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Digital Media Use in Art Therapy

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DIGITAL MEDIA USE IN ART THERAPY

A DISSERTATION

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Richard Hell and the Voidoids performed "Blank Generation" from 1976-1984 and as a youthful anthem regarding the struggle to understand who you are and what you will become, besides what you have been given. I was a youth in this eventful spanning of decades and considered that 'blankness' of my generation not as empty or meaningless space, but one full of potential and possibility to be continually defined. My generation has also been termed the Atari generation as we were exposed to early video games in our homes and neighborhood arcades. We were the first generation to grow up with evolving computer technologies and have integrated their proliferation into the tasks and pleasures of our everyday lives, creativity, media entertainment, and communications as quickly as computers shrank from room-sized hard drives to ones that fit on the end of a fingertip. The research and writing contained within this dissertation tracks a related path of technological art forms and communications in therapy from the 1970s to 2014. I believe some of the nuances and clarity I hold as an artist researcher for this subject comes through my lived experience with developing new media and responses of contradictory resistance to bridging or fusion of material life with digital realms.

The people I wish to honor and acknowledge come from many concentric circles of my life. My primary dedications go to my ever-loving partner Ben Wright, our beautiful, creative daughter Djuna Lyle, and my mother Glenna Stowers Carlton who all taught me the values of leading with both my heart and my mind, hard work, curiosity, and dedication to that which I and others think is important. Other family members I wish to honor are my ancestors no longer here and yet to come, my father Walter Melvin Carlton, my sister Lori Stowers Wright, her husband Tom, my fabulous loving nieces Erin, Bella, and Madi, cousin Jean Farley Kluttz, and several significant aunties and uncles who inspire me to love, live fully, pursue knowledge and craft, and be true. Thank you to Ben's family Josh, Jack Wright, and Barbara Upton for being the smarty-pants funny and creative in-laws I love dearly. I extend love and thanks to my family of choice and friends far flung who always push my growth and welcome me with sweet conversation, shelter, and good food. They are Linda, Ruby, and Seth Soffer, Lisa and Paul Maiello, Geraldine Nogaki, John Lutz, Stephanie Rowley, Denise Cavaliere, the Powleys, Max Ortiz-Concha, Beth Enson, Kathy Morsell, Vicky Careccia, Juniper Purinton, the Costanza-Spironi family, Jill Griffin, Shawn O'Neal, Megan Keller, Alita Randolph, Larry Yes and Sare Rane, Scott Moore, and many more too numerous to mention. Other circles I honor and thank are my clinical and teacher colleagues, my students, and clients, all current and past. You know who you are and you have been invaluable to my inspired scholarship, my interests and professional growth, dedication to art therapy, and the blessed work we share and grow from so intimately.

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ABSTRACT

This art-based, phenomenological inquiry investigated how four art therapists and five art therapy clients have used digital media. Polarities in how computer-mediated materials are experienced and the larger impacts of technology on clients, therapists, and the therapeutic encounter were exposed. New media have brought constant contradiction in characterization just as all previous technologies have reflected responses from unease to adaptation. Some key questions in the research are how digitized materials are being used in art therapy and by whom and when? Related questions are what effects can these materials have for clients and what learning, interests, and media adaptations have art therapists integrated to use the materials skillfully?

The reflexive use of digital video recording and editing activities formed deeper levels of sustained inquiry for the researcher to create a two part written and video research investigation that distilled the following major themes and subthemes: 1) omnipresence of technology with the subtheme digital divides; 2) technology as a bridge between therapy and the everyday lives of clients; 3) openness to new generations and evolutions; 4) photography and video as access to memory and storytelling with related subthemes of veracity of the image and capture and documentation; 5) the 'hybridness' of the digital art therapist; 6) fluid parameters in digital media with a subtheme of fluid parameters in ethical boundaries; and 7) the inherent and sensory qualities of digital media to include: immediacy and playback, emotional distancing and pause, movability, mobility, re-presentation, ordering and winnowing, versatility, roadblocks, curious and playful, and predictable to unpredictable.

Conclusions from this research include digital culture considerations for how growing numbers of clients and therapists are using digital media readily; how digital media can be

characterized and dismissed through intuitive understanding of benefits and drawbacks and without sustained knowledge, experiential or creative application, or evaluation; and why interested, hybrid therapists are growing the applications of digital media use technically, creatively, and ethically. This researcher noted profound implications for future digital media use in therapy and how the conscious use, balancing with, and understanding of technology are not casual choices or behaviors but dynamic cultural shifts within growing media sphere contexts.

CHAPTER 1

Introduction

Digital media in art therapy is the use and adaptation of comprehensive computer technologies for art forms, therapeutic processes, and connectivity. Beyond the physical limits of gear, tools, and software, new media are actively creating, remediating, and assembling contemporary culture experiences and consciousness. Computer technology has introduced novel media and tools that cross traditional bounds of material use in art therapy practice, influence evolutionary adaptations, and raise dialogue and research in their wake. Art therapists have documented reflective practices with digital tools and media and have published research with significant outcomes. A growing literature base has documented how new media are used with various populations and settings and how their qualities can be perceived as a benefit or a hindrance in therapy. Recent researchers agree that art therapists are using technology in email communications, professional presentations, and blogs and websites to network, archive, and participate in online activities and smaller expanding numbers are using the digital arts creatively for clinical applications.

Digital media use in art therapy is often summarized in the term 'digital art therapy' and can be found on various professional websites such as the LinkedIn forum and under the subgroup Art Therapy Alliance. Website owner, Gretchen Miller, has set up a discussion forum for practitioners to share and discuss client-therapist-computer applications that utilize technological techniques, hardware, and software as the therapeutic arts media in clinical sessions (https://www.linkedin.com/groups?home=&gid=2172516). Art therapy authors and researchers of digital media use have used the interchangeable terms of computer arts or technology, digital technology, digital media, or electronic arts media use to describe

synonymous key materials and processes. The term digital art therapy or occasional use of its acronym DAT in this study is not intended to segregate digital arts media from other art forms such as drawing and painting or from materials such as clay or fabric that can all be used as viable choices in therapy. The material descriptions and evolving practices of digital technologies use in therapeutic sessions are intended by this author and others (Choe, 2014; Malchiodi, 2000, 2013; McNiff, 1999; Moon, 2010; Orr, 2005, 2010) to continue broadening viable tools and choices for expressive arts in therapy clients and therapists while maintaining and adding to the integrity of our professions. Ongoing research is needed in therapy to observe and measure the materials, techniques, and outcomes of digital media use with clients.

The Author's Interest in the Subject

My beginning participation with technology entailed personal and collaborative experimentation to therapeutically engage digital arts media with clients who seemed to benefit from its use. I have found digital software and tools to be dynamic media with clients and students that can be used alone or in combination with other materials. There are abstract and powerful ideas embedded in technology that become amplified in our senses and morph our consciousness. I am critical of digital media for the ways it can impinge on self-expression and dominate, or move from background to foreground. The artistic encounter must drive the media and not succumb to automated programming because therapeutic collaboration and creative work can be achieved. I observe how expressive arts in therapy education, clinical applications, and research evolved alongside digital culture but have struggled to understand or include it. This author and others are experimenting and discerning how the intrinsic qualities of digital materials can advantage and disadvantage therapy through expanded possibilities of hybrid media use.

The magnitude of emergent technology and its influence present multifaceted challenges for digital media in clinical education and practice.

Is Technology Habituation or Adaptive Experience?

Innovative combinations of digitalized still and moving images, sound, and text-based media are constantly created and integrated into comprehensive computer technologies. An accumulative population of young and technologically open individuals assimilates multiple skills and literacy related to digital media use exponentially. Digital media is elemental to modern recording and electronic music, digital photography and video, cell and smart phones, Google searches, high definition movies, and modern television experience. These creative opportunities, entertainment events, and commodities are in the everyday life, language, and consciousness of growing and global digital savvy networks and media spheres. Past, current, and developing digital media creativity and communication forms for new generations are often intangible forces "overhauling the foundations of culture" (Binkley, 1997, p. 107) in a constant slipstream. Artists have made use of diverse tools and new media for decades now because creativity is often grounded in exploration and innovative techniques and products that break out of traditional forms to forge and inspire new ones.

Due to widening computer use there has been enquiry into how individuals and society have habituated to technology since the 1980s. The *New York Times* reported that *screenagers* and *digital kids* are the "screen generation" that are "wired for distraction" and fighting to focus in a digital world (Richel, 2010, A1). Art therapist Klorer (2009) proposed further concerns regarding "overstimulation and technological overload" so that youth and children seem "connected" and communicating virtually through computer devices but show less social relating and "nuanced interpersonal skills" (p. 81) when they are face-to-face. Creativity researcher

Runco (2007) discussed decreased potential in creative thinking development related to information overload and specific to watching television. Habituated passivity in media absorption can dampen cognitive "originality" and "precludes active involvement on the part of the viewer" (p. 196) to decipher the fast-paced, sensory imagery and sound coming from the 60 frames per second experience. Computer 'screen time' can exceed previous television sensory pacing with as much as 255 frames per second complex imagery and sound events capable of being displayed on multiple devices to engage video games or watch the news, serial shows, movies, and YouTube videos all streaming on the Internet continuously for accelerated states of media absorption.

Art therapists and others might think that a choice can be made whether to engage with technology or not. However, the choice to "compute or not to compute" (Austin, 2010, p. 200) may be impossible due to technology's exponentially growing presence for adults as well as young and future generations. There are claims that daily computer users are either 'digital immigrants' or 'natives' living and fusing with technological devices for multiple uses in their day-to-day lives. A closer look at specific criticisms in how computer media relies upon secondary experience and representation versus primary knowledge reveals an extreme wariness of digital technology's tendencies to over emphasize what is synthesized virtually versus material reality. For example, media educator Lòpez (2012) wrote,

> Much of what we know [from the Internet] is secondary experience... It is not necessarily false knowledge, but rather an illusion of immediacy. We are conditioned to believe that media embody the essence of things, but mostly media just re-present the essence of things through various mechanisms of framing and filtering. (p. 106)

Computer mediated experiences can curiously transport the content of our minds and emotions,

multiple, approximated, or invented identities, and physical gestures over augmented reality gaming or Face time and Skype technologies while leaving our bodies behind. Such seemingly incongruous effects to this new media and questions regarding how we become embodied, or distill meaningfulness in communication and knowledge within cyberspace, will be the work and discoveries of the next few decades. Since the 1960s authors have written and conceptualized future visions of technology. Other early explorers were computer designers, musicians, scientists, and installation artists actively synthesizing diverse digital skills. They and others have investigated the fusion of the human with the machinic for decades and continue to describe, question, explore, and innovate new technologies of their generations.

