, participants assisted an avatar called Tom through social scenarios where the task was to select appropriate emotional and behavioural responses. Case studies of two participants using this program showed improvements in theory of mind, emotion recognition and attributional style.

These examples of avatar-based approaches were predominantly linear and didactic, but other researchers have used avatar mediated face-to-face therapy in a more flexible and less scripted and prescriptive way. For example, Leff and colleagues (Craig et al., 2015; 2013) used customised avatars to represent participants’ auditory hallucinations. These avatars were manipulated and spoke through the therapist during role play, offering the client an opportunity to interact with their hallucinations in a controlled and constructive way. Another example of flexible avatar assisted counselling can be seen in the work of van Rijn, Cooper, Jackson, and Wild (2015), who evaluated ProReal software as an adjunct to face-to-face group therapy in a prison setting. The small sample size precluded conclusions about the outcomes on personal distress and interpersonal functioning, but the qualitative analysis of interviews suggested that the intervention was acceptable and helpful to both the clients and the counsellor. The analysis suggested that the intervention facilitated the development of reflection, insight and empathy. The same software was used in the current case study and is described in more detail later.

**The Assimilation Model**

There are a number of theoretical models which describe the process of change within counselling and psychotherapy, normally rooted in established therapeutic approaches and models. In order to investigate a relatively new approach to treatment, which combined humanistic counselling with avatar software, we decided to use the Assimilation Model as a generic theory, which had been successfully used in case study research.
According to the assimilation model, the goal of psychotherapy and counselling can be understood as building semiotic meaning bridges between parts of the person that have remained disconnected (e.g., warded off, avoided) because they were problematic to each other in some way, including being incompatible, threatening, distressing, frightening, emotionally painful (Stiles, 2011). A meaning bridge is a sign (e.g., a word or an image) or a system of signs that has similar meaning to both parts, allowing them to share each other's experience to some degree.

The assimilation model is an explanatory theory, not a treatment theory, although it may have implications that could be incorporated into a treatment theory. Its purpose is to explain what happens in any therapy, not to provide guidelines or protocols for a particular approach to intervention. Like all explanatory theories, the assimilation model grows by accumulating observations. If something is observed in any therapy that is inconsistent with the theory or that the theory does not adequately account for, then either the observation is mistaken or the theory must be changed or extended to accommodate the observation. After the change, the theory must remain consistent with all previous reliable observations, so changes cannot be made lightly (Stiles, 2007, 2009).

**Traces of Experience as Internal Voices.**

According to the assimilation model, a person's experiences leave traces in their nervous system. The traces can be reactivated, which means the person can re-experience aspects of the original experience. When they are reactivated, they can act and speak just as the person did in the first instance. To characterize this active, agentic nature of how information is represented within people, assimilation authors use the metaphor of *voice*. From this perspective, then, people are understood as being psychologically composed of the voices of their previous experiences (Honos-Webb & Stiles, 1998; Stiles, 2011).

According to assimilation theory, normally, people’s experiences become interlinked (assimilated) into constellations of related experiences. These voices represent other people, activities, fantasies, interests, significant events, and so forth. Normally, these are smoothly interlinked, constituting, metaphorically, a community of voices. Voices emerge to speak and act when they are addressed by relevant events, bringing past experience to bear on present tasks. For example, cooking voices emerge in the kitchen and teaching voices emerge in the classroom.

Some experiences, however, are incompatible with the typical self or are traumatic or painful to a degree that they cannot be easily assimilated. When the voices of such problematic experiences are addressed, they evoke opposing voices from the community, producing negative affect, such as terror, disgust, or rage (Stiles, Osatuke, Glick, & Mackay, 2004). Consequently the offending voices are warded off or avoided. This may happen so quickly that the person has no memory of it, or it may be accompanied by intense emotional experience. If the problematic voice succeeds in speaking or acting, it is likely to be in ways that are incompatible with the person's usual self and may be seriously disruptive or maladaptive, and the offending experience is unavailable as a resource.
Assimilation of Problematic Experiences Sequence.

From an assimilation theory perspective, in successful psychotherapy, clients can come to terms with their problematic voices, reducing distress and gaining useful access to the previously warded off or avoided parts of themselves (Stiles, 2011). The therapeutic process involves exchanging signs and thereby building meaning bridges, allowing smooth access between the dominant voices representing the community and the non-dominant, problematic voices. This typically occurs in a sequence that involves (1) acknowledging the existence of the avoided experience, (2) addressing it directly, facing the experience, often with considerable distress, (3) giving the problem a name and a characterization, engaging in dialogue, (4) articulating an understanding of the problem, or, equivalently, a mutual understanding between the voices, (5) adjusting the new meaning bridge so that it works in daily life, (6) using the meaning bridge to draw on the formerly problematic experience as a resource, and (7) integrating it into the community so that it is a part of the self. This series of stages in the relationship of the non-dominant (problematic) voices to the dominant (community) voices is summarized in the Assimilation of Problematic Experiences Sequence, and their substages (APES; see Table 1; Stiles, 2002; Stiles et al., 1991, Brinegar et al. 2006).

Table 1. Stages and Substages in the Assimilation of Problematic Experiences Sequence
(Stiles, 2002; Stiles et al., 1991, Brinegar et al. 2006)

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<th>Stage number</th>
<th>Substage</th>
<th>Description</th>
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<tr>
<td>0 Warded off/dissociated</td>
<td>Client seems unaware of the problem; the problematic voice is silent or dissociated. Affect may be minimal, reflecting successful avoidance. Alternatively, problem may appear as somatic symptoms, acting out, or state switches.</td>
<td></td>
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<tr>
<td>1 Unwanted thoughts/active avoidance</td>
<td>Clients prefers not to think about the experience. Problematic voices emerge in response to therapist interventions or external circumstances and are suppressed or actively avoided. Affect involves unfocused negative feelings; their connection with the content may be unclear.</td>
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<tr>
<td>2 Vague awareness/emergence</td>
<td>Client is aware of the problem but cannot formulate it clearly—can express it but cannot reflect on it. Affect includes intense psychological pain—fear, sadness, anger, disgust—associated with the problematic experience.</td>
<td></td>
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<tr>
<td>3 Problem statement/clarification</td>
<td>Content included a clear statement of a problem something that can be worked on Opposing voices are differentiated and can talk about each other. Affect is negative but manageable, not panicky.</td>
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<tr>
<td>3.2 Rapid cross fire</td>
<td>The problematic voice addresses dominant community but is abruptly cut off mid-sentence. Rapid cross-triggering of incongruent voices as they...</td>
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fight for possession of the floor. Voices speak for short periods of time with frequent interruptions.

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<th>Stage</th>
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<td>3.4 Entitlement</td>
<td>Problematic voice speaks for a longer period of time without disruption from the dominant community. The voice asserts itself forcefully, feels entitled; speaks with a demanding attitude. Affective expression tends to be assertive, angry.</td>
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<tr>
<td>3.6 Respect and attention</td>
<td>Voices become more tolerant of each other. They listen to each other without interrupting and are more respectful of the other’s position. They each speak for longer and more equal amounts of time. The content is less emotionally charged, and voices are less confrontational. (Voices begin to work toward problem solving.)</td>
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<tr>
<td>3.8 Joint search for understanding</td>
<td>Voices work collaboratively and struggle to understand the problem more clearly; connections are made as awareness grows; approximations of insight become evident. Voices begin to blend and sound less distinctive. (They each sound less discrepant and become harder to identify.)</td>
</tr>
<tr>
<td>4 Understanding/insight</td>
<td>The problematic experience is formulated and understood in some way. Voices reach an understanding with each other (a meaning bridge). Affect may be mixed, with some unpleasant recognition but also with some pleasant surprise.</td>
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<tr>
<td>5 Application/working through</td>
<td>The understanding is used to work on a problem. Voices work together to address problems of living. Affective tone is positive, optimistic.</td>
</tr>
<tr>
<td>6 Resourcefulness/problem solution</td>
<td>The formerly problematic experience has become a resource, used for solving problems. Voices can be used flexibly. Affect is positive, satisfied.</td>
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<tr>
<td>7 Integration/mastery</td>
<td>Client automatically generalizes solutions; voices are fully integrated, serving as resources in new situations. Affect is positive or neutral (i.e., this is no longer something to get excited about).</td>
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Note. The APES is understood as a continuum, so intermediate stages are possible (e.g., 2.3, 3.6). Clients may enter therapy at any stage, and any movement along the continuum may be regarded as progress.

**Building Meaning Bridges.**

Meaning bridges are composed of signs, which have two aspects. Signs exist in the observable world as sounds or images; they also refer to the private experiences of author and addressee. The words and images exchanged to convey clients' experiences and therapists' understandings
are observable and potentially available to other voices within the client for use as meaning bridges between internal voices. Secondarily, they are also accessible for research. That is, outside observers can hear or see the signs, though it may take some work and some empathy to grasp the meanings they had to the participants. In principle, it should be possible in avatar therapy, as in any therapy, to identify the meaning bridges, or at least aspects of them, within the therapeutic discourse. They should appear as words, narratives, metaphors, images, etc., that explicitly link or encompass non-dominant and dominant voices.

In therapy, meaning bridges are often built between the therapists and the clients before they are built among the client's internal voices. Therapists may understand their clients' problematic experiences before the client's own dominant voices understand them. In this sense, clients often say more than they know. This allows therapists to be helpful in building new meaning bridges. It also makes it possible for therapists to overstep their clients' limits, that is, to propose meanings or actions that are more threatening than the client can currently understand or tolerate. It is useful to conceive a therapeutic zone of proximal development (TZPD, after Vygotsky) as a range of APES stages within which a client can currently work productively on a particular sort of experience. Interventions that exceed the current TZPD are likely to encounter resistance and fail.

**Initial Evaluation of the Avatar Software**

Richard participated in an initial evaluation of Avatar Based Counselling, using ProReal software within the context of school-based counselling, which took place between September 2015 and April 2016 (Cooper, Chryssafidou, & van Rijn, 2016). The research involved eight schools in the UK and 54 clients, 11 of whom, including Richard, had already begun a course of counselling. During the research, the Avatar Based Counselling was offered on a weekly basis up to a maximum of 10 weeks, with sessions lasting 50-60 minutes (Richard used the software for one further week). Results showed that taking part in the intervention was associated with significant, small-to-medium reductions in personal distress and difficulties, and a small, significant increase in self-compassion. However, these improvements were significant only for male clients and for those starting a new episode of therapy. Male clients were also more satisfied with the intervention than female clients. Qualitative interview data suggested that the avatar software intervention had a potential to facilitate self-expression and support the process of change. The software seemed to change the structure of the counselling sessions and made the counsellors more proactive in enquiring. This seemed to facilitate developing a relationship with the client and making the client feel understood. The intervention was experienced as more helpful by male clients and those who reported they had been diagnosed with learning difficulties, including ASD.

**Research Aims**

The aims of the case study followed on from findings of the evaluation project. We wanted to gain insight into how the software was used in counselling, its impact on what happened in the sessions, and the process of change within the treatment.

In order to do that, we needed a case study client who had a sufficient number of sessions, so there would be a possibility of examining the process of change.
We used assimilation analysis (Stiles & Angus, 2001) to examine Richard's use of the avatar software in nine sessions drawn from an early part of a long course of school counselling. We aimed to represent the process of change by characterising his main problematic experiences or voices—the central themes, formulated as the topics and attitudes expressed by his non-dominant (problematic) and dominant (community) voices. We sought to trace the problematic voices' movement through the APES across sessions.
Method

Research Questions
The research questions in this case study investigate how avatar software was used within counselling, and how it contributed to the process of change.

Client
We sought a case where there was evidence that a client used the software for a minimum of six sessions, and focused on Richard because of the preliminary evidence that the treatment might be particularly acceptable to male clients and those with learning difficulties. Richard was a 14 year-old boy, who received counselling at his school. He had previously been diagnosed with an ASD, and this was listed as the reason for his referral. Problems and concerns identified in the initial assessment included longstanding anxiety, self-esteem and identity issues, anger, and behavior problems.

Counsellor and Treatment
The counsellor was trained in a Humanistic Person-Centred approach and had over six years of post-qualification experience. Humanistic approaches to therapy (Roth, Hill, & Pilling, 2009) focus on facilitating clients to achieve their full potential and authenticity. Although there are a number of differences between the humanistic approaches, they tend not to be mechanistic and focus on building the therapeutic relationship, empathic enquiry and acceptance of clients. The Person Centred approach could be described as non-directive and sees the role of the counsellor in being supportive of the client’s development and exploration by using approaches such as active listening and empathy.

