

Constructing Agents for Self-Learning: Animated Agents as Expressive Vehicles

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Abstract: This poster session will present a unique collaboration of art therapy with instructional technology through the use of animated agents as a computer-based medium in art therapy. By constructing agents as an extension of themselves, clients can progress toward self-learning, and the therapist can use the agents as a projective tool to better understand clients' current state of personal awareness and needs. The session will present possibilities for using and researching the use of animated agents for art therapy.

Introduction

Art therapists using computers as a creating medium is not new; many art therapists use drawing and painting programs with their clients (Malchiodi, 1999, 2000; Parker-Bell, 1999). However, many of the programs used by art therapists are limited to those created by computer programmers who are not aware that they are being used in a therapeutic capacity. Thus, the end users are not considered, and the programs are limited in their capacity to provide real therapeutic benefit. Gussak and Nyce (1999) indicated that ideally, art therapists and programmers would work together, using a common language, or tools from the shared “visual toolbox,” to create programs with the end user—the art therapy clients—in mind. This paper suggests that we progress one step farther: that the client actually construct three-dimensional animated agents, and that evaluation of these agents can provide information about the client, and ultimately lead to therapeutic benefits.

The Pedagogical Agent Learning Systems (PALS) Research Lab at Florida State University has been investigating the role of animated agents' image, represented role, and animation on learning (e.g., Baylor, 2002, 2000a; Baylor & Ebbers, 2003; Baylor & PALS, 2003). This collaboration of instructional technology with art therapy takes the use of pedagogical agents to another level by investigating the use of agents to facilitate *self-learning*.

Representing oneself

Art therapy clients in our current research are Haptek People Putty™ and Poser™ 3-D graphical development software, integrated with Microsoft Agent™ technology with a user-friendly interface developed by PALS Lab. Ultimately, clients create 3-dimensional animated characters of themselves or others (see Figure 1) that represent personal characteristics and interaction styles. These kinds of images can be used to assess how clients feel about themselves, serving as a type of “computerized” Draw-A-Person (DAP), but that is much more sophisticated.

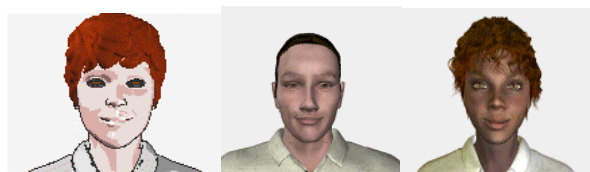


Figure 1. Examples of User-created Agents

Although how a pencil drawing is completed may tell us a lot about the client (i.e., line quality, ability to draw realistically), how the agents are formed and organized, much like a photo-collage, can provide key information on the developmental level of the client (Lowenfeld & Brittain, 1987). Further, constructing interacting agent(s) could assess other issues (e.g., Kinetic Family Drawing or a Kinetic House-Tree-Person); since the clients create and modify the interactions of the agents, the therapist no longer relies on the client's ability to describe what is happening in the images, but can witness what is actually occurring "on the screen."

Representing the art therapist

Another benefit is if the client develops an agent to represent their ideal (or conceived) art therapist, much like how agents that students construct reveal their preferred types of instructors (Gilbert, 2002). This may provide valuable information for the art therapists on how best to meet their clients' needs and expectations. This can also take distant therapy to another level, building on recent attempts to use computers for distant "tele-therapy" in which "groups" meet and show their artwork to one another via computer screens. What if, as well as being able to show their work, they receive their directions from the image that they most would like to interact with? The style of therapy would remain that of the art therapist, but the image could act as the conduit for the information (think the Wizard behind the curtain); the client may be more responsive to the process.

Other applications

Beyond the uses of agent construction for representing oneself and the therapists, there are other benefits for having clients construct animated agents; for example, studies could be conducted to investigate how creating affective agents could possibly help depressed or suicidal clients. Overall, animated agents that allow for realistic *affect* (Kort, Reilly, & Picard, 2001), and *interaction* (Koda & Maes, 1996) are key advantages in facilitating the therapeutic process. This session will present the benefits from constructing animated agents and will present current and future research projects.

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