Whether new media is represented by the printing press or the computer, creative and conscious engagement with these once emergent materials have brought new ways of seeing and being into the world. McLuhan (1966) proposed we necessarily adapt to new ways of thinking and being in the world when we reorder our senses into new media. McLuhan's revolutionary writings published in *The Guttenberg Galaxy* almost fifty years ago have retained their visionary relevance and even increased with further interdisciplinary reflections our multi-media embeddedness. His central argument noted how our psyches are influenced and adapted by seen and unseen media contexts. This bears a theoretical truth many might agree with but not fully comprehend. Moreover, technological formats, tools, and disseminated products are not simply replacing analogue media because they are utterly transforming the whole of experience. "Digital representations not only possess a power to move us borrowed from their analogue predecessors, they also contain a *vitality* which enables them to engage us in unique and personal interactive experiences" (Binkley, 1997, p. 108). Likewise, technology scholar Postman (1998) postulated, "a new medium does not add something; it changes everything" (para. 17).

Contemporary culture, visual languages, written and verbal communications, and creativity seem more and more embedded in the current synergy of human-computer interface. If technology can be viewed as adaptive experiences within changing consciousness, then how to study its inner workings and effects bring complex questions to research goals and design.

Applications for Digital Media Use in Art Therapy

To illustrate how digital media can engage clients and therapists in distinct sensory and interactive experiences, I will present a case study that occurred in my clinical practice before I began my doctoral research. After applying digital video in sessions with a few children and youth, I began to distill both questions and observations related to what qualities this media brought to therapy. After this case example there will be a brief review of important technological terms such as: *digital media*, *software*, *digital technology*, and *digital culture*. Both the case study and the term descriptions are meant to introduce how diverse digital media applications and contemporary technological consciousness inform this and previous research.

A clinical example. I introduced digital video as an interactive tool to record and play back a story of superhero sand play characters, as directed by a 8-year-old child, throughout a series of art therapy sessions. Client requests to play back portions of or an entire video became a therapeutic part of ongoing sessions, allowing the client to review, objectify, or, "observe self at a distance with projections of self displayed through the character play" (McNiff & Cook, 1975, p. 56). Technological tools and techniques were explored through both collaborative and autonomous efforts that built toward his manipulations of the technology, story, and therapy relationship. The technology gear and structure, such as how to set up and work the camera or methods of editing in a software program, not only challenged but also aided this client by providing him with situations to problem solve and gain a "sense of control and ego mastery"

(Tosone, Gelman, & McVeigh, 2005, p. 426) in the sessions and through the cumulative creative efforts of building his video. Media literacy was learned experientially through self-directed and collaborative camera operation, video editing activities, and soundtrack creation (Ehinger, 2009; Mosinski, 2010). Moreover, the client dually controlled the video as observer and creative processor through directing and editing (Ehinger, 2009; Mosinski, 2010; Tosone et al., 2005) to create a dynamic story of superhero powers, conflict and battle, teamwork, and death to rebirth.

My young client and I found video to be powerful art media for capturing self-narrative imagery because he chose what he wanted to photograph and directed how we would edit and sequence his imagery and sound recordings to build a story into a time line. Moreover, the making and editing of the movements of the imagery was a multilayered process that formed his creative visions and was "driven" (Austin, 2010; Edmunds, 2012; Ehinger, 2009) and co-created by me when technical needs arose. He showed many instances of self-direction by setting up the equipment and reviewing his video numerous times and active collaboration by asking me to participate, record, and witness his actions and character play unfolding in the sand play. The creation of the stop-animation video project seemed to grant him, and his sometimes-destructive play, a newfound sense of order, safety and containment, and a distancing from chaotic internal and external forces.

Definition of terms. *Digital Media* refers to any type of storage, transmission, or product in digital format including hard drives, networking or communication modes, and computer-generated text, graphics, animations, photographs, sound files, and video used in many types of art forms such as theatre, music, graphic design and writing, visual arts, and dance. Digital media employs applications or 'apps' and hardware tools that can be used to create, store, and share content including digital audio or digital imagery and text in hard copy or uploaded

onto Internet sites. For example, there are numerous free digital drawing websites where a mouse, trackball, or touchpad can be used to create imagery on a computer screen or iPad. Motion is transmitted from the finger, hand to mouse, or stylus on a pad device, and translated in real time to the computer screen or monitor. Many adjustments, deletions, and experimentation can occur and multiple, seriated versions of images can be created and then reviewed or printed off the screen to become tangible artwork on paper. Digital projects can be saved or uploaded, shared and stored on the Internet or on a portable flash drive as well. Images saved digitally and can be reviewed later as documentation of treatment, for treatment closure, or periodic client and clinician reviews. Printed digital artwork can be taken home immediately or upon project completion and can also be collated together.

Digital media projects are embodied through *software* that include photo manipulation programs, audio recording and mixing studio platforms, comic book templates, applications to create visual collage with graphic text content, avatar augmented characters, and animation programs to name a few. Software often provides stock material files and the user has the additional ability to appropriate or import files from the Internet. Software also encourages client-generated text, sounds, and/or imagery to be created and manipulated or combined with saved projects from the computer hard drive. To enhance layering, client-generated media can be mixed with stock or custom effects that provide stamps, templates, backgrounds, filters, character, or sound to create combined media artworks. Software programs are frequently used as combined tools for single projects. A short list of drawing, music, 3-D virtual sculpting, and photography software that can be used includes Comic Life, People Putty, Photo Booth, Adobe Photoshop, Final Cut Pro, Cube Base, Garage band, Pen & Ink, Artist's Touch, Aftereffects, Brushes, Sketch Up, and Paper Camera, depending on which platform (Mac and/or PC operating

systems) is used. Rather than adapting the creative digital programs being manufactured by technology companies to art therapy needs, art therapists have discussed initiating design with computer programmers to develop software specifically tailored as therapeutic art processes and ethical practices for art therapy (Choe, 2014; Gussak & Nyce, 1999; Mosinski, Doby-Copeland, Brandoff, Choe, & Gibbons, 2012).

Digital technology entails methods of storing, processing, and transmitting information through the use of electronic optical pulses that represent the binary units 0 and 1, or off and on. Computers, by their nature of binary stream design, reduce the need for large volume and variable analog feeds and compact digitalized information with fast speeds of representational material transmission.

As digitalized technologies have become more pervasive in our daily lives, so has our membership in *digital culture*. Large-scale utilization of computer tools and new technologies has shifted our communication, cognition, and behavior. Whether or not one is engaged with digital culture, these developing technologies change and adapt visual languages, systemic interfaces, and an operational consciousness through the ubiquity of digital instruments and everyday computerized systems that are an integrative presence and force of fusion between material-physical and representational-virtual worlds. Expansive technological possibilities are defining present realities while simultaneously envisioning the future with technology and in combination with other artistic means. Digital culture participants are using, re-purposing, and forging digital media products that engage the senses and complex pathways for problem solving and creativity. Art therapists, to name a few, are drawing cumulative attention to our capacities to understand and show skill, quality, and craft with digital media because all these factors influence and impact therapy, therapists, and clients.

CHAPTER 2

Literature Review

Art therapy practitioners initiated discussions, as early as the 1970's, on the potential benefits of photography, videography, and computer media use for clinicians and clients (Canter, 1989; Fryrear & Corbit, 1992; Gussak & Nyce, 1999; Malchiodi, 2000; Mayadas & Duehn, 1981; McLeod, 1999; McNiff & Cook, 1975; McNiff, 1981; McNiff, 1999, 2000; Parker-Bell, 1999; Weinberg, 1985; Weiser, 1999; Wolf, 1976, 1990). Subsequent research has expanded the dialogue with surveys, focus groups, descriptive studies, single and group participant observation, and phenomenological studies that describe specific technology use in clinical, artistic and professional networking, and graduate training applications (Alders et al., 2011; Asawa, 2009; Austin, 2009, 2010; Chilton, Gerity, LaVorgna-Smith, & MacMichael, 2009; Choe, 2014; Edmunds, 2012; Ehinger, 2009; Kuleba, 2008; Mosinski, 2010; Orr, 2005, 2006a, 2006b, 2012; Peterson, 2010; Peterson et al., 2005; Potash, 2009; Thong, 2007; Wolf, 2007). While new media inspired some art therapists to apply these tools in practice there have been continuous concerns regarding technological synthetic materials and their lack of adherence to traditional boundaries, art forms, and sensory qualities (Gerity, 2001; Kuleba, 2008; Williams et al., 1997; Klorer, 2009; Potash, 2009). Some of the same art therapists who have discussed detriments to digital media use have also documented benefits of technology exploration (Chilton et al., 2009; Gerity, 2001, 2010; Potash, 2009).

Digital media research has expanded as its use has extended. Research findings from related fields have highlighted how digital media can empower creativity, communications, group dynamics, and learning aspects through its qualities and adaptive communication tools (Cohen, 2012; Hartwich & Brandecker, 1997; Mavrou, 2011; Risner & Anderson, 2008; Taylor

& Carpenter, 2007; Tosone et al., 2005). Technology use in art therapy has contextualized its growing use within related digitalized gestalts of psychology, communication studies, education, and the fine arts. Art therapy material practices emphasize awareness for the impact of properties and the skills necessary to facilitate media with related therapy goals. Furthermore, art therapists' specialized knowledge about image creation, process, and product, should lend expertise to interdisciplinary investigations regarding digital media application and theory (B. Austin, personal communication, November 7, 2011).

Contested and Emergent Qualities of Technology

Quarterly publications of the *American Art Therapy Association Journal* were dedicated in their entirety to technology use in art therapy at the decade junctures of 1999 and 2009. It is interesting to note how these special journal issues regarding technology in art therapy came at the ends of decades and presumably as attempts to explore future expansions in art therapy. Art therapy authors for these special issues gave researched descriptions and observations, case studies, and viewpoint essays that reflected differentiated views of technology and potential applications. Journal editor Kapitan (2009) wrote that art therapists might find themselves choosing one side or the other of contested digital divides but that to blindly reject or adapt without inquiry into technology would be short sighted.