ProReal (http://www.proreal.co.uk/) was the avatar software used in treatment. It was designed as a therapeutic tool that could be used in different therapeutic settings and in which people could create visual representations of their inner worlds, and life situations. Metaphorical representations are created by using avatars, features of the digital landscape (such as a bridge, a castle, a river etc.), and props (such as a treasure chest, a platform, and elephant, etc.). There is an additional scope for expression as avatars could be assigned emotions, postures, colours and an inner dialogue. The interactive landscape can be viewed from their perspective or that of any other individuals represented in the virtual environment. These features of the landscape have been hypothesised to support the therapeutic change by supporting and developing the therapeutic relationship, enhancing self-expression and communication, developing insight and self-acceptance.

In Avatar-Based Counselling, the use of the ProReal software was not specifically structured. In the first session, the counsellor would normally invite the client to represent their world within the landscape. The counselling work in further sessions was primarily client-led, and offered a choice of using the software within the session, and the length of time in which it was used. In addition to their own theoretical approach and practice, counsellors used guidelines detailed in a ProReal User Manual (ProReal Ltd, 2015), and were trained in using the software by the members of the ProReal Ltd team.

Prior to using the avatar software, Richard had approximately 10 counselling sessions with his counsellor. He had 11 sessions during the research project and used the avatar software for 9 of them. He did not use it in sessions six and nine. Richard continued in counselling after the end of the research project and had over 60 sessions with his counsellor in total. He did not use the software after the end of the research project.
Investigators
Two of the investigators who were involved in the initial evaluation project were both female in their 40s and 50s. One was a psychotherapist and a counselling psychologist (BvR), the other was a researcher with an education background (EC). A third female investigator in her 30s (CIF) has a background in cognitive psychology and virtual reality research. The fourth author (MC), is a counselling psychologist in his early 50s. Finally, the fifth investigator (BS) is a male clinical psychologist in his 70s who was a developer of the Assimilation Model. All five were authors of this report.

Case Materials
Our analyses focused on digital recordings of the avatar software images and accompanying audio recording of the dialogue in nine counselling sessions drawn from an 11-session sequence during which Richard and his therapist participated in the avatar software trial. Our materials were drawn from an early mid-point of Richard's treatment.

In session 1, numbering from the beginning of the 11-session sequence (not from the beginning of Richard's therapy) there was no accompanying audio recording. In sessions 6 and 9, Richard did not use the avatar software. Richard did not use the avatar software for the full duration of each session. In the nine sessions we studied, Richard's time using the software ranged from 16 minutes to 50 minutes, with a mean of 31 min.

We also had available interviews from both the client and the counsellor collected at the end of Avatar Based Counselling and feedback on the case study findings. From the evaluation study, quantitative data were also available from the Young Person CORE (YP-CORE), the Strengths and Difficulties Questionnaire (SDQ), Revised Child Anxiety and Depression Scale (RCADS), and the Self-Reassuring Scale of the Forms of Self-Criticising/Attacking and Self-Reassuring Scale (FSCRS).

Measures
Young Person CORE (YP-CORE) (Twigg et al., 2009; Twigg et al., 2015) is a self-report measure of psychological distress for 11-16 year olds. Young people are asked to rate their psychological distress on ten items using a five point scale (0-4), giving a total score between 0 and 40, with higher scores indicating greater levels of distress. Example items include: ‘I’ve felt edgy or nervous’, ‘My thoughts and feelings distressed me’, and ‘I’ve done all the things I’ve wanted to’ (reverse scored). The YP-CORE measure has been shown to be acceptable to young people, with a good level of internal consistency (Cronbach’s α = .85; Twigg et al., 2009) and test-retest stability (Pearson’s r = .76, Twigg et al., 2015). The internal consistency in the present sample, as assessed at baseline, was also good: Cronbach’s α = .89. In the evaluation study, YP-CORE questionnaires were administered at baseline, end point assessment and in the beginning of all sessions.

Strengths and Difficulties Questionnaire (SDQ) (Goodman, 2001) is a 25 item measures that groups into five subscales: Emotional Symptoms (e.g. ‘I am often unhappy, down-hearted or tearful’), Conduct Problems (e.g. ‘I get very angry and often lose my temper’), Hyperactivity (e.g. ‘I am restless, I cannot stay still for long’), Peer problems (e.g. ‘I am usually on my own. I
generally play alone or keep to myself’), Pro-social (e.g. ‘I try to be nice to other people. I care about their feelings’). The scale is for young people aged 11-17 years old and requires individuals to indicate on a three-point scale to what extent they think a statement is true of them (‘Not True’, ‘Somewhat True’, ‘Certainly True). Convergent validity for the overall SDQ-TD scale has been demonstrated (e.g., Cooper, 2013) and internal consistency has been found to be acceptable (Cronbach’s α = .82 and .78, Goodman, Meltzer, & Bailey, 1998; McArthur, Cooper, & Berdondini, 2013). On the SDQ, young people in the study were asked to rate the items according to how they had been feeling over the past 6 months (at assessment), and past month (at endpoint assessment).

Unfortunately, due to an administrative error in the present evaluation, the assessment version of the SDQ was used at post-therapy assessment in 11 instances (27.5%), rather than the endpoint version. Although the items are identical, this means that at endpoint the young people may have been rating the past six months rather than the past month. In the case of our case study participant, we collected the endpoint assessment version in a follow-up, three months after the end point assessment.

The Revised Child Anxiety and Depression Scale (RCADS) is a 47-item, self-report measure with subscales including: separation anxiety disorder (SAD), social phobia (SP), generalized anxiety disorder (GAD), panic disorder (PD), obsessive compulsive disorder (OCD), and major depressive disorder (MDD) (Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000). Items are rated on a 4-point Likert-scale from 0 (‘never’) to 3 (‘always’). Initial piloting indicated that young people found the full RCADS questionnaire too long. For this reason, for the main evaluation, only items from the 6-item generalized anxiety disorder (GAD) subscale and the 10-item major depressive disorder (MDD) subscale were used. Example items are ‘I worry that bad things will happen to me’ (GAD subscale), and ‘I feel sad or empty’ (MDD subscale).

The FSCRS is a 22-item self-report questionnaire which aims to assess the extent to which people have self-critical and self-reassuring thoughts. The questionnaire asks respondents to circle a number from 0 (‘not at all like me’) to 4 (‘extremely like me’) indicating how they think and feel when things go wrong for them (Gilbert, Richardarke, Hempel, Miles, & Irons, 2004). The questionnaire has three factors: ‘inadequate self’, ‘hated self’ and ‘reassured self’; and for the present evaluation we used just the 8-item ‘reassured self’ scale as this was most closely associated with the proposed theory of change. Example items are: ‘I am able to remind myself of positive things about myself,’ and ‘I am gentle and supportive with myself’.

The Assimilation of Problematic Experiences Sequence (APES; see Table 1; (Stiles, 2002; Stiles et al., 1991, Brinegar et al. 2006) includes eight stages of therapeutic change numbered 0 to 7. The stages characterize the changing relation of problematic experiences (NDVs) to the client’s usual self (DVs). Theoretically, the APES stages anchor an underlying continuum, and intermediate ratings are allowed. Substages in the transition between Stage 3 (problem statement/clarification) and Stage 4 (understanding/insight), were developed by Brinegar, Salvi, Stiles & Greenberg (2006), and used in our analysis. For example, APES 3.5 is mid-way between APES 3 (problem statement/clarification) and APES 4 (understanding/insight). In this study, we used the APES to characterize Richard's progress, but we did not use it as a formal rating scale.
**Procedure**

The five investigators analysed the recordings of the digital imagery with background audio qualitatively, using an adaptation of assimilation analysis (Stiles & Angus, 2001). The procedure can be described in four steps, though in practice, these steps were not discrete but blended into each other. These steps were conducted by each investigator independently, with periodic video conferences to discuss impressions and progress, using an adaptation of the Ward method (Schielke, Fishman, Osatuke, & Stiles, 2009). This procedure of independent work punctuated by meetings was congruent with the geographical separation of the investigators.

*Familiarization.* The investigators studied intensively the available recordings of the 9 sessions in which the avatar software was used and read verbatim transcripts of the 8 sessions with audio, making notes and/or using qualitative analysis software (NVivo) to record session events and their impressions.

*Theme identification.* Based on their acquired familiarity and notes, investigators identified themes or problems that seemed salient and therapeutically important within the material under study. These themes were discussed during videoconferences, and investigators worked toward a consensus formulation on a problem (described later) that seemed central to Richard's work with respect to its psychological importance and the amount of time spent on it.

*Extraction of theme-related material.* Session material, including dialogue and relevant screen shots were excerpted and listed in sequence as a way to highlight the changes or lack of changes in Richard's assimilation of this issue across this segment of treatment.

*Interpretation and writing.* Richard's expression of and progress on his presenting problem were described and interpreted in theoretical terms. This included characterizing Richard's progress in terms of the APES. Until the last stages of writing, each investigator maintained her or his own separate version of the developing documents (i.e., descriptions and interpretations of session events and drafts of this paper). Periodically, investigators posted their current version or notes on a shared server, so that the other investigators could read them and adopt ideas or text for their own versions. In this way, each investigator's ideas could be articulated and shared freely while being independently retained as long as she or he felt it represented the best interpretation (Shielke et al., 2009).

In interpreting the material that appeared in each session, we drew on familiarity with all sessions. As a result, meanings that might not have been apparent in an isolated moment or a single session could be understood based on contextual material that occurred earlier or later. For example, images seen in the first session could be understood based on information drawn from much later in the sequence.

It is worth emphasizing that our process of interpretation was not quick, simple, straightforward, or linear. Each of us repeatedly went back and forth between the material and our interpretations, drawing on each other's growing understanding. At first, we struggled to get some grasp of what problem of Richard's was being addressed, how the problem was represented in the images and in words, what progress was being made, what the relevant voices were, what stage of
assimilation was represented, and so forth. Later, as our understandings gradually formed, we sought evidence in the session material, trying to look for both confirmations and disconfirmations. In the end, the process seemed understandable, even systematic to us, and in what follows we have tried to represent our understanding, along with as much supporting text and imagery from the sessions as the paper would accommodate.

**Ethical Procedures**

Issues of consent and confidentiality in case study research often contain a degree of complexity, because it is not often possible to achieve total anonymity. For this reason we sought consent in stages, so that Richard and his counsellor could make an informed choice about their participation and data. Following the evaluation research, we asked all the participants for a consent to contact them again for a potential inclusion in the case study research. Having chosen Richard, we asked him, his parents and the counsellor, for a consent to use the recorded sessional material in the case study. We removed the personal details, used a pseudonym, and kept the school details confidential. Finally, we shared our analysis with Richard and the counsellor and gave them the final opportunity to add or remove any data, and asked for their consent to use the analysis.

**Post Analysis Interviews** Following the final step of interpretation and writing, the research team produced a synopsis of the report. It included the main scenes, illustrated with screenshots, the investigators’ interpretations of the scenes and dialogues, and analysis of Richard’s progress in terms of APES stages. One of the investigators (EC) interviewed Richard and the counsellor (for 40 minutes), and discussed the main themes and interpretations in critical scenes of most sessions. The interview was semi structured and consisted mainly of open questions (Appendix 2), prompts to agree or disagree with the statements in the synopsis, and invitation to rephrase the interpretations. The counsellor was also asked for a reflection on the assimilation analysis. Both were again asked for agreement and consent to use the analysis. The interviews were transcribed and comments and changes were integrated into the report.
Results

Quantitative Outcomes

In the context of the case study, the quantitative outcomes are given as an illustration of how counselling impacted Richard’s levels of distress. They are not intended to evaluate the overall effectiveness of the counselling.

On the YP-CORE (See Figure 1), Richard showed little change across the 11-week period we studied. He scored a total 18 at baseline, 15 at his first and last session with the avatar software, and 20 at the end point assessment which took place a few weeks after the last session that we considered (see Figure 1). These YP-CORE scores indicate that Richard was in moderate distress at the beginning and end of the trial. In interpreting this lack of change on measures of self-reported distress, it is important to remember that by the end of the trial, Richard was still in the middle of his course of counselling (at session 21 out of his 60+ sessions). The small change across sessions is consistent with the scores of clients in the evaluation in which pre-existing clients did not show significant change in levels of psychological distress. (Cooper, Chryssafidou, van Rijn, 2015).