Responses to technology might seem polarized due to inherent contradictions within media qualities such as speed and perceived reductive qualities that affect user attitudes of ease and value in the product. For example, the benefit of immediacy can be found in iPhone tools that provide users instant satellite-guided directions to a restaurant, selected address, or road. In contrast, the same positive characteristic of immediacy might impact user values negatively regarding the quality or originality of imagery on the Internet. Photographic value might not be

met due to perceptions that digitalized media are reductions in quality from film media and lack originality or tactile qualities as appropriated web images from unknown sources displayed on computer screens. Knill (2008) described digitalized imagery where the consequential piece of artwork, or moving image and sound event, copies and discards the "original source" and becomes the often-judged "virtual reality" (p. 39). The virtual artwork or multidimensional space is characteristically different than previous analogue media artifacts. Computers, by design, meant to "symbolize and … abstract" rather than "imprint or … preserve" (Binkley, 1997, p. 109). What results can be endless comparisons between physical, hand folded maps versus virtual ones. The nature of the latter representational and 'digitized' map might be characterized as degradation compared to previous media qualities and aesthetics. Essentially, there is a perception in loss of quality due to familiar characteristics for the object 'map' and how that media impacts our behaviors and thought processes. There are enhanced to detrimental cognitive shifts in how representational maps can be voice activated, visually descriptive and adaptable to orientations, and direct every step of the way to our destinations. The transition from paintbrushes and cellos to digital tools alters our sense of what creativity is by changing our relationship with production and dissemination" (Blythe, Light, & O'Neill, 2007, p. 6). What is often difficult to understand are the ways digital media are not degradations but distinct forms of expression and tools reflected in sensory-altering creativity and products.

Mass information disseminated through computers and new media has been categorized with both lauded benefits and counterpoint skepticism. Postman (1998) described the human-technology interface as a "Faustian bargain" and "for every advantage a new technology offers, there is always a corresponding disadvantage. The disadvantage may exceed in importance the advantage, or the advantage may well be worth the cost" (para. 4). Technology historian

Staudenmaier (1985) noted how America's Industrial Revolution transmitted lore that the innovations of automating machinery would always be time saving, helpful, and profitable to humans. Specific time saving benefits ascribed for the computer are efficiency and immediacy for information access, communication, creativity, leisure entertainment, and work tools including Power points, email, virtual art apps and games, and online networks of commerce and exchange (Carr, 2008). In contrast, counterpoint apprehensions reflect feared dependencies on machines and perceived loss of human integrity (Kapitan, 2007). Arnold Schwarzenegger's *Terminator* character or the fictional Borg race from *Star Trek* embodied the hive mind collective modeled on the mechanized thinking of computers. In literature, film, and television, communal conformity served to threaten states of humanness including personal consciousness, sensate experiences, individualism, emotional connection to others, and creativity. Interrelated concerns are the permanent identity alterations through the automating and assimilating qualities of technology (Potash, 2009), "synthetic stimulation that blurs the boundaries of real and received experience to a dangerous degree" (Kapitan, 2009, p. 51), as well as diminishing comprehension and control within the powerful watershed presence of digital culture (Asawa, 2009; Carr, 2008).

Questionable phenomena related to digital media use can include unintended effects for therapists and clients. Klorer (2009) outlined one unfavorable effect on the relationships and development of young people as a loss in their ability to connect interpersonally. She theorized that ill effects of the media are imbedded in everyday computer multitasking, such as streaming television shows or music videos, face booking, and monitoring text messages on cell phones concurrently. She theorized that an over-attachment to technological gadgets could reduce all motivation for young people to interact in person or leave their devices at home. She found in

her art therapy facilitation with young clients the need to "reduce stimulation to connect" (p. 80), so she specifically refrained from using electronic arts media in sessions. Potash (2009) similarly found that the speed and immediacy of digital media could undermine originality and creativity and reflect "fast food art" products made hastily, lacking active imagination, and requiring little "emotional investment from the client" (p. 53).

Ethical video use in art therapy has also brought dialogue at recent American Art Therapy Association (AATA) conference panels (Alders & Allen, 2010; Mosinski et al., 2012). Key issues concerned the ownership, informed consent, and privacy of video content made in art therapy. Much of the discussion focused around the responsibilities and roles of art therapists to protect clients, their artwork, and especially the identity and psychological confidentiality of minors and youth (Alders, Beck, Allen, & Mosinski, 2011; Mosinski et al., 2012). Clients can overlook the emotional or identity revealing nature of their video product and can be fixated on showing it to others because it is "really cool" (Alders et al., 2011, p. 167). Clients might even upload these videos on Internet sites that distribute video to wide audiences and become permanent parts of the information stream detritus so managing or monitoring are impossible to undo.

Art therapists are experiencing similar impulses with uploading videos and Internet content that bring their own ethical challenges to light. Significant examples of where the complexities of creative digital media use can combine with the Internet are social media sites (Belkofer & McNutt, 2011). Social media refers to the multiplicity of computer-based communities that represent an expanding number of communication modes and uses to include websites, blogs, forums as well as networking, podcasts, and online publishing (Miller, 2013). Fusing professional, personal, and artistic identities, boundary impingements, and mishaps are

occurring within the expansive creativity, relational, self-promotion and networking, and information distributions on the Internet (Alders et al, 2011). Attempts to dialogue and remedy these situations will require sustained reflective practices, applied ethical guidelines, and collaborative work between art therapists and other professional practitioners (L'Esperance, 2014). Online discussions and training workshops provide ongoing educational opportunities with digital media and these community discussions can alert art therapists to innovative applications, ethical standards and updates, as well as provide invaluable support (L'Esperance, 2014). Art therapists have established ongoing chat rooms and blogs and have reflected on technology use through their own experiences with it. "Internet content creators" (Chilton et al., 2009, p. 66) can enrich their lives as artists and writers; promote social justice causes and community discussions; provide information and promote professional identities and works; teach at low residency programs and provide online seminars and supervision; and build vibrant relationships and creative art exchanges through online virtual studios and mail art projects (Gerity, 2010; Malchiodi, 2000, 2009; Miller, 2013; Orr, 2010a).

The choices of art therapy material have remained individualized or appropriate to the settings, groups, treatment rooms, and studios in which therapists work, but what about the specific needs and interests of clients? More than choosing media that the therapists find to be valuable and therapeutic, art therapists carry an important responsibility to work with clients and the media skills and preferences that they bring to therapy (Orr, 2010b). Art therapists might choose to engage with the social networks, musical preferences, and other audiovisual representations of self brought by clients to therapeutic sessions through cell phones, laptop computers, or iPads, or they might ask clients to leave these devices and content outside of the

sessions. A key question might be why digital media are chosen and acknowledged as vital creative and communication forms for some clients and therapists and not others?

There have been considerable accolades for how digital media defy traditional arts media parameters and boundaries while creating new cultural forms, languages, and vitality of creativity and communication for a variety of people. For example, art therapist Alders described how youth with developmental disabilities used iPhones, iPods, and other computer based devices and social media to enhance their communication and connectivity to others (Cohen, 2012). Digital media may grant structure and provide emotional safety or structure to communication that is beneficial to some persons, developmental tasks and needs, and circumstances (Austin, 2010; Tilberg, 2014). Additionally, wired into the ordering properties of digital media, are qualities of fluid boundaries and continuous informational streams. Expressive therapies educator Knill (2008) mused, "In the Internet the whole globe is at hand and through a mouse without ever having to encounter a concrete object" (p. 41). The World Wide Web, with its innumerous websites and Google searches, can provide mixed media experiences including sound, text, video, and animation that propel the user through virtual space by clicks through a mouse or track pad. Creation of digitalized media can similarly defy physical constraints through "intermodal editing and shaping" processes limited only by copyrights and the "polyaesthetic skills necessary to make the edits work" when "adding a soundtrack, a subtitled poem, doing color manipulations, theatrical effects, playing with movement and time and framing" (p. 41). The ability to layer digital media such as audio, still images, video, and graphics are the polyaesthetic skills referred to above.

More examples of combining multifaceted layers of digital media are the therapeutic use of I Pad 'apps', video, and animation. Art therapists have proposed that particular iPad 'app'

benefits can include simplicity and ease in use as well as a robust variety of options, features, and structural frames (Choe, 2014; Mihailidis et al., 2010; Robards, 2012). Other benefits can manifest in how video and animation media often require problem solving and sustained focus for the client, facilitator, and/or group as co-creators to build and edit the product (Austin, 2010; Edmunds, 2012; Ehinger, 2009; McNiff, 1999; Mosinski, 2010). This continuum of media benefits and therapy goal choices depend heavily on the users' knowledge and application of digital media and what they wish to achieve. Edmunds surmised that the art therapist must not be "lazy and let the media inform the work" but rather drive "the media to expand the sense and heighten the art" (Edmunds, 2012, p. 14). Potash (2009) described aspects of positive client engagement with digital media through two case studies where "cyberspace entered into art therapy sessions and also how the process of art making empowered adolescent clients to transform pop culture images into personally meaningful ones" (p. 52). Orr (2010b) wrote, "digital media encourages people to experience themselves as a part of a participatory environment on a global scale" (p. 97). The possible impact of these products can be large-scale and run counter to or apart from corporation-controlled mass media or television as the traditional disseminators of information.

Digital media use in art therapy seems to require a hybridization of skills, which include technology ability, clinical awareness and competencies, and fine arts skills (R. Wolf, personal communication, November 11, 2011). At the other extreme, digital media can afford easy access, egalitarian functions, and even inspire playfulness in its non-permanent capacities. Computer technology can be viewed as a standardizing force that goes against the textures, multiplicities, and individualism of art therapy but it can also be redesigned and programmed to work just like art therapists want it to (Choe, 2014; Gussak & Nyce, 1999; Mihailidis, et al.,

2010; Mosinski et al., 2012). Several art therapists fusing technology and creativity find the media therapeutic but also significant to client learning needs outside of therapy (Austin, 2009; Ehinger, 2009; Moon, 2010; Orr, 2010b). For example, some research has described particular social skills and vital media literacy clients learn through creating with technology (Alders et al., 2011; O'Rourke, 2001; Mosinski, 2007, 2010) and there might be necessary evolutionary and developmental skills embedded in the digital media material for youth (Austin, 2009; Ehinger, 2009). More than that, these clients, or digital culture participants, are using technology already and "shooting with their cameras, they are texting each other, and they are creating languages that did not already exist" (B. Mosinski, personal communication, November 7, 2011). Computerized technology has distinctive sensory qualities through the tools and software of digital media (Edmunds, 2012; Kuleba, 2008; Malchiodi, 2000; McNiff, 1999; Orr, 2005; Peterson, 2010) and offers unconventional, contemporary, and relevant forms of therapeutic process (Austin, 2010; Edmunds, 2012; Ehinger, 2009; Moon, 2010; Orr, 2010b).

Digital divides. Fourteen years ago, Malchiodi (2000) predicted significant trends for computer arts media use in therapy which included: the evolution of critical ethical considerations; the continued rise of digital culture affiliation for clients and therapists; increased telehealth services and communication safety needs; and expansive art therapist use of social media including online networking and artistic community sites. However, there has been a noted slow digital media adoption process for art therapists in comparison to the general populations' use (Malchiodi, 2000, 2009; Orr, 2006b) but also evidence that art therapists own and use digital media for personal, professional, and therapy purposes (Alders et al., 2011; Edmunds, 2012; Kuleba, 2008; Orr, 2006b, 2012; Peterson, 2010; Peterson et al., 2005).

Orr (2012) published a longitudinal, comparison study that documented digital media increased use for art therapists from 2004 to 2011. Specifically, the rate of technology use for professional management tools and tasks showed a 36% increase during this seven-year period. From the same study, the creative use of digital media with clients occurred at a 68% rate of increase. For some critical context regarding the later sudden increase in creative digital media use, Orr noted that 19% of those art therapists she surveyed in 2004 facilitated digital art making with clients and tallied at a much lower numbers than the larger percentages of technology users for various professional management practices. Correlations for technology use have reportedly balanced in the course of the last several years with an estimated 34% increase by the general public as compared to the 36% increase for the majority of art therapists surveyed (Orr, 2012). Technology use between art therapists and the general public might have aligned due to diminishing costs and increased accessibility of digital consumer products that became more affordable as they were made more plentiful (Orr, 2006b; Peterson, 2010; Peterson et al., 2005). Other explanations to why slow adaptation occurred cite historical art therapist perceptions and reluctance to use the 'synthetic' new media in contrast to 'traditional' art forms valued as more therapeutic (Asawa, 2009; Gerity, 2001; Kapitan, 2009; Kuleba, 2008; Orr, 2006b, 2012; Peterson, 2010; Peterson et al., 2005; Potash, 2009) and an absence of professional training and potential learning by integrating new media or digital culture into art therapy graduate programs (Asawa, 2009; Edmunds, 2012; Kapitan, 2009; Kuleba, 2008; Moon, 2012; Orr, 2006a, 2012; Peterson, 2010).

Digital divides within art therapy run along continuums of 1) art and science valuations; 2) emotional responses to technology; and 3) technology inequalities related to ability and economic circumstances. Kapitan (2007) described a historical and significant digital divide in

how fine art history distanced itself through elevations of skilled artists' "purity" and "hand made" qualities for their materials over the techies' "demeaningly commercial … forces of hybridization" (p. 50) with their machines and science. Ironically, this representational rift between art and science is not a divide in technology industries. Commerce and business companies with their legions of 'techies' have shown a historical openness to developing technologies, which has generated a creative responsiveness to infinite combinations and innovations in software and products. Asawa (2009) identified key digital divides in both "emotional obstacles that art therapists face when engaging technology" (p. 58) and a "growing inequity of the information haves and have-nots" (p. 59) due to high costs of purchasing and maintaining digital media and computers. Emotional responses named in her research included fear and anxiety when faced with new formats and skills to learn and when the technology 'fails' to work. Socio-economic divides partly exist from the initial costs of products and membership and the exponential time, efforts, and money investments continually required to update, understand, and run software and hardware with skilled use. The relative affordability of computers and digital media creates access for some, but not all, and persons left out due to the costs of technology are often therapists as readily as they are clients.

A fourth and critical concern seems to be that a small number of art therapy graduate programs include digital media learning and the larger number of programs does not (Asawa, 2009; Edmunds, 2012; Kuleba, 2008; Malchiodi, 2000, 2009; Orr, 2006b, 2012; Peterson, 2010). How do art therapists learn to use digital media? Some art therapists have identified prior careers that provided technology knowledge and skill capacities learned before their art therapy degrees (B. Austin, personal communication, November 7, 2011; Thong, 2007). Edmunds' (2012) qualitative study described how some art therapists identified as "early adopters" (p. 34)

who approach, experiment, and go through learning curves with digital media to then teach clients and others with no formal training. L'Esperance (2014) interviewed art therapists working directly with digital media in their studio practices and determined that there is a high importance for both therapists and clients to engage in ongoing, experiential education as technological platforms and software are constantly changing and evolving. There are technical aspects, storage and data protections as well as privacy, and new software and creative innovations that require experimentation and consultation with others to utilize digital media in therapy settings and for therapeutic purposes (L'Esperance, 2014) or supervisory purposes (Orr, 2010a). In contrast, other art therapists are reported as feeling under skilled and under qualified using the digital arts (Edmunds, 2012; Ehinger, 2009; Kuleba, 2008; Orr, 2006b; Peterson, 2010) and there is no to low exposure of digital media integrated studies regarding technology as an art form, digital culture considerations, theoretical discussions, or ethical applications in graduate programs and learning (Kapitan, 2009; Kuleba, 2008; Orr, 2006b, 2012; Peterson, 2010). This lack of training issue can be complicated because other media forms such as painting, drawing, and clay are used in sessions by art therapists who might also have low skill, craft, or exposure to the skills and materials necessary. Do art therapists perceive a higher need to understand digital media over other art forms?

Evolving Materials Use and Reflective Practices in Art Therapy

Knowing the capacity of creative media has shaped art therapy material practices of the past and present (Hinz, 2009; Kagin & Lusebrink, 1978; Lusebrink, 1990; Robbins, 2000; Rubin, 1984; Wadeson, 2000). Present experimentation with materials will form contemporary, integrated practices for the evolving media of the future (Moon, 2010; Orr, 2005, 2010b). Orr (2010b) related three significant principles of material consideration: "media as having its own

inherent human-like characteristics; media as having values, characteristics, and qualities imbued by the client and therapist; and media as having a relational dimension, evident by how if affects both client and therapist" (p. 90). Moon (2010) found that materials used in art therapy most often reflect therapist preferences and familiarity with media choices.

Moon (2010) encouraged art therapists to always aim to widen knowledge and the range of materials offered to clients that include more "material possibilities" (p. 8) and diversity of media including technology. Additional parameters of materials use include space limitations, affordability, accessibility as well as sensory qualities, time requirements, practitioner familiarity, and structural properties (Kramer, 2000; Malchiodi, 2000; Moon, 2010; Rubin, 1984; Wadeson, 2000). Contemporary reflective practices would incorporate client-driven media curiosity and preferences as well (Orr, 2010b).

Varieties of art materials and tools have always been used in art therapy sessions and there are perceived effects on clients and session structure. Developmental schemas such as the expressive therapies continuum (ETC), originally developed by Kagin and Lusebrink (1978) reformulated by Lusebrink later (1990) and elaborated and extended by Hinz (2009), theorize art media as crucial therapeutic elements in sessions. Media choices, properties of media and the perceptual, emotional, and physical experiences of clients when offered certain media or materials with which to engage in the art therapy process are key considerations.

Orr (2005) referenced materials as producing energy on human behavior and imparting messages to clients that might augment or diminish therapeutic work and process. McNiff (1998) characterized the distinctiveness of creative media as compelling variable parts in the whole therapeutic exchange through their representation of emotional and physical properties. Robbins (2000) discussed the importance texture and touch can play in the choice of media for

diverse clients. Rubin (1984) wrote, "without media and tools, there can be no art" (p.7) and she described media as having "personalities" and importantly presenting an "adaptive solution to a patient's problems in the actualization of creative intentions." (p. 9). Rubin correlated simple, unstructured materials with high "projective qualities" (p. 7) and documented how these media engaged diverse therapeutic outcomes for her clients. Rubin also stressed that the art therapists should understand about the care and containment of materials as well as show proficiency with media through their own experience with it (p. 8). Fryrear and Corbit (1992) discussed media choice in terms of eliciting interplays between "conscious and unconscious forces" by blending different kinds of materials or photography with drawing or painting (p. xv). Kramer (2000) termed the phrase "third hand" as a relational transmission of skill that "helps the process along without being intrusive ... or imposing preferences alien to the client" (p. 48). Kramer (1986) also wrote that the relationships between materials, clients, and therapists are interwoven. Wadeson (2000) described how art therapists should choose materials that are sensitive to the clients' needs and circumstances.

Material reflective practices raise awareness of how media affect the therapy encounter as much as relational dynamics and theoretical applications do (Kramer, 1986; Lusebrink, 1990; Hinz, 2009; Malchiodi, 2000; McNiff, 1998; Moon, 2010; Robbins, 2000; Rubin, 2000; Wadeson, 2000). McNiff (1999) wrote, "Because our discipline has been largely oriented to explaining and responding to artworks within the context of narrative based psychological theories, we have been less concerned with the physical and emotional affects of different media" (p. 197). He surmised that graduate art therapy programs as well as practicing art therapists, tended to work with the ubiquitous box of Cray-pas and paper" (p. 197) and often for economic reasons that had an effect of defining a standard of art material practices. McNiff

described ‘virtual art therapy studio’ experimentations that encouraged the inclusion of new possibilities to the established toolbox of traditional materials. He asked how digital media might bring vigor and unique qualities to progress art therapy and mix well with existing art materials. Other art therapists have also drawn attention to new media that extend the materials of drawing, painting, and sculpture so that art therapy might evolve alongside visual art innovations (Moon, 2010; Orr, 2010b). However, computers and software in art therapy remained limited in use and research study (Malchiodi, 2000) until the last decade.