Looking into the individual questions of the YP-CORE questionnaire, before and after avatar-based therapy, we note that Richard did not think about hurting himself at the time of the end point assessment (Figure 2, statement 4), nor in sessions 2-9. He also showed improvement in the two statements: one assessed his nervousness, and the other a whether he felt he had someone to speak to or ask for help.

Figure 2. Line graph showing Richard’s scores at baseline assessment, sessions 1-11, and end point assessment
In Richard’s individual scores on YP-CORE, we note that there is a consistently low score across four statements ‘I’ve felt edgy or nervous’, ‘I haven’t felt like talking to anyone’, and ‘My thoughts and feelings distressed me’ at sessions 3 and 11 (Figure 3).

The SDQ showed little change scores between the baseline and end point assessment on the total difficulties score and on the five subscales (Emotional problems, Conduct problems,
Hyperactivity and Prosocial). We need to take into account that when completing the endpoint assessment, Richard had been rating the past six months rather than the post month due to administrative error. However, the scores are reduced at the follow up, three months after the end point assessment (See Figure 4.).

![Bar chart showing Richard’s scores on the Strengths and Difficulties Questionnaire (SDQ) at baseline, end assessment and follow-up.](image)

**Figure 5.** Bar chart showing Richard’s scores on the Strengths and Difficulties Questionnaire (SDQ) at baseline, end assessment and follow-up.

Richard’s scores improved at the follow-up across all five subscales of the SDQ questionnaire. He improved to the point of reaching the lowest range (Close to average) for all but the Peer Problems scale. (Table 2).

**Table 2. Richard’s score at baseline assessment and follow up, across five subscales of the SDQ, and according to standard four-fold Classification of subscales**

<table>
<thead>
<tr>
<th></th>
<th>Total difficulties</th>
<th>Emotional problems*</th>
<th>Conduct problems**</th>
<th>Hyperactivity*</th>
<th>Peer problems**</th>
<th>Prosocial**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>22</td>
<td>Very high</td>
<td>7</td>
<td>Very high</td>
<td>3</td>
<td>Close to average</td>
</tr>
<tr>
<td>Follow-up</td>
<td>10</td>
<td>Close to average</td>
<td>3</td>
<td>Close to average</td>
<td>1</td>
<td>Close to average</td>
</tr>
</tbody>
</table>

Richard improved on the GAD and MDD subscales of the RCADS (Figure 5). There were no
significant changes on these scales in the evaluation sample except for a male participant subsample, who significantly improved in terms of symptoms of depression (Cooper, Chryssafidou, van Rijn, 2015).

![Bar chart showing Richard’s scores on the Generalized Anxiety Disorder (GAD) and Major Depression Disorder (MDD) subscales at baseline and end point assessment.](image)

Figure 6. Bar chart showing Richard’s scores on the Generalized Anxiety Disorder (GAD) and Major Depression Disorder (MDD) subscales at baseline and end point assessment.

Finally, in terms of self-reassurance from the FSCRS, Richard improved by 2 points in the total score at end point assessment. This is consistent with the evaluation results that showed a significant increase in the general sample and in the male subsample (Cooper, Chryssafidou, van Rijn, 2015).
Qualitative Outcomes

Focal theme.

Following our familiarisation with the material, we decided to focus our analysis on Richard’s problematic experience of being different. This major theme encompassed his sense of being different from his peers, longing to be ‘normal’, not belonging, and not fitting in. Richard attributed his being different, at least in part, to his ASD diagnosis. He put it this way in Session 5, contrasting himself with peers: ‘I know that I’m actually the one who’s different. It feels like they’re different but then it’s actually me’ (Session 5). In theoretical terms, the aggregate of traces (such as memories) of his experiences of being different and not fitting in comprised a problematic voice that was incongruent with his dominant community of voices, which could be characterized as feeling normal in the sense of worthwhile, belonging, and fitting in. The problematic theme of being different was salient in at least eight of the nine sessions we studied.

Why, if Richard knew he was different, was the experience of being different problematic? Theoretically, a dominant community characterized by feeling normal, worthwhile, and belonging, is grounded in early experiences of nurturance, continuity, and benevolent treatment by caretakers (Stiles, 1999). Of course there is great variation in the quality of these experiences, but infants who do not receive a substantial degree of such care do not survive and are not available for psychotherapy case studies. The early experiences of continuity and benevolence form a core that is added to and elaborated by extensive everyday experience that confirms the child's humanity and worth, such as being fed, kept warm, taught, played with, and loved by parents. Because these mundane experiences are congruent with the early core, they are easily assimilated to it, and the aggregate constitutes a dominant self for whom experiences of mistreatment are incompatible and foreign. We return to this point in our discussion.

In Richard's case, the problematic voice of being different appeared to be comprised mainly of experiences with peers, who, he reported, treated him as different or odd for reasons he could not fully discern, at least initially. Presumably such experiences had become particularly salient in connection with the developmental tasks of adolescence (finding one's place in the world: identity, intimacy, and hierarchy; see e.g., Erikson, 1963; Blakemore and Mills, 2014). On the other hand, not all of Richard's peers treated him as abnormal. For example, among his online gaming peers, he was accepted and even admired in some respects.

In a post-analysis interview, both Richard and his counsellor agreed that being different was the central problem addressed in the whole treatment--not only in the segment we studied. Nevertheless, other issues may have become salient in later sessions. Table 3 provides a summary of themes and assimilation across sessions.

Overview of Richard's use of the Avatar Software.

Richard took quickly to the avatar software, perhaps partly because he had had extensive online gaming experience. He smoothly used avatars to represent aspects of himself and others in his life, and he used props to represent problems and coping, both explicitly and metaphorically. The meaning of these images evolved across the investigated segment of Richard's treatment, as he made modest gains in assimilation.
According to our interpretation, Richard's use of the software began with formulating his problem, seeking a way to understand his predicament. During Session 1, he began by using the software to represent relevant inner figures and his attempts to deal with his problems by avoidance. He then worked towards more poignant representations of his out-of-reach wish to be a normal adolescent. In subsequent sessions, he explored his lack of psychological safety in his school and social situations (e.g., being mocked and laughed at) and, as a counterpoint, his relative safety in online gaming. He used the software to represent his experiences of desiring to fit in and be normal and of being a spectator, watching from the outside. He found ways to use the software to represent the levels of psychological risk involved in the relatively (but not completely) safe world of gaming, where he did fit in. And he contrasted this with the relative danger of being mocked in encounters at his school. Interestingly, he also used the software -- and acknowledged using it in this way--to articulate and contain his own distractibility (e.g., racing through the landscape as an avatar rather than as pacing around the room in the real world).

Midway through the study sequence, he seemed to confront his experience of difference more directly, saying that he was ‘not normal’ because of his ASD, a form of ‘mental defect’. Later in the sequence of sessions, he explored, as a counterpoint, his friendships and enjoyment in his gaming community and his distinctive achievements (e.g., as a tester for video games). In the last session of the sequence (session 11), he used a mirror prop in articulating what seemed to be a new note of self-acceptance: ‘I like myself but not for appearances’.

We detail this progression by describing Richard's use of the avatar software and offering selected quotes from the transcripts. Richard used the software by constructing a series of scenes, which he then modified, sometimes across several sessions, representing changes in his life and feelings.

**Session 1: Symbolizing the problem.**
The imagery in Session 1 evolved through five scenes, which, according to our interpretation, reflected work on formulating his problem and seeking a way to understand his predicament by beginning to represent relevant inner figures and experiences. He seemed to represent both his goals (e.g., secure friendships, reduced distractibility) and his attempts to deal with problems (e.g., by avoidance), working toward a more poignant representation. Recall that we did not have audio for Session 1; however, we did have the labels, emoticons, and written speech/thoughts Richard gave to the avatars and props in the scenes he created. He used the software for 42 minutes, nearly the whole session.

Richard first created a scene within the walls of a castle, which he populated with avatars representing himself and other adolescents, labelled as ‘objectives’, apparently referring to his hopes for positive social contacts, along with milestone props representing recent accomplishments. Later on in counselling, he referred to the castle scene as a ‘secure base’. Next, he created a scene outside the castle gate in which an avatar representing himself was, as we eventually understood it, protected by roadblock props and a shield prop from another avatar representing ‘anxiety’. Then, he created a scene by a riverbank which an avatar apparently representing an aspect of himself, labelled ‘attention,’ was separated by the small river from two treasure chests on the bank opposite, named ‘ideas’ and ‘concepts.’ When he returned to this scene in session 2, Richard talked about his ‘distracting ideas’; thus, the scene expressed his...
problematic inability to attend to intellectual content. In APES terms, with respect to the focal theme of being different, these early scenes appeared to represent work in the late stages of APES 2 (vague awareness/emergence; see Table 1) moving toward APES 3 (problem statement/clarification) later in the session.

Figure 6. Richard is referring to the large treasure chest labelled ‘normal’ that is situated behind the wall labelled ‘cannot get past’

Figures 6. and 7. represent the fourth scene Richard created. He placed a large treasure chest labelled ‘normal’ behind the wall labelled ‘cannot get past it.’ He added a black avatar named ‘fitting in’ on the other side of the wall from the chest with a crying and stressed emoticon, a posture of ‘stressing/regretting/OMG,’ and a speech thought: ‘I can see it but I cannot achieve it.’ To us, this seemed to be a clear and poignant symbolisation of his problematic experience of being different. He could see where normal was (though perhaps its specific nature was hidden in a chest), but he could not get to it; he wanted to fit in, but he could not achieve it.

Figure 7. Avatar labelled as ‘fitting in’ with an anxious emoticon, stressed posture and saying ‘I can see it but I cannot achieve it’

The memories scene (not pictured), was started in Session 1. and elaborated later. He first created an avatar called ‘spectator’ with a bright yellow colour, and walked toward one of the boundaries of fences in the landscape. He added a sort of minefield named ‘memories’, with two
treasure chests named ‘good’ and three bombs named ‘bad’. The spectator avatar looked at the scene, while an inner voice was saying ‘some things are okay and others are not.’

Richard introduced similar ‘spectator’ avatars in subsequent sessions. This could refer to what some theorists have called an observer position, a manifestation of reflective functioning, mindfulness, or an observing ego, which can be contrasted with an experiencing position. It involves thinking about one’s own mental processes. The ability to do this is both promoted by psychotherapy and considered a positive prognostic sign (e.g., Wallin, 2007). Richard deleted this spectator avatar at the end of Session 1 and, interestingly, deleted the other spectator avatars at the end of their sessions, as if their function was restricted to the therapeutic context, and they were not a permanent member of his internal community.

**Session 2: Who can I trust?**

In Session 2, Richard again used the software for 42 minutes. During the session he began exploring the parameters of his problematic experience of being different—situations in which he felt safe and others which he found socially hazardous, where he risked being mocked and laughed at. He began by returning to scenes he had constructed in Session 1. He first returned to the memories scene and deleted two bombs representing bad memories.

He moved to the riverbank scene he had created in Session 1, and he added a bridge in front of the black avatar with a sad emoticon, which he had placed on one side of the river in Session 1. He explained that the point of the riverbank scene was to represent distracting ideas that interfered with his ability to concentrate. He said he tried writing down the distracting ideas (e.g., fictional plots) on his phone, which helped, but he also wrote a label ‘wasn't that good’, meaning that writing was not very successful at overcoming his distractibility.

Richard then introduced a subtheme that became a counterpoint to his problem of being different: his involvement in an online gaming subculture. He built the scene shown in Figure 8, in which he used an elephant to represent an online games server that he frequented with other gamers. He put three avatars on the back of the elephant to represent other gamers and coloured them ‘yellow, like warning chevrons.’

**CO (Counsellor)**  
And you said before that it’s easier in some ways, talking to people online than in reality?

**Richard**  
Yes. See, they don’t know who I am so they don’t have anything to mock me for before they meet me.

**CO**  
Is that the dangerous, hazardous yellow bit then, mocking?

**Richard**  
Yes.
At this point Richard returned to the memories scene, with the bombs and treasure chests, and the counsellor commented, prompting Richard to explain his view of the hazard presented by encounters with peers who were not his friends. It is worth noting that the counsellor was learning the meanings of the images and using them as interpersonal meaning bridges in her communication with Richard. The bombs referred to volatile situations in which Richard feels he could be laughed at by his peers. Using them prompted a more explicit discussion of his experiences of being different:

**CO**  Okay, so that was different from last week so ... you've got two less of those bombs and you still kept the memories, which is your treasure chest as well. All right. Okay, but there’s still a bit of a bomb going on there but not as much.