Art therapy has begun comprehensive research regarding how expanding technological art palettes are affecting therapy encounters and client goals. Evolving materials in art therapy now include digital arts media and authors have continued to develop applied methods and tools and theorize possible effects. Moon (2010) postulated that digital arts media and tools reflect a range of therapeutic qualities both similar and unique to traditional art media and research has documented other art therapists sharing this perception (Kuleba, 2008). Art therapists have researched technology’s ‘inherent qualities’ as a therapeutic medium (Orr, 2005; Peterson, 2010), its possible effects on the affective and cognitive processes for art therapist learning (Orr, 2006a; Wolf, 2007) and client therapy goals (Choe, 2014; Edmunds, 2012; Kuleba, 2008), its adaptive challenges for clinicians (Asawa, 2009; Choe, 2014; Orr, 2006b; Peterson, 2010), and age appropriate benefits for youth clients (Austin, 2010; Edmunds, 2012; Ehinger, 2009; Tilberg, 2014).

Comparative Research

Creative and responsive application of digital media to promote student engagement through assistive technologies was a focus of one educational research project. Mavrou (2011) conducted four qualitative case studies from four educational settings where primary education

teachers interfaced with technology in their classrooms through assistive technology tools for physically and learning disabled children. Data included demographic profile information, the researcher's research diary, and informal interviews with the students, parents, and teachers. Thematic analysis was applied to the interviews and classroom assessments and follow up visits to note the students' use and attitude toward their classroom adaptive technology. Teachers were reported as initially reacting with irritation and impatience to the introduction of technology assistance tools in their classrooms as they felt pressured to teach students computer skills amidst time constraints. These same teachers were documented to realize over time that technology could mean access to writing or other communication for students who might not have adequate language, skills, or self-expression. Mavrou further reported increased engagement and inclusion of the students in their classrooms and with peers as well as autonomy and increased self-esteem for the children related to technology use.

Risner and Anderson (2008) described their research pilot as using a feminist pedagogical frame to create research design that was "relational, contextual, subjective, and integrated" (p. 115). Their collaborative study aided in curriculum development with the goal of creating a model design for how to add advanced technologies to an undergraduate dance curriculum. Data came from an undisclosed number of undergraduate student researchers, faculty, and administrators and included self-observation, journals, and review of learning segments. Four developmental design struggles were identified in this pilot study including integrative technology learning for all students, student-centered learning "capitalizing on students' own technology capital and interests" (p. 113), balance between creative and practical technology learning, and a completion requirement of a digital 'e-portfolio' for their senior project. Research participants found technology skills important to include in curriculum design due to

the fact that technological methods were already in use professionally for the creation, development, documentation, and presentation of digitized dance works. The researchers also found that both students and faculty valued learning advanced technology skills but expressed concerns of technology removing kinesthetic experience from the dance form and inequity in access to computers and technology for all students.

Psychologists Hartwich and Brandecker (1997) studied the creative technology experiences of three adults in psychiatric care and proposed computer-painting programs as potential positive engagement for patients with limited, anecdotal results. They observed how their clients interfaced with computer drawing programs for an undisclosed amount of time. These researchers reported that the participants imposed their choices in the media tools with results of beneficial structure, delineated rules, and emotional distancing for therapeutic, ego-building experiences through the use of computer arts programs.

Tosone et al. (2005) facilitated video use in adolescent group therapy to provide peer support and creative process to teenagers in New York City after the terrorist attacks in the US on September 11, 2001. These researchers found video processes to be a useful trauma group intervention for adolescents due to provision of creative processing in both community and individualized narratives. These researchers also found that positive outcomes of reduced distress and peer support through the group process were related to "expressed emotion in non-threatening and non-stigmatizing ways" (p. 421). The workshops granted opportunities to the adolescents in relating personal and collective narratives of their traumatic experiences. Video production was a team effort that included the co-facilitators, a videographer, a sound engineer, and six student collaborators. The researchers stated that the goals of the group therapy were communication, planning, and autonomy in creative vision for their video content and editing of

group videos. These artist-technician, clinician, and client-collaborative roles built toward clients learning the technical aspects of camera operation, sound recording, editing and production of video and promoted autonomy and mastery in their own digitalized storytelling.

Psychologists O'Rourke (2001) and Chin et al., (1980) found that the use of a video camera helped to alleviate some depressive symptoms associated with trauma and elevate sense of autonomy, social skills, self-esteem, and self worth. O'Rourke indicated from her single case study that through the video process, a child interacted with objects, people, and the environment through video recording and a heightened sense of interaction and attunement to her surroundings and a reduction of trauma symptoms occurred. Similarly, psychologist Cohen (2013) proposed that video therapy can be a healing tool for many circumstances and seemed to benefit clients by increasing empathy and lowering defenses in the therapeutic process. His six-participant, phenomenological study suggested that 'film based therapy' could be a valuable tool when clients are ready to express trauma and process their experiences with their therapists.

Art education researchers Taylor and Carpenter (2007) described the contemporary "visual art world … as becoming a digital extravaganza of interactive exhibitive space, collaborative art making, pastiches of old and new, performances, and new media that fuse light, sound, and kinetics" (p. 84). The learning and applications of technology media can transform passive experience to active experience through engagement and creation. Taylor, Wilder, and Helms (2007) completed an arts-based and auto ethnography study with an undisclosed number of graduate students in a technology and art education classroom. This inquiry directed teachers and students to look at their digital media experiences through making their own digital art. Participants summarized how digital culture and materials grant 're-inscription' and

juxtaposition of text and images that create "many complex layers constantly referencing one another in an intertextual web of meaning" (p. 5).

Artists have used technology including hardware, multimedia, electro-mechanical systems, cameras, televisions, and video as art forms of communication and engagement. The 1960s Fluxus movement artists defined themselves by using varieties of 'intermedia.' Their artistic materials were video, written text, music, technology, dance and performance used in combination to contrast and capture the different media with collaborative fusion and create a new realm of contemporary art form explorations (Handardt, 2000). For example, Nam June Paik reorganized visual and aural grammar of mass media in the 1995 creation of *Electronic Superhighway: Continental US,* a 47-channel and closed circuit video installation with 313 television monitors, neon color tubes, and sound. Paik created numerous two-way video camera and television installations that transformed the relationship between viewer and television from passive to active through playful human-machine interactions. Prisms, lasers, as well as large magnets placed on and inside televisions to appropriate both the visual aesthetics and inner hardware of televisions but also transform them into other worldly sculptural and large-scale installation art forms (Hanhardt, 2000).

Contemporary artist Aparna Rao (2011) also crafted and re-imagined familiar objects of technology in amusing and thought provocative ways. With her collaborator Soren Pors, Rao fashioned high-tech art installations that included a typewriter that sends emails, life-like "pygmies" who respond to viewers who make sounds and hide behind their wall mounted screens, and a camera that tracks viewers in the room to make them invisible on an installed monitor screen. Through their creative technology installations, Rao and Pors placed ironic and unexpected qualities on ordinary objects that interacted with human viewers. These Bangalore

based artists work with electro-mechanical systems and interactive installations that heighten critical attention and imagination for technology-human interfaces.

Digital Media Use in Art Therapy Research

Art therapy practice and research have integrated digital media into its creative materials, professional tools, and community dialogue to formulate many reflective questions. Art therapists have researched how emerging technology and software programs can be vital process, communication, and self-expression for clients as well as students of art therapy. The art therapy literature regarding digital media integration included surveys, phenomenological interviews, descriptive narrative methods, and focus groups that continue to build upon single to small group case studies. Anecdotal descriptions and results cannot be generalized to all art therapy clients or students without repeatable methodology of data gathering and analysis being applied. However, case studies remain critically important to digital art therapy literature due to their historical and contemporary permanence, interest and innovation on which additional research can be built, and vital client-media-clinician inquiry interface and explanatory qualities.

First wave: Descriptive studies. Single and small group case studies focused on interrelational, emotional, cognitive, and behavioral outcomes related to technology use in art therapy. Also of interest for these practitioners and authors were the positive and negative media qualities related to client progress and goals, hardware and software options, and applications to broader life skills for therapists and clients. Technology development, mass media effects, art history, object relations theory, developmental psychology, and group therapy theories contextualized the clinical observations. These descriptive studies have continued in recent years as ongoing reflective practices and vital investigation by those art therapists who have incorporated digital media in their clinical practices.

Photography and video. Photographs were used early after the invention of the camera in the 19th century as physician documentation of clients in treatment (Krauss & Fryrear, 1983; Wolf, 2007). Client photography as self-portraiture began in the later 20th century as means of "self objectification in the most graphic sense" (McNiff & Cook, 1975, p. 56) and with reported outcomes of affective learning, improved self-control, and insight (Fryrear & Corbit, 1992; Mayadas & Duehn, 1981; McNiff & Cook, 1975; McNiff, 1981; Weiser, 1999; Wolf, 1990, 2007). Jacobs (1994) discussed early concerns regarding how the use of photography in therapy revealed client personal identities in very different ways than other art representations and asked what steps therapists should take to safeguard confidentiality. Johnson (1981) similarly pondered the "social ethics" (p. 306) of client informed consent and confidentiality in psychiatric institutions; in relation to video recording as a "technology of exposure" (p. 307) and even surveillance; and how video products were fraught with antithesis experiences of subjectivity in the media rather than the often-presumed objectivity. Contemporary concerns have persisted regarding how emotionally and psychologically revealing still and moving photography can be even in our contemporary, heavily photographed and self-representational Internet-driven worlds (Alders et al., 2011; Mosinski et al., 2012; Orr, 2006a). Careful attention is required for the art therapist's abilities to work safely with both the technology and clients' understanding of the media to protect inadvertent disclosures through art therapy products existing in careless or exploitive ways outside of the therapeutic relationship (Alders et al., 2011). Early art therapy investigations examined film photography and video for both clinical and teaching practices (Jacobs, 1994; Jacobs & Milton, 1994; McNiff & Cook, 1975; Wolf 1976, 1990; Weiser, 1998, 1999, 2000) whereas the use of digital photography media followed later and as computer technologies were disseminated for wider consumer use (Ehinger, 2009; Mosinski, 2007, 2010;

Wolf, 2007). The photographic technologies initially available for art therapy experimentation included analogue videotape, still film cameras, and the 'instant photograph' of the Polaroid.