**Richard**  I had them all here because ... at the moment I keep, like, accidentally doing things that seem to... That other people find funny, like, at my expense.

**CO**  Okay, what, like, in school, do you mean? What, like what, for instance?

**Richard**  I said something, like, I didn’t... Nothing rude or anything. I, like, shared my opinion. Then it was, like, a whole bunch of people started laughing at me.

**CO**  Okay, so that’s, sort of, representing that fitting in thing, then?

**Richard**  Yes.

...  

**CO**  So how did you manage to deal with that one then?
Richard Just ignore the people that were doing it.

Thus, Richard was confused about why people would laugh or make fun of him. He had a clear understanding of the problem (he was being made fun of and felt distressed about it) and was trying to make sense of this, to understand why his peers were behaving the way they did. This suggested he was working on the problem in the range of APES 3 (problem statement/clarification).

Session 3: ‘It is hard to fit in amongst everybody else’.

In this session, Richard used the software for the full 50 minute session. He explored his desire to fit in and ‘be normal’ and his experience of being a spectator, watching from the outside. He did this by using the software props to represent his desire to fit in (e.g. treasure chest) and the labelling and positioning of avatars to represent reflective functioning (e.g. Spectator avatar placed at the top of the castle). The meaning of both the ‘Spectator’ avatar and the prop of the treasure chest were already familiar to Richard and his counsellor, and were used in the Session 1.

Richard increased the number and size of the treasure chests to communicate his desire to fit in (Figure 9):

\[
\begin{align*}
\text{CO} & \quad \text{So they’re all, so all the treasure chests are called normal today, are they?} \\
\text{Richard} & \quad \text{Yes.} \\
\text{CO} & \quad \text{Yes, and what, how does that...? What does that mean for you today?} \\
\text{Richard} & \quad \text{Like, because I’ve been hard to fit in amongst everybody else... Like, because everything that like, happens is like, it always happens like, different for other people other than myself. And then it’s like, always seem like other people and then I get treated like really differently.} \\
\text{CO} & \quad \text{Okay. So what does the normal mean today in that treasure chest? Is that what you would like to be then?} \\
\text{Richard} & \quad \text{Yes.} \\
\text{...} \\
\text{CO} & \quad \text{So is that the goal then? Is that the treasure, the feeling like you’re fitting in?} \\
\text{Richard} & \quad \text{Yes.} \\
\text{...}
\end{align*}
\]
CO Okay. So I’m just wondering, is the significance of having more treasure chests, or bigger treasure chests, means that your desire to be normal is bigger, or that you feel more normal?

Richard It’s the desire to be normal is bigger.

CO Is that because you feel less like you’re fitting in then?

Richard Yes.

Figure 9. Richard represents his increased desire to be normal with more large treasure chests. These still remain out of reach from his avatar, which is positioned behind a wall that blocks his access.

The treasure chests thus became a meaning bridge between Richard and the counsellor. He was able to share his experience of being different, and she communicated her understanding and correctly interpreted his increased desire for normality.

Richard then reviewed the elephant scene, representing the games server and the game players (yellow avatars, who could be ‘hazardous’), and then went on to the castle scene. The, avatars surrounding the campfire represented friends (we assume school friends) who had accepted his birthday invitation. Following the counsellor’s inquiry, he said that he was surprised about it, but happy. We can understand this visual description of being accepted as an internal conversation between the communities of voices.

Richard again returned to the ‘Spectator’ avatar:

CO What’s the spectator thinking?

Richard I don’t think it really can be thinking anything because a spectator’s just a representation of myself watching in on those.

CO A part of yourself, is it, or yourself?

Richard It’s like...

CO Does it feel like yourself?
Richard  It’s like how I’d watch everything within like, this, in the same sense that I’m watching it from the outside. So I guess spectator represents myself in reality watching all of this.

In this case, the ‘Spectator’ avatar seemed to communicate an experience of being an ‘outsider’. At the same time, it could also be symbolising his growing ability for observation and reflection.

The ‘Spectator’ reached a high vantage point at top of the castle by using numerous platform props, stacked on top of one another. The counsellor commented on this, engaging Richard in a conversation about uniformity:

CO  Okay. Is that a…? Does that make it feel better for you, being more uniform?

Richard  Yes because it’s like, it’s less… odd or anything.

CO  It’s less odd?

Richard  Yes, like...

CO  You feel more comfortable with less odd.

Richard  Yes.

This is again an example of how the on-screen behaviour communicated an internal experience and created a meaning bridge about the importance of uniformity for Richard.

In this session, Richard’s experience of difference was clarified further (APES 3), in part by using the avatar software to describe his desire to fit in and his social and gaming communities. The juxtaposition of his surprise and happiness about the acceptance of his birthday invitation, and his increased desire to fit in could be seen as linked, as the opposing experiences are represented and verbalised. This sort of intrapersonal conversation--overt conversation between inner voices--is characteristic of APES stage 3 (Brinegar et al., 2006).

**Session 4: Halloween. Disapproval vs acceptance.**

In Session 4, Richard again used the software for the full 50 minutes. He contrasted his experiences of fitting in with others in the gaming world, including a gaming workshop for people diagnosed with ASD, with his difficulties in social situations at school. Events in this session also showed how the software influenced the session process. Richard used the software to symbolise the experiences that stimulated the counsellor to initiate verbal enquiry and exploration. As another influence, the avatar paced through the landscape, expressing Richard's agitation but also helping him to stay seated in the counselling room.

Richard began by talking about Halloween, which was relevant to the time of the year. He initially symbolised his associations with Halloween on screen by building walls and lighting
fires in front of gravestones, which he placed outside the castle walls. This led to talking about earlier experiences of not fitting in:

Richard  
*I want to make it like Halloween, because it’s Halloween-ish. I tried doing Halloween last year, and then like gave up because parents came and kept looking at me weirdly.*

CO  
*What did you try and do?*

Richard  
*I went as a cultist.*

...  

Richard  
*So it was like I was like too old or something and kept getting like disapproving looks from people’s parents. So I just gave up after five minutes and went home and played computer games.*

To us, this articulation of how he might plausibly appear odd to other people seemed like a new idea in the intrapersonal dialogue. In counterpoint to this, Richard talked about his gaming experience more overtly and related it verbally to ‘fitting in’. As Richard talked, the avatar paced rapidly though the virtual landscape and the counsellor reflected on the pacing:

CO  
*... but what I’ve noticed is you’ve been running around quite a lot, and...*

Richard  
*Yes, otherwise I’d end up like goofing around a lot in reality; like I am the bloke pacing around in circles. Like if I wasn’t sat down I’d be walking around the table, and I probably would have done it about 200 times by now*

CO  
*So that, so the... so you’re using the avatar to do the pacing for you?*

Richard  
*Yes. I don’t need to exercise - the avatar can do that*

This led to an exploration of another area of his perceived difference from the others. Pacing and leg shaking were parts of his behaviour, but were not something that people in his social circle understood. Instead, they used it to make fun of him:

Richard  
*Not really. And then like at home there’s like a red inflatable cushion thing, and it’s like it moves around a lot, so I feel that like distracts me from my game if I’m moving or I’m doing that; if my legs are like that [Richard physically demonstrates his legs to the therapist]*

CO  
*Yes, I noticed you do that when we’re sitting still.*

Richard  
*Like it happens all the time, and like some people have made inappropriate jokes about it, and it just plain annoys some people. But like I can’t stop doing it; like I stop one leg, the other leg starts doing it.*
Thus, Richard examined another way in which he might appear odd to others—pacing, moving his legs, and generally being unable to keep still. In the intrapersonal dialogue, this partially responded to his surprise and puzzlement about others laughing at him. If he knew he behaved differently, it would be less surprising that others found him odd. Here again, using the avatar software facilitated the communication and understanding between Richard and his counsellor, and led to further internal clarification of the problematic experiences (APES 3). Rapid pacing by the avatar, seems to reflect the rapid shifting between the inner voices suggesting ‘Rapid Crossfire’ (APES Sub stage 3.2, Brinegar, Salvi, Stiles & Greenberg, 2006). In this case the ‘rapid crossfire’ occurred on screen and across scenes, and the voices spoke for short periods of time with frequent interruptions.

Richard's pacing on-screen, which allowed him to physically sit still during therapy, seemed to facilitate a relatively sustained attention to the potentially distressing topic of his own oddness. In this way, the software facilitated the reflection of the problematic experience, suggesting a developing capacity for metallization (Fonagy, 2002) and the ability to reflect on an experience, rather than remain embedded within it (Kegan, 1982).

**Session 5: ‘I don’t think it’s good I’m autistic’**.

In Session 5, Richard again used the software for most of the session (49 minutes) and there was further elaboration on his experience of difference. During the session Richards openly talked about his diagnosis of Autism. Being autistic was *not good*. He saw it as a ‘defect’ that made him think differently from others. As well as the focus on this problematic aspect of difference there was also more elaboration on the experience of safety and wellbeing, related to gaming, and a desire to bring the two together and be accepted.

Richard again focused on building within the landscape using platforms (props). The counsellor invited him to talk about his building, and highlighted that platforms were the prop he used the most during the session:

*Richard*  
*It’s hard to explain, it’s just when I build something, I build stuff on, like, games and stuff because then it’s like, if I show it to other people I often get, like, positive things, like because I’m good at building in games where... I mean, I’m not good at building on this because it’s like the blocks don’t have...*

*CO*  
*You’re brilliant at building on this, I think.*

Richard then built a secluded section in the landscape using the wall props, and placed a lit campfire in the middle to represent the Games Workshop he frequently attended in town (Figure 10.). The counsellor commented of this process, asked about the props and the avatar, and his choice of colours.
Richard drew the counsellor’s attention to an aspect of the landscape, where he placed the prop pillars and they talked about them (whether they were in the centre, whether they were gothic or medieval). He then segued into talking about another gaming experience which he described as ‘Minecraft for autistic people’ where he felt he fitted in. He found that people who used that game behaved differently, with more morality than the general public. During this process he used an avatar to run and jump through the landscape. While he was pacing on screen Richard reflected on his experience of being different. Initially this was a subject he found difficult to stay with and directed attention away from the topic into the use of the software:

**CO**

I was just thinking, is there any way you can use this landscape with the avatar with the – I’m not sure what you’re doing now but I was thinking, if you’re talking about your difficulty with having that diagnosis, is there any way you can portray that, I suppose, how you feel about it. Is it a difficult thing to...?

**Richard**

Not really. I can jump off here now, like, it’s huge. Right, that’s big.

(moving to a different scene)

To help Richard explore his perceived differences the therapist suggested that the trouble he had with ‘making sense of the world and other people is difficult because [other people are] the ones that are different’. While Richards conceded this point he also replied by saying that ‘it feels like they’re different but it’s actually me’. The therapist tried to explore this again by highlighting that other people would be ‘the different ones’ at the Games Workshop. While Richard agreed he also said that Games Workshop ‘is not an everyday thing so it doesn’t count’. He finally disagreed with her interpretation of his difference:

**CO**

Okay, what’s the worst thing about being autistic for you?

**Richard**

Because it’s like I’m not normal and basically, compared to everyone else, I’m mentally defected.

Richard deflected the discussion away from his ASD and back into the software by exploring different props. He went on to create beacons of light (fires on pillar props) across the landscape
that he could see from the castle. He drew a comparison between these beacons and those used in J. R. R. Tolkien’s Lord of the Rings, which were used to call for aid between the two realms of men but are also a wider symbol of the bond between the two realms. The therapist’s interpretation of this, to which Richard agreed, was that these beacons made him feel connected to what he has represented across the landscape. Following this, he used his avatar to run and jump through the landscape and ended up using more platforms for building. After further discussions of how many props Richard used, he disclosed, quite spontaneously, that he had premonitions. The counsellor reassured Richard that she believed in his capacity for premonition after he stated that no one believed him. After this, Richard discussed the positive potential that these premonitions could have for him to appear clever:

**CO**  
Gosh, so does that feel like a cool thing or does it feel a scary thing?

**Richard**  
What happens if I, like, see myself dying? But then if I could foresee beyond that, I could just, like, live in the next stage of mankind, like, steal people’s ideas from the future.

**CO**  
That would be cool.

**Richard**  
Yes, because then I’d look really clever.

**CO**  
You are really clever.

**Richard**  
But, like, more clever because, like, if I could see things that were going to happen in the future, like, someone could make something really useful in the future and then I could make it earlier because I know what it is but it wouldn’t work like that because it’d be – it’s like short clips of things.

In this session, we see continuation of the work in APES Stage 3. The rapid cross fire of Stage 3.2 was evident in the discussion about his diagnosis, with sudden changes of subject and moving on from the topic. However, there was also evidence that a dominant and non-dominant community of voices spoke for longer periods of time (APES Stage 3.4). In the discussion of the premonitions, Richard’s dominant community of voices could be offering a solution, albeit fantastical, to being accepted and acceptable. The prospect of supernatural powers, consistent with his fantasy role-playing hobbies, could be one way Richard was trying to tolerate or accept painful aspects of his difference and indicates a beginning of an APES stage 3.8, which is a joint search for understanding between the communities of voices.

**Session 6: No recording**  
Richard chose not to use the avatar software in this session.

**Session 7: ‘Angry Troll’ under the bridge**  
Session 7 was the first time Richard used the avatar software for only a part of the session (25 minutes), following a difficult week preceding therapy. He mentioned detentions at school and difficulties at home, leaving the school camping trip early, having difficulties sleeping and
problems with his leg. The counsellor did not enquire into all the
difficulties, although they talked about his reasons for leaving the camping trip. These indicated
some of his difficulties in fitting in, including his inability to eat the food that was provided and
his difficulties with the communal bathroom facilities. Although we didn’t have information
about the detentions, we know that difficulties in social situations and anger have been cited as
reasons for coming into counselling. In this context, the exploration in the session, which mainly
focused on the metaphor of an ‘angry troll’, seemed to reflect his emotional state, which he
wanted to hide from view and make insignificant. Although he introduced this avatar into the
landscape he refused the counsellor’s invitations to own it, reflect upon it or accept it.

While Richard initially talked about his week he moved through ProReal landscape in an
unfocused way and tried to go over the landscape boundary. The counsellor attempted to bring
him back to talking about his feelings:

CO            Does that make you feel...?
Richard       I don’t really... I don’t, like, it’s just something that’s sort of funny
because I got past something that’s supposed to be the edge of the world
or the game I guess. Maybe if I put a mirror here...

Eventually, Richard used a prop bridge to try to close the gap between the two river banks. He
ended up building what looked like a tunnel made up of several bridge props. The counsellor
praised his skills, while enquiring into the emotional aspects of what he built.

Richard      It’s dark. Like, it’s going dark under here now.
CO            Yes. Is that somewhere you’d want to be?
Richard      No. I just..., which I do (he places a grey avatar under the bridge. He
names it ‘troll’ and makes it green)
CO            Troll.
Richard      Yes, like the trolls that live under bridges. Should be... Wait, no.
CO            Is the troll... Can you relate that to anybody in your life?
Richard      Not really, I just want to put it there.
CO            Not part of you? Part of Richard?
Richard      Yes, like, the normal part of me because...
CO            The normal part of you?
Richard: Yes, he’s under a bridge. Wait, no, that’s not normal. That’s not the normal part of me. There’s a normal part but I’d have to think about it.

The counsellor invited him to reflect further on the meaning of the troll, but he didn’t see it as a part of him. However, he assigned an emotion to a troll (Figure 10).

Richard: I want to make him look angry though because that’s what trolls should be.

CO: Angry [?], yes? He looks really angry, doesn’t he?

Richard: He can get angry...

CO: He, she, or it?

Richard: It.

CO: It. It’s not... It’s neither. An angry troll underneath, how many bridges have we got, five?

Richard continued to work with the landscape through the session. He placed overlapping bridges, so there were no holes through which the Troll was visible. He then used an avatar and ran through the tunnel, passing the Troll. The counsellor again highlighted the presence of the troll and asked him what the Troll might be thinking about, but he did not recognise the Troll’s inner thoughts. He eventually removed the Troll, because he ‘has no relevance’.

The counsellor made another attempt to link Richard’s feelings about the week to the landscape,
and this time reflected on his feelings about the week without reference to anger or the troll:

**CO**  
*So with your week... With your frustrating week where everything, what did you say? Everything's not gone according to plan, was that how you described your week?*

**Richard**  
*Yes.*

**CO**  
*Where would you put yourself on the landscape today then? Like, where you are right now?*

**Richard**  
*Under the bridge. Well, tunnel.*

**CO**  
*So being under the bridge is the same as being thrown under the bus?*

**Richard**  
*Yes, it's, like, another... Thrown under the bus is when, like, someone who doesn’t like you sort of ruined everything for you.*

**CO**  
*Was that anybody in particular?*

**Richard**  
*No, because it was just bad luck.*

The counsellor also invited Richard to reflect on the good parts of the week, and he recognised that there was a part of the camping trip he enjoyed, and that he did well in the shooting practice. Despite this, towards the end of the session he said that he was finding it difficult to relate to anything on the software, and he felt under pressure to make the links.

In assimilation terms this session began to explore anger as a response to a problematic experience, but also highlighted Richard’s unwillingness to contemplate anger as an understandable expression of his distress at being different (*'That’s not the normal part of me'*). The avatar software provided the semiotic bridge in the process of assimilating his angry self. In a way, Richard seemed to communicate more about his experience of anger than he was ready for, and although the assimilation and acceptance of anger was not accomplished in this session, it suggested work in APES Stage 3.4, where the angry and assertive problematic voice takes stage for a longer period of time (most of the 25 minute duration of using the software), and without frequent interruptions from the dominant community. We know that anger was one of the reasons Richard was referred to school counselling, but although expressions of anger could be seen as problematic within a school context, they could also be seen as an appropriate response to a difficult experience. This contrast could make his ambivalence about it (*'it is a normal part of me’... ‘wait, no, that’s not normal’*) stronger, and the task of assimilation more difficult.

**Session 8: Joy in gaming. Anxiety at school.**

Richard used the avatar software for a relatively brief period (16 minutes) during this session. The focus was on the positive experiences of gaming, in contrast to difficulties in ‘real life’, which caused him anxiety.
The software was used to represent safety and belonging related to gaming experiences and friendships, and this brought about an expression of joy and ‘jubilation’.

Richard started the session by placing a campfire in the landscape and surrounding it with dancing avatars that represented himself and two friends. They represented joining in with others in one of the online computer games he played. The act of coming together provided a ‘health boost’ to the virtual characters. The dancing was visually very funny to Richard and in discussing the game he said that it made him feel good because it’s ‘more social than things in real life’. The therapist asked whether this created wellbeing and happiness within him to which he agreed and he said the experience was ‘jubilant’ while depicting himself as an avatar with a ‘celebrating/cheering’ behaviour (Figure 11):

**Richard**  
Yes. One of the funny things is like, on this game is like, you can build a campfire and dance round it and for every person that is dancing the music gets even louder, and it’s like fun to... It’s not fun when you do it on your own because you’re music’s very dull and it sounds like it’s like coming through like a radio. And then if you’ve got like five people it sounds like you’re actually having a rave or something.

**CO**  
Oh, is that what happens then, when you all join together online?

**Richard**  
Yes. And it gives you like health boosts, but then like, me and my friends just do it for fun because it’s funny.

**CO**  
What do you mean health boosts?

**Richard**  
Like in the game it like heals you, your character, but then it also looks funny because your characters actually do dance and it’s like an hour long cycle of things that can happen. So like, I take screenshots of it.

...  

**CO**  
Does it feel good?

**Richard**  
Yes, because it’s like... There’s, it’s a lot more social than things in real life tend to be, I guess. Even though that in a way it couldn’t really be more social because it’s not even real, but then like, it is and like, sort of, weird way.

**CO**  
Well I guess the point is that it makes you feel like you’re interacting and having fun with other people, which I guess is, creates a feeling of what, wellbeing or happiness with you.

**Richard**  
Yes.

...  

**CO**  
So you see that motion that you’re making there, is that how you felt after playing with this, that game all weekend?
Richard: Yes. It’s like dancing around the campfire and the gate was basically a representation of how I feel about it.

![Image of Richard dancing around a campfire](image)

Figure 11. Richard recreated a scene from his online game with friends that depict their game avatars dancing around a fire, which also gives the characters a 'health boost'. Richard’s avatar is given the behaviour ‘celebrating/cheering’, one friend is given the behaviour ‘showing direction/leading’ and the other friend is given the behaviour ‘open/being up for it’.

He spent most of the time talking about playing the game and the focus remained on the three avatars around the fire. He then explored the programme by pacing around, changing the perspective and turning the virtual world upside down, and spinning until the counsellor said that this was making her dizzy. He ended the session talking again about his experience of belonging with his friends while playing computer game and chose to end the session on the visual image of him and his friends around the campfire.

In this session, Richard also told the counsellor about a detention he received at school and his anxiety. He didn’t refer to it directly, but used ProReal to guide the counsellor towards these points, using one of the initial scenes he created in Session 1 by the castle walls that incorporated a roadblock prop. Richard moved the roadblock from between an avatar representing his experiencing self and another avatar representing his anxieties (Figure 12). It was after these unprompted changes that the counsellor enquired as to what they represented:

![Image of Richard moving roadblock](image)

Figure 12. Richard revised a scene he created in Session 1 by moving a road block from between his experiencing avatar (blue) and his avatar representing his anxieties (black). The road block is said to represent Richard’s strategies at coping with his anxieties. The anxiety avatar is also moved closer to his experiencing avatar. There is a shield present (foreground) that Richard also moves away from his avatars.
What did you do there, Richard?

I moved away the roadblock blocking it out, things like anxiety.

You’ve moved it?

Yes.

Just run me through that.

Because like, it’s causing problems because of detention so it’s not like really blocked out like it was before, which is why I moved all like these roadblocks and stuff away.

So what do you mean by that? Do you meant that you’re more exposed to anxiety?

Yes.

While Richard focused predominantly on experiences that contributed to his dominant community of voices, he highlighted the difficulties he was having at school by using the software. In assimilation terms, the contrasting experiences of psychological safety and the problematic experiences continue to be represented and explored. The software was used to give overt representation of connectedness, safety and belonging, and this brought about an expression of joy. The problematic experience was initially represented non-verbally, and served as an invitation into a conversation about Richard’s management of anxiety. At a ‘macro-level’ within a session (i.e. not specific events discussed within the session), Richard’s use of the software suggested a continuation of the work in APES stage 3, showing a ‘rapid crossfire’ or switching of dominant and non-dominant voices across scenes within a session. The focus on the dominant voice experiences could be seen as comforting and supporting the expression of the more difficult experience of anxiety.

Session 9: No recording.
Richard chose not to use the avatar software in this session.

Session 10: The ‘Paranormal’
In this session Richard used the avatar software for 22 minutes and the session focused on another aspect of Richard’s sense of difference related to his experiences of ‘the paranormal’. This was contrasted by the conversations about Richard’s concrete achievements as a tester for video games and an achievement in school.

Richard referred to the ‘paranormal’ briefly in session 7 when he was talking about having difficulties sleeping: ‘whenever I’m about to go to sleep I hear, like... It doesn’t matter’. He then changed the subject. In this session he talked about hearing voices more fully:
Richard    Like, I kept hearing breathing noises even though it wasn’t me and none of my cats were in there….

CO    So when did... when did you experience this?

Richard    Yesterday and a couple of times in the previous days.

CO    So is it always at night time?

Richard    Yes

The counsellor enquired into the event and Richard told her that he managed the experience by going out of the room and then coming back. During this conversation he appeared to move the computer mouse aimlessly. He didn’t express any emotion about the experience, but started to focus on the gravestone prop and engaged the counsellor in trying to decipher the lettering on it. He also tried out different aspects of the programme such as turning the avatar sideways and making it lie down to the extent where the counsellor reported feeling dizzy.

The counsellor encouraged him to go back to relating the software to his inner experience and asked whether the gravestone prop was related to ‘the paranormal’. He agreed with her saying that he associated it with ‘dead things’, indicating feelings of fear. He then moved on to talk about his achievements in being a tester for a game stating that he was ‘best in the whole Richardass’, and continued to experiment with the perspective function of the software. For a while, Richard refused any attempts by the counsellor to link the scenes to his inner world, and he referred to the software as a ‘game’.