Polaroid photography. Wolf (1976) explored the use of Polaroid technology with an undisclosed number of adolescent participants where self and group portraits were photographed, cut out, and placed on paper backgrounds to be further manipulated and added to. Wolf described how the process of self-portraiture and removal of the subject from the background revealed the unconscious negative and positive manifestations of body language and facial expressions. He observed phenomenon where photographic images helped youth to discover, recognize, and relate their "automatic images" (p. 121) to habitual thoughts and self-talk. Fryrear and Corbit (1992) also described Polaroid camera use as a practical and potent self-imaging process to be integrated with mixed media art experientials and various techniques for adults in therapy and workshop groups. Fryrear and Corbit (1992) and Wolf (1976) represented individual and group case studies through verbal transcription and art reproductions.

Jacobs and Milton (1994) critiqued the use of Polaroid photography due to toxicity in ingredients and the possibility of harmful exposure for clients. Hazardous chemicals within early Polaroid transfer emulsions were wiped onto the image with possible inhalation and/or accidental skin contact as unintended hazards for both clients and therapists in the art making process. Jacobs and Milton (1994) advocated for art therapists to be aware of toxic ingredients by careful scrutiny of the labeling practices on materials or by the discontinuation of use. Wolf (2007) also discussed the additional limitation of the Polaroid being small in size and reported that the innovation from Polaroid to 35 mm black and white film processing "allowed students to work with larger format images … and to integrate creative darkroom procedures into their therapeutic work." (p. 125)

Film and digital photography. Weiser (1999) provided descriptive evidence to the applied theories and development of techniques termed phototherapy. Therapy was achieved by the review of photographs that "simplify by partializing life and help slow time into units of meaning people can study" (p. 13). Weiser incorporated diverse projective techniques from client-generated self-portraiture, or where they take their own pictures for therapeutic photography, to examinations of family photo albums and images taken by others, or for photos-in-therapy. Wolf (1990, 2007) similarly reported on the therapeutic potency of photographs as potent visual metaphors to be captured and developed in art therapy. Wolf (2007) presented small case studies of art therapy graduate students using phototherapy for emotional and reflective development as anecdotal evidence. He assigned digital photography and collage experientials in the classroom to develop the students' skills using Photoshop. By experimenting with the media first themselves, students found they could later facilitate clinical photo taking and editing with clients. Wolf (2007) and Ehinger (2009) have both reported how photographic images and events can be combined with other art materials and creative modalities such as dramatic role-play. Wolf (2007) concluded that when such creative integrations are processed in the classroom, it "facilitates an affective, visceral learning experience" (p. 130).

Analogue and digital video. 'Video as therapy' (Weiser, 1999), or, techniques that use personal and public film or video content within a theme from therapy to spur discussion or review issues and will not be discussed in this literature review. Focus will be given to video-as-therapy techniques that employ client-centered creations, reviewing and playback, and editing and manipulating of the video for personal story telling and self-development (Ehinger, 2009; McNiff and Cook, 1975; Mosinski, 2007, 2010; Weiser, 2001). Art therapists have applied

analogue and digital video technologies to therapeutic work and have anecdotally found the materials to benefit youth and adults.

McNiff and Cook (1975) studied two years of sequential group experiences with video art therapy for an undisclosed number of adult and youth participants in multiple psychiatric and educational settings. Researchers reported that from their video therapy observational research, there was dynamic group member exchanges and "the ability of art to stimulate order and equilibrium in behaviors" (p. 58) for individual clients. McNiff (1981) further reported ongoing research for group sessions that utilized structured video recording and playback techniques where group members were safely introduced to the media through initial taped sessions of group art making and hands being 'on camera.' Subsequently, groups were led into portraiture or role-playing taped sessions where clients re-experienced themselves and group interactions during the group or individual review of specifically chosen scenes for playback.

Mosinski (2007, 2010) also used group structure and process for a digital video art and activism project that lasted seven-months and included nine adult participants who all identified as living with medical, physical, and emotional complications of AIDS/HIV. Video storytelling was theorized to normalize experiences and feelings and emphasize mastery, collaboration, and control offered in the media process. Mosinski (2010) described how the video projects were organizing structure for personal stories but also for therapeutic group process. The tangible, multi-group processes of planning, recording, and editing allowed clients to form content and be active and "try out new behaviors" (p. 261). Empowerment, reduced distress, increased confidence, and enhanced communication were broad results reported and case examples of client process were given. Mosinski reported that "catharsis" and "reflective distancing" from personal trauma stories were further outcomes attained in the editing processes where facilitated

screenings took place to review the videos with over multiple sessions (p. 262). McNiff and Cook (1975), McNiff (1981), and Mosinski (2010) all drew particular attention to the therapeutic playback of repeated video content that allowed participants to desensitize to their stories and see themselves and the material in different ways. These descriptive studies elaborated that the recording and playback qualities of video "aroused the emotional polarities of self-disparagement and self-interest" (McNiff, 1981, p. 80) and allowed for the processing of emotional content as well as reflective learning toward technical issues and aesthetics.

O'Rourke (2001) and Chin, Chin, Palombo, Palombo, Bannasch, and Cross (1980) found that the use of a video camera helped to alleviate some depressive symptoms associated with trauma and elevate a client's sense of autonomy, self-esteem, and self worth. O'Rourke indicated from her single case study that through the video process, a child interacted with objects, people, and the environment through video recording and there was a heightened sense of interaction and attunement to her surroundings and a reduction of trauma symptoms. Mayadas and Duehn (1981) discussed from their clinical work how the underlying therapeutic principles of played back videotape aids in "self-confrontations" to assist in "desired behavior change" (p. 146). Mosinski (2010) and Ehinger (2009) further purported how video was a therapeutic process with benefits of positive group collaboration, experimentation with multiple identities, increased motivation, and specific mechanisms of ego mastery through the media. Ehinger (2009) noted "children who were shy in real-life situations found themselves fascinated with their own images… like looking into a moving mirror…" (p. 42) for his art-based, participant observational research with a group of four adolescent males using the green screen video method. Green screening is a specialized technique of digital video where a subject is videotaped in front of a large green background and a chroma editing technique filters the green

screen out, and, once removed and the background is replaced with additional imagery to create two visual layers that look like one. Ehinger (2009) proposed that youth have interest and "progress quickly in the area of electronic arts because of their innate ability to adapt and learn languages" (p. 6) and skills. He found that working with youth through "unconventional" (p. 74) means drew and held their attention while also deepening their sense of safety in therapy engagement.

Computer drawing, animation, and iPads. Parker-Bell (1999) argued that novel, useful, and adaptive technological hardware can heighten autonomy, motor control, and creativity for children and adults who have communication difficulties or physical challenges. Weinberg (1985) published the first article in art therapy regarding the use of computerized drawing programs to monitor and rehabilitate adult patients' cognitive states due to quadriplegia, stroke, or acquired traumatic brain injury. Her study had an undisclosed number of participants and did not formulate any clear methodology for results shared. Weinberg discussed how breath and voice-activated computer drawing tools or photosensitive light pens (original stylus technology that required no pressure from the participant's hand) used in combination with graphic tablets seemed to increase control, motivation, and adaptability for patients (p. 68). Canter (1987, 1989) also produced early anecdotal results of adaptive technology use in art therapy sessions by description of three single case studies with children. Canter observed that computer tools and software empowered her clients to work at their own pace and fix their mistakes as they went. Weinberg believed she could track the progression of clients' recovery and strengthening of their cognitive coordination through observing evolutions of their drawings, composition choices or balance on the page, and levels of investment. McLeod (1999) reported on the novelty of the 'undo' button on computers, or, the endless ability to do and undo work and create seriated

multiple copies of artworks as both these qualities of the media were reported as beneficial to rigid or defended clients. These art therapists all noted how computers have the capacity to record sequenced events and recreate the user's decisions regarding composition, deleting and problem solving, and image making. Weinberg recommended further study to record the digitalized creative process and analyze how the steps occurred over time and with what variations, regressions, or progressions that would concretize the client's art image or course of treatment.

Canter (1989) also believed that the therapeutic relationship was enhanced through use of digital media and observed how client "enthusiasm in understanding this new technology offers clients and therapists innovative approaches for learning, listening, and thinking" (p. 303). She found that while art therapists attune to a static image on the page with traditional drawing materials, the process of computer animation can enhance client storytelling by the use of moving imagery and "creative and development growth in eye-hand coordination, visual motor skills, logical reasoning process, creative decision making and interpersonal skills" (p. 315). McLeod (1999) also proposed that children and adolescents with emotional and behavioral issues were able to control their sometimes destructive, manipulative, and hyperactive behaviors by increased self-motivation in their learning to master computer art tasks.

McLeod utilized computer arts in hospital settings and experienced many benefits to the media such as the ability to sanitize keyboards, ease of computer transportation through hallways and rooms, and the lack of mess to clean up after sessions (p. 201). Gussak, and Nyce (1999) criticized such "tidiness" (p. 194) as a criterion for choosing media tools by pointing out that kinesthetic, creative, and messy art experiences have therapeutic value. However, McLeod found that technology use lowered the tactile resistance of some children to art therapy while

"many software tools mimic dimensional media functions … [such as] pressure-sensitive functions allow the crayon and chalk tools to add thicker color each time the mouse to stylus scrubs across the screen" (p. 201). Alders et al. (2012) also reported "digital technology is mess-free and nontoxic…. and may be ideal for those clients who become overwhelmed by tactile sensations… and does not require a sink or shelving space to inhibit the art therapist who is working from a laptop" (p. 168).

Parker-Bell (1999) described photo-altering software programs that created imagery through manipulations of color, sizing, shape enhancements, cutting and pasting, and image transformation. She emphasized how computer technology tools do not preclude additional use of haptic, kinesthetic materials mixed with computer-generated imagery (p. 184). Through her own experimentation and witnessing others explore electronic tools and techniques, Parker-Bell extrapolated that computer applications offer choices, new environments, and explorations of new context for figures or images (p. 183). Thong (2007) also reported client empowerment through choice, technology processes, and options within the computer arts. Thong reported that helping these clients find solutions to technical difficulties in the digital arts media were "crucial to building trust and rapport" (p. 55). Thong theorized that computer created imagery improved the self-advocacy of these clients when digitalized images were displayed in hospital rooms and allowed wider dialogue about their difficult emotions regarding hospitalization.

Complicated limitations to computer drawing programs use were reported challenges associated with the clinician's skill set, the underrepresentation of diverse group identities, and superficiality in the media. Parker-Bell (1999) wrote, "mastering computer arts is a daunting task for the uninitiated" (p. 180) and encouraged informed purchase, upkeep, and ongoing experimentation for art therapists to be technology capable and competent. Additional concerns

included a discriminatory lack of racial variety and skin tones so that human figures were all "blond and blue-eyed Caucasian" (Parker-Bell, p. 182) and mass media negative influences through how the "techno-digital world entered into and affected art therapy with adolescents" (Potash, 2009, p. 55). Potash (2009) found the use of digital media to both taint and enhance the art therapy process and content with two clients. Potash theorized that using digital media in sessions could produce art made quickly and with little time or emotional investment to become throwaway or "fast food art" (p. 53). He also found how pop icons and symbols can be used in as abstracted, ideal selves that provide adolescents some objective distance from thoughts and feelings so that mastery can occur over time and process. Potash postulated that digital media might take away from the therapeutic process with superficiality in content, impede interpersonal communication skills, or in contrast, manifest therapeutic benefits of empowerment and mastery development through the personal and creative manipulation of mass media.

Austin (2009) wrote, "because art therapists work with fantasy, projection, symbol, and metaphor, they are well-positioned to contribute a unique perspective on the impact of technology on the creative process and on emotional life" (p. 83). In a single case study with an adolescent male, Austin (2010) described the therapeutic process of 3-D computer animation use in several sessions. Goals were identified as promotion of regulated affect through emotional distancing because of the inherent physicality of the computer screen that can act as a shield. Austin further described how the process of using a computer as a "therapeutic mirror" (p. 199) engaged this adolescent, not in mere technological distraction, but in an intricate, therapeutic process of bridges built between his "feeling states and representational systems" fueled by the media teaching relationship (p. 211). In negotiating and teaching digital animation in the shared therapeutic space, Austin was able to join this youth on his familiar terms, allow for defenses and

emotional distancing through the media, but also incorporate novel media explorations to create interpersonal and therapeutic rapport.

Robards (2012) completed an autoethnographic study regarding the effectiveness of the iPad as an art therapy tool. The researcher employed personal exploration of the iPad for journaling and chronicling its tools and uses for a six-week duration in a variety of clinical and personal settings resulting in images with therapeutic themes and expressivity. The author also reported the development of a dynamic and what she explored as her own therapeutic relationship with the medium. Additionally, "cultural artifact analysis was used to explore the iPad's cultural connections and reveal any embedded anti-therapeutic messages or values within the device" (p. 8). The researcher surmised "strong capitalistic agendas emerged" (p. 3) from digital media capable of distraction and subliminal messages for users. She suggested that art therapists who use devices in therapy should discern and discuss these implicit and explicit forces with their clients.

Second wave: Rejection, adaptation, and evaluation. Quantitative and additional qualitative studies are categorized as a second wave of digital media research that enhanced the early and contemporaneous, foundational layers of descriptive case studies. Robust research studies have culled larger numbers of therapist participant responses to reflect rejection, adaptation, and evaluation trends for digital media use in art therapy. Art therapist perspectives and experiences with digital media have resulted in analyses regarding technological skill sets and applications, specific media use and processes of adaption or rejection, ethical considerations for clinicians and clients, and perceived interrelational, emotional, cognitive, and behavioral effects that occurred in the therapeutic relationship.

Peterson, Stovall, Elkins, and Parker-Bell (2005) implemented a study to investigate how art therapists purchase and use technology and to evaluate barriers to ownership. A survey was handed out at an AATA annual conference in 2002 to 250 attendees and with a return rate of 78%, or 195 surveys completed. The survey asked questions regarding client-related, work-related, and personal computer technology use. Significant differences were noted between computers used for personal tasks (1.03% do not use the computer for personal reasons) in contrast to computers used with clients (20% do not use computers with clients). Additionally, "statistically significant differences were found between respondents' use, ownership, and application of technology in the categories of age, professional registration, and education" (p. 139). Researchers found that the art therapists surveyed seemed informed about technology tools and their applications and 99% of respondents owned a computer for use. Researchers reported that the high cost associated with technology devices was the reason 40% of participants did not use technology and 26.25% responded that unfamiliarity with digital media was an additional barrier. Only 8.13% surveyed reported that they had no interest in technology use. One limitation in the research included how respondents were not directly asked if they were currently working with clients using digital media. The quality of direct observation seems important to the clinician's evaluation of digital media advantage and disadvantage to therapy processes and outcomes. Also, as researchers found correlations in educational level attained and technology use rates, there could have been questions directed to art therapy educators in how technology was used for classroom activities such as paper writing and power point presentations versus courses taught specifically to inform and assist students with digital media experimentation for their own learning and toward future therapy work with clients.

Toward further documentation of art therapists using technology for personal and professional growth, Orr (2006a) completed a qualitative study of documentary video use for first-year graduate students. Her study used a phenomenological approach that documented a group of 10 students moving through a shared educational experience and how they used technological media to process the individual and collective. Digital media and tools were used to encourage student reflection on their perceptions and change in perception, to show group processes, and adaptation and learning with video. Analysis revealed that "the students' process in redefining art therapy for themselves and revelations of how they used supports in their lives to maintain equilibrium" (p. 285). Orr reflected on digital storytelling elements in the narrative of group experience and how the media formed around students' changing needs and goals. Identified limitations to the study were inherent media manipulation challenges such as the time and skill set requirements that editing digital video can take. The researcher further strategized how to structure the allocation of group member tasks to ease the multi layered and challenging process of recording and archiving video segments and placing them into a cohesive and artful whole.

To explore additionally how digital media is being applied clinically, Orr (2005) designed and implemented research titled "Technology as Therapeutic Intervention" and anchored her guiding questions as to how technology was being used as an art form, what might be its inherent therapeutic qualities, and for who and in what settings might digital media be used best. Orr mailed a survey to 500 randomly selected art therapists with a return rate of 41%, or 206 questionnaires returned and 173 filled out completely. Specific questions in the survey asked how computers and digital media were being used as art forms, what were perceived therapeutic qualities of their use, and what sorts of clients and settings were suitable for digital

art therapy. Orr found that a majority of art therapists (83.8%) used technology generally for their practice and work tools including photo archiving, organizational or research tools, and web camera and email communications versus a smaller number used digital media creatively with clients (20.8%), and others did not use technology at all (16.2%). Seventy-seven of all respondents felt that children and youth showed aptitude and interest in the digital media so that creative and therapeutic capacities were enhanced whereas adult clients might be stalled in therapeutic creativity due to not feeling comfortable or processing well the technological systems and tools. Twenty-nine participants in the study responded that they did not use technology materials because the sensate quality of traditional art materials was their primary therapeutic tool. This is contrasted with 12 respondents who identified their work settings of hospitals and prisons as ideal to use digital media because of potential client tactile resistance and institutional restrictions on the use of 'messy' and space demanding art materials.

Peterson et al. (2005) stated that computers and digital media were influencing the ways art therapists network, produce, archive, and promote their own artwork, communicate with each other and clients, research, and record assessments, treatment plans, and progress notes. Orr (2005) widened the perspective of those technological tool developments by reflecting on the therapeutic possibilities for creativity with computers. Additional to time saving professional management tools, specified benefits to technological systems included adaptive services for disabled persons and virtual sessions or supervision for individuals living in rural areas (Peterson et al., 2005) while other survey respondents documented concerns for new ethical dilemmas including questionable confidentiality through virtual platforms (Orr, 2005). Additional benefit to digital media was noted in its relevance for children and youth who seem to have interest and aptitude in computers but also balanced with concerns of technology not so applicable to other

populations and lacking important kinesthetic qualities (Orr, 2005). Authors noted rising trends in computer ownership in the United States and Peterson et al. (2005) identified how "professional counseling associations have demonstrated the importance technologies are having in their fields and to their clients by devoting entire journal issues to technology-related topics" (p. 139). Consensus drawn from these research studies indicated that technology will not replace all aspects of therapy or other therapeutic materials but it needs continued research and clinician experimentation to document its possibilities and applications. How art therapists gain critical exposure and knowledge of digital media were future implications for these researchers.

Orr (2006b) published further survey research where she sent 250 email questionnaires to AATA members who were either students or active professionals and received 45 back for a 27% response rate. The low response rate was reportedly due to a technical error in that out of 250 emails, only 165 of these were active. The author noted that sending surveys directly to inactive email addresses was an obvious difficulty of the study and also confidentiality in responses could have been increased by the use of an online survey service platform linked in emails that willing respondents could activate. Orr (2006b) asked how 'prepared' art therapists were to use technology media for presentations or teaching and for art making with clients; what levels of training had they received with digital media for both presentational or clinical use; and their thoughts on the future of digital media in art therapy. Of the participants, 38.1% reported they did not receive technology training for professional presentations or teaching skills, 28.6% reported the training as adequate, and 23.8% reported receiving training of poor quality. Seventy one percent of participants reported they did not receive technology training for digital art making at all, 7% reported graduate training but of low quality, and 12% responded that their training was adequate for clinical and professional practice needs. Orr stated that she cross

tabulated the above data results to determine "the influence of the years in which the participants were in school with the quality of training in these areas, the statistics show a trend for a slight increase in the perceived quality from 2000 to 2004" (p. 192). Impediments to using technology in professional practice were cited as expense of equipment, lack of value for technology and art making in places of employment, limited time or opportunity for learning digital media, not feeling skilled or qualified, and "feeling that technology does not meet the sensory needs of clients" (p. 195). Technology training in art therapy education was surmised as a necessary component to future inclusion of digital media.