In assimilation terms, the voices of the experience of difference (‘the paranormal’) and the dominant community of voices (his excellence as a game tester) both claimed space, indicating further work in APES stage 3. There was further evidence of using a prop as a meaning bridge into Richard’s inner world. It also seems that his sense of competence in gaming was expressed in his experimentation with the software, which impacted the counsellor. She accepted this and praised his skills.

Session 11: ‘I like myself but not for appearances’.
Session 11 was the last session of Avatar-Based Counselling, and Richard used the software for 27 minutes. As expected in the final session of this sequence, Richard and the counsellor spent most of the time focusing on reviewing his use of the programme. Richard revisited the landscape and the scenes he created over the whole period, and reviewed their current relevance. Most of them remained relevant to him, unsurprisingly for a mid-period in counselling, but he also reported feeling more accepting of himself, saying that he did not feel ‘as bad’ about ‘wanting to be normal and stuff’.

As it was his last experience of ProReal, Richard decided to explore the software as much as possible and made sure he had used all the props available. At one point he discovered a mirror
and this led to a conversation about how he felt about himself, and a conversation about distinguishing appearances from his ‘internal self’:

CO What do you like?

Richard Myself, but not for appearances.

CO You like your internal self?

Richard Yes.

CO That’s a really good thing, isn’t it?

Richard then seemed to change the subject and for the rest of the session focuses on building and trying to use up the props.

This session demonstrated another aspect of using the software as a visual tool for review, which provided a concrete and visible history of the sessions. In assimilation terms Richard seemed to be developing a degree of self-acceptance. He referred to it verbally and the mirror prop gave him an opportunity for further insight. APES Stage 4 (Understanding/Insight) seems to be emerging, as Richard feels less distressed by his experience of difference and there is an apparent surprise in his insight about liking his ‘inner self’.

**Summary of the Themes of Difference and Assimilation Stages (APES) Across Sessions**

Table 3, gives an overview and a summary of the themes related to Richard’s experience of difference, and APES stages contained within each session.

<table>
<thead>
<tr>
<th>Session</th>
<th>Dominant Voice:</th>
<th>Problematic Voice:</th>
<th>Assimilation Stage (APES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Symbolising the problem</td>
<td>Castle scene: Around the camp fire with friends.</td>
<td>Forest Scene: The treasure chest represents ‘being normal’. ‘I can see it but I can’t reach it.’</td>
<td>Later Stages 2 (Developing awareness) towards Stage 3 Problem Statement/Clarification Opposing voices are becoming differentiated.</td>
</tr>
<tr>
<td>2: Who can I trust?</td>
<td>I can make decisions about who to trust in online gaming. Representation of fitting in: the games server and players.</td>
<td>People at school mock me when I do something by accident. Symbolic representation of problematic experiences: A bomb with a lit</td>
<td>Stage 3.2. ‘Rapid Crossfire’ Cross-triggering of incongruent voices.</td>
</tr>
<tr>
<td>3: ‘It is hard to fit in among everybody else’</td>
<td>fuse.</td>
<td>A ‘Spectator’ Stacking platforms in order to observe, safety in uniformity.</td>
<td>Increased Desire to fit in. An increased number and size of treasure chests.</td>
</tr>
<tr>
<td>---------------------------------------------</td>
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<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Software use: 50min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4: Halloween. Acceptance vs Disapproval</td>
<td>Acceptance at the games workshop</td>
<td>Disapproval within a social context. Previous experience of Halloween.</td>
<td>Stage 3.2 ‘Rapid Crossfire’ Cross-triggering of incongruent voices.</td>
</tr>
<tr>
<td>Software use: 50min</td>
<td></td>
<td></td>
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<tr>
<td>5: I don’t think it’s good that I’m autistic’</td>
<td>Fitting in. Representations of the games server and the workshop.</td>
<td>Being different from others. ‘It feels like they’re different but it’s actually me’.</td>
<td>3.4 Entitlement’ Problematic voice speaks for a longer period. 3.8 ‘Joint Search for understanding’ Awareness increases and connections grow.</td>
</tr>
<tr>
<td>Software use: 49 min</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6: No ProReal</td>
<td></td>
<td></td>
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<tr>
<td>7: Anger. Troll under the bridge</td>
<td>Positive experiences in the school camp and shooting practice</td>
<td>A difficult week: a school trip, physical difficulties, detentions. Symbolic representation of affect as an angry troll under the bridge. ‘That’s not a normal part of me’.</td>
<td>3.4 ‘Entitlement’ Problematic voice speaks for a longer period.</td>
</tr>
<tr>
<td>Software use: 25min</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8: Joy in gaming. Anxiety at school</td>
<td>Feeling ‘jubilant’ when he plays games with his friends</td>
<td>Detention at school. Less protection against anxiety, coping strategies are not working.</td>
<td>APES: 3.6 ‘Respect and attention’ The voices are more tolerant of each other and the content is less emotionally charged.</td>
</tr>
<tr>
<td>Software use: 16min</td>
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<tr>
<td>9: No ProReal</td>
<td>Recognition for his skills as a games tester</td>
<td>‘Paranormal experiences’</td>
<td>APES: 3.6 ‘Respect and attention’ The voices are more tolerant of each other</td>
</tr>
<tr>
<td>Software use: 22min</td>
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</table>
and the content is less emotionally charged.

11. Review. ‘I like myself but not for appearances’

Software use: 27 min.

The dominant and problematic voices are not as separate from one another.
All the problematic experiences are still the same, but Richard doesn’t feel so bad about ‘wanting to be normal, and stuff’.

APES Stage 4
Development of Insight
A beginning of reaching understanding between the two voices. The difficulties are still present, but there is more self-acceptance.

Post Analysis Interviews
Richard engaged well with the post-analysis interview, examined the screenshots, read parts of the synopsis, and responded to questions. He sat at a distance from the interviewer, did not make eye contact, and seemed a bit anxious. In the first half of the interview, Richard found it easy to remember many details from the scenes, how he had labelled scenes, avatars and props and his reasons for doing so. Towards the end of the interview, possibly because he became tired, his responses became less elaborate and he found it harder to remember his intentions and scenes. In anticipation of the possibility that talking about his counselling could cause some discomfort, the interviewer frequently checked with him whether he wanted to proceed (he did).

Richard confirmed that the core theme of being different was central in his counselling. He also confirmed several of our interpretations of the scenes he created, such as the castle being a ‘secure base’, the game server representing belonging online, and how the scenes with the walls and the bombs related to his struggles with being different. Consistent with his behaviour in the session, Richard did not confirm that the angry troll was a representation of himself. However, he did confirm that it represented ‘being angry’. He also went on to say that he was confused about the scene and didn’t remember it well. While Richard did not disagree with our overall interpretation of his affect and scenes, he did, at times, attribute a more concrete explanation for his use of the software:

**INT** Yes. And the objectives were, like, game-coping strategy and social and things like that. These are not related [to the milestones], I get that, but what did they represent for you?

**Richard** They were just things that’d happened recently that I was kind of proud of.

**INT** Okay. And the fire was...?

**Richard** I just put it there because it looked nice.

....
INT While you're building all these platforms and bridges, you did this a lot, did you... how... did you enjoy that? Did you...? How did you feel when you were actually doing this, building a lot of things like that, a lot of platforms, a lot of bridges?

Richard I was just, kind of, curious to see what... if I could get to the top of the castle, when I did it, because there wasn't any other way to get up.

... INT You said that this is because I can see from, you know, above, but we thought that... we took it more metaphorically: that [reading] experience of feeling odd is closer to being, you know, an outsider. Is it... did you feel like an outsider when you built that, or you're just building...?

Richard I just built it to look over everything

Our initial interpretation was that the Spectator avatar was used metaphorically to represent Richard’s ‘experience of feeling odd and an outsider’. This was refuted by Richard and he provided a more concrete explanation for its use, which was merely to view things from above. However, Richard’s use of the Spectator avatar fits more closely with our second interpretation, which was that the Spectator represented an observer position, referring more to his experience of examining his own mental and behavioural processes (reflective functioning).

As mentioned above, when the interviewer asked Richard how he felt when he stacked the numerous platforms, Richard gave the concrete perspective, which was that he needed to view things from above. Interesting, the counsellor’s reflection on this is in agreement with our own interpretation of the way Richard used the software to help build and deepen the therapeutic relationship.

CO Yes, I can remember that one. It just went on and on and on that building of the levels.

INT How did you feel about that? When he was doing all these repetitive – building loads of bridges, using lots of platforms, how did it... what was your take on that?

CO I just thought that was part of him, and careful not to say his name, but it was very much what he... the way he sees things or saw things, and that that was, yes that was really important and it was about the ability to control his environment, so whilst it’s a physical environment, an external environment on there, it’s also representative I think of probably his internal environment... about control, trying to get control. Actually I can do 50 levels if I want to.

... So something about transferring their internal landscape to the external landscape within ProReal and having control of that, and I suppose as a facilitator, it’s about them not feeling judged, so nothing is wrong, nothing is bad, nothing is... there’s nothing negative about any of it.
The counsellor generally agreed with our interpretations of Richard’s use of the software, although she could not recall the scenes and labels as easily as Richard. The counsellor’s response in the interview also corroborates with the study finding that Richards progressed in terms of assimilation between his contesting voices, perhaps through self-acceptance. In the beginning of the interview the counsellor referred to the reasons Richard was referred for counselling:

**INT** Okay yes, and you said that he was referred for anger issues?

**CO** Loads of things, it was anger issues but actually it never really, it didn’t become so much about that. It was more about being different, and being heard and being understood and not being judged, but at the time when he was referred for counselling before we, you know, the initial period that we had before ProReal, prior to that he had had some outbursts where he’d been mocked or taunted, so in a way it was a very appropriate response in a way...

In terms of the role Avatar Based Counselling played in the therapeutic relationship, the counsellor also reflected on how she integrated it into her own humanistic approach:

**INT** What role do you think this period, when you used ProReal, played for the relationship?

**CO** I think that it enabled, it gave him another dimension to work with in terms of looking at his awareness, so I think as you say, its sort of a gradual thing between these two. It’s about sort of the reflecting bit, so you can’t... initially it’s difficult to sort of know what it is or name it, so it takes a while sometimes and I don’t think you can rush those things with client work, and it has to come in a sort of organic way, but I think... well I think as I’ve said before quite a bit, I think a) well it’s partly him having the intention of somebody who is dedicating that time to listening to his thoughts and processes, and acknowledging them and not deconstructing them or not challenging them, but just accepting them is a really helpful part of the process

Both Richard and the counsellor gave final permission to the team to use the material and their analysis in the case study.
Discussion

What Happened in the Counselling?
The desire to be ‘normal’ and fit in is developmentally salient in adolescence (Somerville, 2013; Coie, 1990), so in that sense, Richard's central problematic experience of being different was arguably typical for people in his age group. His concerns were exacerbated by ASD, at least in his own mind. He reported that his classmates laughed at him for reasons that he didn't fully understand; both odd behaviours (such as repetitive stereotyped behaviours and insistence on sameness, demonstrated during the sessions) and limited social sensitivity could be attributable to ASD (APA, 2013). His otherwise unexplained (to us) after-school detentions presumably reflected deviations from norms for behaviour in school, though these may have been understandable angry reactions to being ‘mocked’ for odd behaviours. Thus, we have some basis for inferring that his experience of being different was indeed more extreme than that of an average 14-year-old boy. Furthermore, there is a theme of not belonging or being different in the ASD literature (Wilson, 2016; Humphrey & Lewis 2008; Portway, 2006; Cousins, 2002; Jones, Zahl and Huws, 2001; Willey, 1999; Jackson, 2002). These studies discuss the problematic experiences of young people with ASD of being socially excluded, misunderstood, bullied and laughed at. Consistent with this is Richard’s description of fitting in much better online, playing games on a server that was specifically for autistic spectrum adolescents.

Richard, of course, has had experiences related to his ASD for many years and he seemed to have brought some already-formed ideas about his problems and goals to the series of sessions we investigated. During this segment, Richard's work on his problematic experience of being different seemed to be in the region of APES 3 (problem statement/clarification; see Table 1), working toward APES 4 (understanding/insight). At APES stage 3, the problem is formulated and the client is working toward an account—a meaning bridge—that is acceptable to both the problematic voice and the dominant community (Brinegar et al., 2006; Stiles, 2011). Affect is negative but under control and not frantic or overwhelming. Richard's passing references to recent panic attacks suggest that this—or at least some—major problem had recently been at an earlier stage (APES 2 is characterized by intense negative emotion).

In our interpretation, the work Richard did towards coming to terms with his experience of difference originates from him acknowledging and confronting his perceived difference, as well as exploring areas of his life where he did fit in and belong. He used the avatar software in various ways throughout this process. By considering imagery as constituting a problem statement, this study also expands the assimilation model. It suggests that imagery may serve as a meaning bridge (a problem statement can be considered as a proto-meaning bridge, that is, semiotic elements that make links between voices). While Richard’s progression was not in discrete steps, there were recognisable shifts between the APES substages within the sessions we studied.

In sessions 1-3, Richard focused on articulating his powerful but blocked desire to be normal and socially connected; others mocked him for reasons he did not understand, so any new social contact was risky. As early as session 1, he formulated a powerful visual metaphor, which he returned to in subsequent sessions: a collection of treasure chests labelled ‘normal’ separated from him by a wall he could not get past. We considered this as a problem statement (APES stage 3; see Table 1) in assimilation terms. Similarly, he was blocked by a river of distraction
from the ideas and concepts he wished to master. Even the online gaming world, represented by
an elephant, was populated by gamers marked by a yellow colour of warning. In a second phase,
particularly sessions 4 and 5 (and perhaps 7), Richard began to confront and acknowledge his
own difference. Notably in this phase, Richard used the software as an outlet for his agitation, for
example, pacing virtually throughout the online landscape. In the later sessions, 8 and 10,
Richard shifted more to building scenes representing positive social contacts, such as the scene
of avatars representing him and his online friends dancing around a virtual campfire, getting
‘health boosts’ from the positive social interaction.

Although Richard used much of session 11 to explore and review the capabilities of the avatar
software package, this did yield his encounter with the mirror prop in which he said that he liked
himself, ‘but not for appearances.’ This seemed to us a nice metaphor of progress in the way
Richard was coming to terms with his experience of being different. That is, we speculated, he
could confront the ways in which he was different and might seem odd to others (e.g., not
keeping still, being unable to deal with communal facilities at the school trip etc.) and the
experiences showing that he was capable of rewarding social contact (e.g., in the gaming
workshop), so that he could like himself in spite of a reality that was difficult to change.
Acquiring the wisdom to know what cannot be changed can be a successful path to self-
acceptance. Theoretically, this can yield a substantial reduction in distress even when it does not
change the valence of the experience. For another example, see the case reported by Caro (2006),
in which Maria came to accept her physical symptom of dizziness with substantial psychological
benefit.

Although Richard made extensive use of the avatar software, more conventional verbal
counselling processes were interleaved with the use of the digital imagery. For example, the
important discussion of Richard's ASD diagnosis in session 5 in which he said it was he, rather
than others, who were different and that he felt that compared to others he was ‘mentally
defected’ was verbal, not visual. Arguably, however, use of the software facilitated this
discussion in several ways, including opening the discussion via a representation of the gaming
workshop (where he did fit in) and providing a handy way to change the topic when the
discussion exceeded his comfort zone.

The use of the software for avoidance was common in Richard's case. He frequently began rapid
movement onscreen or began talking about specific software tools or feature when the counsellor
was pursuing a significant line of enquiry. We understood this as a way to move away from
topics that were getting too difficult. The avatar software offered an easy way to shift the topic
(for example in session 5, changing the subject from talking about his experience of autism).
Theoretically, this sort of avoidance can be considered as a sign of exceeding the upper limit of
the problem's therapeutic zone of proximal development (TZPD; Leiman & Stiles, 2001; Ribeiro
et al., 2014). The TZPD is a sort of working zone within the APES, the region between the
problem's current level of assimilation and the level the client can currently achieve with the help
of the therapist. So long as interventions remain within the TZPD, the client can work
productively, but if the therapist seeks to intervene beyond the zone's upper limit, the client will
somehow invalidate the intervention, for example, by changing the subject.

Was Richard's problem psychological, social, or neurological? His formulated problem was that
he was different because of his ASD. Peers laughed at him because they saw him as odd, and his
school's inability to accommodate his distractibility was frustrating, and we assume that this is how he became angry and was given detention. All problems that confront counsellors and psychotherapists have biological and social dimensions as well as narrowly psychological ones, and the process of assimilation must work within and with them. Whatever sort of problem Richard had, that was the problem he had to solve. At the end of the segment we studied, we didn't know how he would solve it, though the mirror episode suggests that self-acceptance might be a way to maintaining a sense of worth in a world that is less welcoming than he wished. Perhaps maintaining self esteem requires all of us to accept and somehow assimilate the biological and social hand we are dealt. Watching Richard deal with this is instructive about the process of assimilation for anyone.

Richard's modest gains in assimilation--his problem reached APES 3 in session 1 and had not reached APES 4 by session 11--and his lack of change on the standard measures, such as the YP-CORE, must be understood in the context of this being a relatively early segment of a long-term treatment. Insofar as his experience of being different derived from his ASD, we presume that it had a long history, even if it had become more salient and urgent as he embarked on adolescence. On the other hand, theoretically the progress from APES 3 to APES 3.6 or 3.8, which we inferred from our observations would be expected to produce a small decrease in distress (cf. Stiles et al., 2004) that should have been detectable on the YP-CORE. We don't have an answer to this discrepancy. We do note that in the post-analysis interview, Richard still said he thought not much had changed, whereas the counsellor said she saw large improvements is self-confidence and reductions in distress.

The Source of Richard's Self: Theory of CBA Voices

It may seem intuitively sensible, but it is theoretically puzzling that Richard considered evidence of his being different as ego-dystonic and problematic, whereas evidence of his being 'normal' and fitting in was ego-syntonic and positive. Why should his core sense of himself (like most people) have been that he was 'normal'?

According to one tentative elaboration of the assimilation model (Stiles, 1999), people who survive infancy are left with a basic sense that they and life are good and worthwhile. This derives from early experience of physical contact and being kept warm, safe, fed, and loved. People who are not provided for in these respects, at least minimally, do not thrive and may not survive infancy (Bowlby, 1951; Field, Schanberg, & Scafidi, 1986; Spitz, 1946). So there is reason to expect that people who have lived past infancy have had these experiences to some degree. Theoretically, constellations of traces of these essential experiences remain as voices representing continuity and benevolence assumptions (CBA voices; Stiles, 1999), an underlying sense of personal worth and optimism, including a tacit assumption that the world is stable and will provide for basic needs. There are large variations in the nature and extent of these experiences, resultant voices, and sense of worth and optimism, of course. But there is nevertheless reason to expect some sort of CBA voices at the core of any client’s personality.

This conception of CBA voices addresses the phenomenon that social psychologists have called the just world hypothesis (e.g., Lerner, 1980). It is these assumptions that can be shattered by severe trauma, leading to manifestations of PTSD (cf. Janoff-Bulman, 1992). When the assumptions are abandoned or rejected, according to this theoretical elaboration, the result is
depression; the person feels that he or she is worthless and that life is hopeless (Stiles, 1999).

**Features of Avatar Therapy**

The rationale for using ProReal software in counselling was based on the notion that it would support therapeutic change by helping clients in sharing their inner world with the counsellor and thus support the therapeutic relationship. The software was also intended to enhance self-expression and development of insight, and there was a suggestion that this would lead to an increase in self-acceptance. The analysis of Richard's case demonstrates that the software was used in all of those ways. It supported the development of the therapeutic relationship, and it was used for representation, symbolisation and non-verbal expression. It was also used in less helpful ways, such as avoidance and the symptomatic use. We will discuss each of these aspects in the following text.

**Therapeutic relationship.**

The analysis shows numerous examples of how the use of avatar based software developed communication between Richard and the counsellor and contributed to a deepening communication and understanding between them. Richard led this process by creating his digital world, and the counsellor followed him closely, reflected, enquired, and articulated the issues, experiences and emotions. Avatar software supported the creation of interpersonal meaning bridges between them, and enabled the counsellor to share Richard’s world, but also facilitate him in voicing difficult experiences, and broadening his awareness. Working with the software was one of Richard’s strengths, an area in which he felt confident and received praise both in his social environment and from the counsellor. It could be suggested that, for a boy who felt so unaccepted by his peers, being more skilled than the counsellor impacted the power dynamic of the relationship. As well as praising Richard, the counsellor often referred to how much better he was at it than her, and commented about feeling dizzy when he increased his speed, or suddenly changed the perspective. Giving power to the client was inherent in her therapeutic approach, and she used this difference between them gently and persistently, as a reflection of his ability and agency. We could also speculate that the counsellor’s gentle and accepting response towards the client-landscape interaction may have impacted Richard’s experience of acceptance. For example, on occasions when Richard was exhibiting repetitive behaviour, such as building, her response was either to praise or to prompt him to elaborate more on the symbolism of sizeable constructions. Understanding and acceptance of idiosyncratic or symptomatic behaviour is expressed as a requirement by ASD people who received therapy. In order to meet their clients successfully, therapists need to adjust their approach (Wilson, 2016), just as the counsellor did in this case.

**Representation.**

Richard used avatar based software to visually represent aspects of his life. He used avatars to represent both himself and his friends, the games workshop, and his online gaming. These were overt representations of positive experiences in his life. It could be suggested that this supported the therapeutic process, as these scenes remained available on the landscape and he was able to see them again and review them. They also provided a platform from which he was able to talk about the more difficult experiences related to his experience of difference.
Symbolic representation.
In assessing Richard's choice of symbols, it is important to remember that he was restricted to the images offered by this particular software. The repertoire of images was fixed and limited, in the sense that it did represent all possible states or capture all the subtleties of a client's experience. For example, in choosing treasure chests to represent unattainable ‘normality’, he did not invent the image of a treasure chest but rather selected it as the best symbol from among those offered. On the other hand, the avatar software imagery was designed to be semiotically rich, with ways to refer to emotional states (e.g., though the avatars’ body language), significant others, and other psychologically important aspects of clients' lives, as well as a large repertoire of props. However, communication using language is limited too, by the vocabulary that author and addressee share. In the case of twenty-first century adolescent boys, who may have limited verbal and social facility but are articulate in digital media, such game-like software may be particularly useful for building meaning bridges. Avatar based software enabled Richard to represent his inner world and experiences in a series of scenes, from the first session in which he used it. An example of the symbolic presentation of his longing for ‘normality’ was a treasure chest, surrounded by bombs with their fuses lit, placed behind walls he could not pass. This scene painted a vivid picture of his inner world and affect, which he could fully not articulate verbally.

The software also enabled Richard to symbolise experiences and affect which were partially warded off, as in the case of an ‘Angry Troll’, or a mirror which he discovered in the final session and which seemed to indicate the beginning of a different stage in his journey towards self-acceptance. The ‘Angry Troll’ seemed to express more of Richard’s experience than he was able to own. He used it after talking about the ‘difficult week’, and although he showed ambivalence in acknowledging the troll as a part of himself (from being unsure of whether this was a ‘normal’ part of him or not, to dismissing him completely), he spent most of the session working with this scene, hiding the troll, running past him and finally deleting him. Theoretically, this could be an expression of an ‘unthought known’ (Bollas, 1987), an experience known in some way enabled by use of software, but not verbalised.

Using symbolic material has a potential to increase communication and emotional depth in counselling, as symbols could contain layered personal meanings. An example of this is the way Richard used the avatar he named ‘Spectator’. The Spectator had a function of observing, to which Richard referred verbally, and this could suggest a development of his reflective, metalizing ability. However, the Spectator was also always apart, observing from the top of the castle, looking on from a riverbank or from behind the wall. Even though this was never voiced, the Spectator also seemed to communicate an experience of separateness and difference, a continuous theme in the sessions. In this context, the software shows the potential to allow clients both to put distance between themselves and their problems and make communication immediate and powerful. A hypothesis to account for this seeming paradox is that clients using avatars may say more than they know (as in the case of the ‘Spectator’ and the ‘Angry Troll’). That is, problematic voices may express themselves through the software without being recognized as seriously incompatible by the usual self (distancing). When the incompatibility is suddenly recognized (i.e., when the meaning bridge comes into focus)--either spontaneously or perhaps because of some comment or description by the counsellor--the usual self is confronted with the problematic voice in an
unavoidable way, accompanied by powerful feelings. Finding instances of this in intensive case studies would be important theoretically. Clinically, it could suggest ways to recognize when clients may be at the limit of their TZPD.

**Non-Verbal Expression.**
Richard used avatar based software as a non-verbal tool for expression in different ways. He and the counsellor talked about his pacing through the digital landscape as a replacement for his need to pace physically (Session 4). His activity in the landscape (pacing, running, changing perspective) seemed to increase when he talked about the events that contain distressing and difficult emotions and experiences (e.g., in sessions 7 to 10). It could be suggested that this activity served as a non-verbal expression of affect, where the verbal articulation was sparse and only emerged with the help of the counsellor.

**Means of Avoidance.**
Just as in conventional therapy, avatar based software offered opportunities for changing a subject and avoiding talking about difficult areas, as when the conversation moved beyond the upper limit of the problem’s TZPD (Leiman & Stiles, 2001; Ribeiro et al., 2014). In this case, this happened on screen. When Richard wanted to change the subject, he moved to a different scene (sessions 5 and 10), ran through the landscape (Session 4) or engaged in testing out the capabilities of the software, such as boundaries of the digital world, a perspective function, or simply testing out new props (sessions 5, 8, 9 10 and 11). Furthermore, in Session 2, Richard verbalised that he was deliberately changing the subject through the use of the software so that he did not have to answer the counsellor’s questions.

**Symptomatic Use.**
As well as offering avenues for expression and non-verbal communication, Richard also used avatar based software in a way that could be seen as symptomatic for someone with ASD. His repetitive use of props, such as numerous platforms and bridges and flipping perspective, could be seen as stereotyped repetitive motor movements, characteristic of ASD. However, the fact that this happened on screen, rather than in the room, might have helped Richard to stay in the counselling room. He and the counsellor refer to this in session 5.

**Research Limitations**
The main limitations in this case study relate to our inability to explore the whole counselling treatment. This had an impact on our level of insight into the process of change and the impact of counselling. The assessment information about the client was not available, so we did not know Richard’s personal circumstances or history, and did not have a full diagnostic statement. We also did not know the exact context of his referral for counselling, apart from being told that he had behavioural and anger issues which resulted in a referral by the school pastoral team. Available research material also lacked recordings for all counselling sessions and the sessional segments during which the client was not using the avatar software.
Summary and Recommendations

Avatar software could provide an additional resource for counselling, particularly for digital natives and those with verbal expression difficulties. The computer imagery appeared to offer assimilative meaning bridges—communicative links with the client's problematic experiences as well as with the counsellor. For digital natives, computer-generated images may be useful tools for therapeutic communication, both interpersonally (client-therapist) and intrapersonally (internal meaning bridges). They may be particularly valuable for individuals, such as adolescent boys, with relatively less ability or inclination to verbally express psychologically difficult material.

In this case, it was used for expression, representation and symbolisation, and it enhanced the communication and possibilities for empowerment within the therapeutic relationship. By using digital images, Richard seemed able to symbolise his experiences more evocatively. This made it possible to communicate more of his experience to the counselor, and perhaps even more thoroughly to his other inner voices (and, incidentally, to observers such as ourselves). Although there was evidence of the symptomatic use of the software, it could be argued that, as a part of the client’s presentation, these symptoms would have been present in any counselling context. There was evidence that avatar software provided containment for these behaviours, and this facilitated the counselling process. Further research with clients diagnosed with an ASD could contribute to the development of a specialised digital counselling intervention using ProReal software, for this client group. This is particularly promising given that this client group has a predominantly visual thinking style (Anderson and Morris, 2006; Donoghue, Stallard and Kucia, 2011; Paxton and Estay, 2007).
References


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Appendices

Appendix 1 Baseline and Endpoint Assessment Measures
**CLINICAL OUTCOMES in ROUTINE EVALUATION**

**YP-CORE Beta version**

<table>
<thead>
<tr>
<th>Assistance given?</th>
<th>Young Person's ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>(If yes, please tick)</td>
<td></td>
</tr>
</tbody>
</table>

These questions are about how you have been feeling OVER THE LAST WEEK. Please read each question carefully. Think about how often you have felt like that in the last week and then put a cross in the box you think fits best. Please use a dark pen (not pencil) and mark clearly within the boxes.

**OVER THE LAST WEEK.....**

1. I've felt edgy or nervous
2. I haven't felt like talking to anyone
3. I've felt able to cope when things go wrong
4. I've thought of hurting myself
5. There's been someone I felt able to ask for help
6. My thoughts and feelings distressed me
7. My problems have felt too much for me
8. It's been hard to go to sleep or stay asleep
9. I've felt unhappy
10. I've done all the things I wanted to

Thank you for answering these questions.
**Strengths and Difficulties Questionnaire**

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of how things have been for you over the last six months.

Young Person's ID: 

<table>
<thead>
<tr>
<th>Not True</th>
<th>Somewhat True</th>
<th>Certainly True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I try to be nice to other people. I care about their feelings</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>2. I am restless, I cannot stay still for long</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>3. I get a lot of headaches, stomach-aches or sickness</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>4. I usually share with others (food, games, pens etc.)</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>5. I get very angry and often lose my temper</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>6. I am usually on my own. I generally play alone or keep to myself</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>7. I usually do as I am told</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>8. I worry a lot</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>9. I am helpful if someone is hurt, upset or feeling ill</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>10. I am constantly fidgeting or squirming</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>11. I have one good friend or more</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>12. I fight a lot. I can make other people do what I want</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>13. I am often unhappy, down-hearted or tearful</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Other people my age generally like me</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>15. I am easily distracted, I find it difficult to concentrate</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>16. I am nervous in new situations. I easily lose confidence</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>17. I am kind to younger children</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>18. I am often accused of lying or cheating</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Other children or young people pick on me or bully me</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>20. I often volunteer to help others (parents, teachers, children)</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>21. I think before I do things</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>22. I take things that are not mine from home, school or elsewhere</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>23. I get on better with adults than with people my own age</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>24. I have many fears. I am easily scared</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>25. I finish the work I'm doing. My attention is good</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

Do you have any other comments or concerns?

---

Please turn over - there are a few more questions on the other side
Overall, do you think that you have difficulties in one or more of the following areas:
emotions, concentration, behaviour or being able to get on with other people?

<table>
<thead>
<tr>
<th>No</th>
<th>Yes- minor difficulties</th>
<th>Yes-definite difficulties</th>
<th>Yes-severe difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

If you have answered "Yes", please answer the following questions about these difficulties:

- How long have these difficulties been present?

<table>
<thead>
<tr>
<th>Less than a month</th>
<th>1-5 months</th>
<th>6-12 months</th>
<th>Over a year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

- Do the difficulties upset or distress you?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Only a little</th>
<th>Quite a lot</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</table>

- Do the difficulties interfere with your everyday life in the following areas?

<table>
<thead>
<tr>
<th>HOME LIFE</th>
<th>FRIENDSHIPS</th>
<th>CLASSROOM LEARNING</th>
<th>LEISURE ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

- Do the difficulties make it harder for those around you (family, friends, teachers, etc.)?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Only a little</th>
<th>Quite a lot</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you very much for your help
Please put a circle around the word that shows how often each of these things happens to you. There are no right or wrong answers.

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I worry about things</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>I feel sad or empty</td>
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<tr>
<td>3</td>
<td>Nothing is much fun anymore</td>
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<td>4</td>
<td>I have trouble sleeping</td>
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<td>5</td>
<td>I worry that something awful will happen to someone in my family</td>
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<td>6</td>
<td>I have problems with my appetite</td>
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<td>7</td>
<td>I have no energy for things</td>
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<td>8</td>
<td>I am tired a lot</td>
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<tr>
<td>9</td>
<td>I worry that bad things will happen to me</td>
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<td>10</td>
<td>I cannot think clearly</td>
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<tr>
<td>11</td>
<td>I worry that something bad will happen to me</td>
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<tr>
<td>12</td>
<td>I feel worthless</td>
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<tr>
<td>13</td>
<td>I worry about what is going to happen</td>
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<td>14</td>
<td>I think about death</td>
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<td>15</td>
<td>I feel like I don't want to move</td>
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<tr>
<td>16</td>
<td>I feel restless</td>
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</tbody>
</table>
THE FORMS OF SELF-CRITICISING/ATTACKING & SELF-REASSURING SCALE (FSCRS)

When things go wrong in our lives or don’t work out as we hoped, and we feel we could have done better, we sometimes have negative and self-critical thoughts and feelings. These may take the form of feeling worthless, useless or inferior etc. However, people can also try to be supportive of themselves. Below are a series of thoughts and feelings that people sometimes have. Read each statement carefully and circle the number that best describes how much each statement is true for you.

Please use the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Not at all like me</th>
<th>A little bit like me</th>
<th>Moderately like me</th>
<th>Quite a bit like me</th>
<th>Extremely like me</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

When things go wrong for me:

1. I am able to remind myself of positive things about myself.  
   0 1 2 3 4
2. I find it easy to forgive myself.  
   0 1 2 3 4
3. I still like being me.  
   0 1 2 3 4
4. I can still feel lovable and acceptable.  
   0 1 2 3 4
5. I find it easy to like myself.  
   0 1 2 3 4
6. I am gentle and supportive with myself.  
   0 1 2 3 4
7. I am able to care and look after myself.  
   0 1 2 3 4
8. I encourage myself for the future.  
   0 1 2 3 4

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Appendix 2 Post Analysis Interview Schedules

Pro Real Avatar Based Counselling. Case Study

Post Analysis Client Interview schedule

Introduction
The aim of this semi-structure interview is to give the participants an opportunity to comment on the analysis by the research team of the process of therapy and the mechanisms of change, and therefore have both a research and an ethical purpose. The participants can agree or disagree with the findings and give their own perspective on both the process of counselling and the analysis. They will also have an opportunity to ask for any personal details or quotes to be removed.

The questions are there to provide structure and focus to the interview, but do not have to be used verbatim. Additional enquiry and open questions -- concerning the areas of inquiry -- can be used by the interviewer to facilitate the reflection on the personal experience of the interviewee.

The interview will be audio recorded.

The Interview
Begin by welcoming the client, introducing yourself and the structure and aims of the interview. Answer any questions they might have about the interview. Reassure the participants of the confidentiality of the interview and how it will be used. Ask the participant whether they want to have some time to read the findings first, or look at them while you go over them.

➢ Go through the findings. After each point ask for feedback:
  • How does this sound to you?
  • Would you like to add anything? Perhaps put it in your own words?
  • Is there anything here you disagree with?

➢ At the end of going through the findings ask for the overall feedback:
  • Overall, how does this sound to you?
  • Looking back, what did you find particularly important for you during counselling?
  • How did you use ProReal?
  • Looking back, would you like to say anything else about your experience?

➢ Ask for consent:
  • Are you happy with what we have written?
  • Following this interview, the findings with your comments will be finalised before they are published. Is that ok for you?
  • Are there any changes you wish to make?
ProReal Avatar-based Counselling. Case study

Post Analysis Counsellor Interview schedule

Introduction
The aim of this semi-structure interview is to give the participants an opportunity to comment on the analysis by the research team of the process of therapy and the mechanisms of change, and therefore have both a research and an ethical purpose. The participants can agree or disagree with the findings and give their own perspective on both the process of counselling and the analysis. They will also have an opportunity to ask for any personal details or quotes to be removed.

The questions are there to provide structure and focus to the interview, but do not have to be used verbatim. Additional enquiry and open questions -- concerning the areas of inquiry -- can be used by the interviewer to facilitate the reflection on the personal experience of the interviewee.

The Interview
Begin by welcoming the client, introducing yourself and the structure and aims of the interview. Answer any questions they might have about the interview. Reassure the participants of the confidentiality of the interview and how it will be used. Ask the participant whether they want to have some time to read the findings first, or look at them while you go over them. The interview will be recorded.

- Go through the findings. After each point ask:
  - How does this sound to you?
  - Would you like to add anything? Perhaps put it in your own words?
  - Is there anything here you disagree with?

- At the end of this ask for the overall feedback:
  - Overall, how does this sound to you?
  - Was there anything about your work with this client you would like to add?
  - Looking back, how do you think ProReal worked in these sessions?
  - Was it different from talking, or using other materials?
  - How confident were you in using it?
  - How did it work with your theoretical approach?
  - Looking back, would you like to add anything about your experience?

- Ask for consent:
  - Are you happy with what we have written?
  - Following this interview, the findings with your comments will be finalised before they are published. Is that ok for you?
  - Are there any changes you wish to make