Orr (2006b) postulated that "technology-based art-making is simply a new tool- like a new type of clay with which to create art," that needs introduction "to learn the unique qualities it has to offer" (p. 195). Orr had also reported on increased focus of younger art therapists and clients toward "visual cultures" that necessitates a comprehension of "technology based multisensory communication with multiple truths and interpretations" (p. 191). Orr found that of those art therapists using digital media, the choice was often made to engage with young clients who seemed knowledgeable or interested in the media and as adaptive tools suited for diversely-abled clients who currently utilized assistive technology tools. Orr (2005), Peterson (2010), and Kuleba (2008) all found that art therapists evaluated the use of digital technology primarily through how clients responded to that media and how the inherent media qualities impacted the therapy process. Peterson (2010) wrote that "the decision making process behind adoption, modification, continuance, or discontinuance of art materials is an essential element of treatment, as it reflects trends and alterations in the therapeutic tools that art therapists present to their clients" (p. 26). Some contrasts in art therapist perspectives, experiences with digital media, and resulting commentaries in the literature have noted complexities around how technological art

forms have been categorized as distinct (Edmunds, 2012; Kuleba, 2008; Orr, 2005) and also similar (Edmunds, 2012; Orr, 2005) to 'traditional' media. Moreover, the many ways in which digitalized mixed media creative processes have both excited and repelled art therapists around the "values and pathologies of an emerging techno-culture" (Kapitan, 2007, p. 50) can be seen as conscious choices to engage or disengage with technology.

Kuleba (2008) investigated art therapist use of digital media in a descriptive, web-based survey that elicited quantitative and qualitative answers. Participants (*N*=208) responded to questions including demographics, how digital media is being used in art therapy, with what software and clientele, and how these materials compared to other media. Additional topics of response included issues of digital media storage, the effects of the computerized art making experience within the therapeutic relationship, and how digital media might be integrated into art therapy. Quantitative data was documented in graphs and tables to illustrate frequencies of response to questions. Qualitative data was coded thematically and correlated with quantitative results. Kuleba (2008) found that 28 participants (14%) surveyed used computer art making in their sessions with clients, 55 participants (27%) used computers to create their own artwork, and 154 participants (74%) reported computers as important to their general art therapy practice. Limitations to this study were that a majority of respondents to the survey had little to no experience with using creative digital media in sessions with clients or for their own art making. Some responses to the benefits or detriments for digital media use were made with no educational or applied experience so that a majority of responses were more opinions than related to direct experiences or knowledge. The smaller number of respondents who reported digital media use with clients identified technology as having "unique" (p. 107) sensory qualities and similar effects on the therapeutic relationship as traditional media. In response to the

question regarding how digital media might have cognitive effects on clients, themes identified were, "enhance problem solving, ego strengthening, aide in sequencing and focus, help with eye-hand coordination, increase self esteem by mastering use of software, promote frustration tolerance, increase attention span, and engage both right and left brain hemispheres" (p. 84). Participants also identified emotional effects as "the same as traditional media, increased self-esteem, self-soothing, detachment, instant gratification, control, disconnect from social interaction" (p. 85). Other participants reported hesitation to use digital media for art making due to "a lack of" (p. 107), sensory qualities that might not further therapy, a paucity of research regarding the implications of its use, and deficiencies in their experience or training for competent computer art making. When participants were asked if creative digital media should be added to art therapy graduate curriculum 155 (78%) respondents said "yes" and 43 (22%) reported "no" (p. 81).

Asawa (2009) implemented a focus group study with selected AATA members as an exploration of emotional responses and obstacles that art therapists face when interfacing with educational and presentation technology. This study used three focus groups to observe art therapists' emotional responses to technology through a phenomenological data analysis that included group art making observation, group process transcription, and interpretations of themes. The qualitative data analysis revealed nine major themes from three focus groups: "emotional reactions of frustration, fear, anger and anxiety as well as self-representations, unknown, mastery, duality, transition, technology representation, mandatory compliance, and professional stance" (p. 63). For example, the theme duality revealed a tension and divided stance for the field of art therapy to adopt technological tools because "technology will remove what art therapy holds sacred, which is the art" (p. 64). Asawa shared that "a conflict between

the desire to promote art therapy and engage in technology and the desire to remain loyal to the field's origins in traditional means of communication and art media" (p. 58) presented in the research data. Additional results were reactivity reported as anxiety and panic feelings that occurred after not being in control when participants remembered past technology malfunctions.

Asawa (2009) related that what seemed to be particularly concerning regarding technology engagement were the perceived manipulated synthetic realities that might degrade intrapersonal, face-to-face communications that occurred within digitalized realms where "the computerization of thinking and virtualization of life is replacing the perception of reality, influencing decisions and actions" (Safarov, 2003, p. 103). Asawa also pointed to an important ethical issue regarding a "digital divide" of "growing inequity of the information haves and have-nots" (p. 59) because of skill and economic barriers to digital art media access and use. One limitation of this study was that recollections of failed educational and presentation technologies were the only digital media experiences discussed with participants so that overwhelmingly negative responses were normative to all the experiences shared. This narrow sample of responses to technology malfunction in the whole of possible technology experiences brought honesty to underlying fears, anxieties, and panic feelings. These feelings, in turn, represented larger themes of loss of control and resistance to larger automating forces represented by technological platforms and both revealed shadow dynamics in the human-computer interface. Asawa recommended future study on how to increase professional use of current and emerging digital technologies with less negative emotionality and more adaptability. She suggested digital media be included in graduate program training to increase exposure, knowledge, and skills that would improve adaptability for art therapists who choose to learn digital media applications.

Peterson (2010) used a mixed methodology study and examined how art therapists adopt or reject digital media for applications in professional and clinical practice (p. 26). Peterson used a two stage research process including a survey sent to 785 AATA members to "obtain direct reports of personal experiences with media adoption from experienced practitioners " (p. 27) that was followed up by eight phone interviews with participants who were chosen by categories of "innovators, laggards, and early majority" (p. 28). With a response rate of 17.4% (*N= 136),* the surveys illustrated why technology adoption or rejection was occuring for participants. This study also noted differences between adopting technology "freely" versus having "forced adoption" (p. 27) due to job requirements or settings. For example, adoption occured when quality innovations were perceived such as how emails replaced phone calls and digital photography editing options replaced older film tools. Reportedly, once digital media and platforms were evaluated as having positive qualities or innovation for existing media, art therapists adopted the new tools and processes because of perceived improvements or suitability to needs. Professional work tools such as power point or word processing programs were evaluated and adopted or rejected similar to clinical tools such as digital drawing or photo editing programs. Forced adoption of technology was also a reported factor where occupational needs and work tasks required art therapists to incorporate and learn new media at times and due to the expectations of their employers.

Peterson (2010) found that key adoption and implementation elements for using digital tools and media therapeutically were if clients responded positively to their inherent qualities. Respondents used media again if it showed capacity to encourage change for clients and if the art therapists felt confident in the media. Prohibitive factors identified were the high price of equipment and program update needs as compared to other art media. Additionally, when media

hardware was purchased there was reluctance at times to let clients use the equipment or tools due for fear of potential breakage. Some art therapists surveyed reported they reserved expensive technology equipment for their own creative and professional use only.

Mihailidis et al. (2010) published a participatory design study with closed and open-ended questions to determine what art activities would be suitable to engage older adults with dementia. The web-based survey was sent out to North America and United Kingdom creative arts therapists for a total of 133 participants. Questions included the forms and levels of necessary assistance and response a user would require as well as what specific technology interfaces might work well for clients and arts therapists. The ultimate goal of research was to compile suggestions into the design of three test prototypes of a computer-based art therapy device to prompt and monitor a user's participation. This study is the first of its kind to evaluate and initiate specialized art therapy software design and hardware rather than non-specific art technologies that are generally used for DAT. The respondents identified that technological devices are viable for the encouragement of interactivity in therapeutic creative activities by older adults with dementia. They also answered questions regarding current arts therapist and client needs, practices, and ideas regarding technology use. Limitation to this study was a lack of client feedback regarding the use of such technological devices and art forms in their therapy experiences. Structural element suggestions from therapists that resulted from the survey were values of "customizability, adaptivity, passivity, and assessment" (p. 296) that the programs and devices might provide. Design element results were choice, simplicity, touch, saving and reviewing work, tangible interfaces, art therapist involvement, and feedback (p. 296). The prototype development led the researchers into three EPAD designs to include: a digital paint program running on a touch screen computer monitor; a digital collage program running in a

custom-built table top with an imbedded touch screen; and a free hand drawing and animation program running on a flipbook with a touch screen. Current work for these researchers is to further refine the three prototype designs after a focus group study involving several creative arts therapists is completed in the near future.

Edmunds (2012) completed a phone-based and descriptive, qualitative survey with four participants who had to have one-year minimum experience with digital art making with at least two clients. Edmunds wanted to specifically document clinical experiences of those art therapists actively using digital media with clients. Survey category responses consisted of "types of preferred media use and accessibility to clients, the place of technology in art therapy, training with and preference of computer programs, populations that technology might be most effective with, and the implications of using technology in the therapy setting" (p. 24). A major difficulty identified by the author of this study was the low response rate, as 900 emails were sent to American Art Therapy Association members and six potential participants responded back and only four met criteria of familiarity with digital media in clinical use. Due to this low response rate, the results cannot be generalized to the larger population of art therapists currently using technology in sessions. Edmunds (2012) reported that one out of the four participants had been trained in creative digital media and the other three had taught themselves. Familiarity with digital media for the clinician was reported as critical because that experience informs abilities around adaptability of use with different clients and needs in therapy. Client populations that were reported as responding positively to digital media were children and adolescents, clients struggling with identity issues and medical and/or trauma experiences, and clients needing adaptive assistance due to behavioral or physical issues. Potential positive and negative aspects of digital media use were documented as supporting defenses, a sense of accomplishment and

pride in the creative product, and detractions in sensory and relational experiences. One important ethical consideration identified was the positive benefits of digital archiving to increase safekeeping and also smaller storage space requirements. The downside to digital storage was reported as vulnerabilities to computer data loss and hackers able to access information remotely off of computers without data encryption. Cost of digital equipment and upkeep was an additional concern as were the motivations to use computers in therapy and the interactions and relationship between client and therapist that might be lost through over-involvement with the media. Edmunds (2012) concluded, "in art therapists understanding their own reactions and processes with technology, it may be possible to successfully embrace a generation of digital natives" (p. 63).

Orr (2012) expanded her 2004 questionnaire discussed earlier in this literature review by reiterating previous research questions regarding art therapist preparedness to use technology for both professional and clinical tools (2006b). For the follow-up survey, Orr sent 250 email surveys to randomly chosen AATA members who were either students or active professionals and received 98 surveys returned for a 39% response rate. The participants received emails that asked their participation and could link to an online survey site that allowed for complete anonymity. Overall fluctuations in technology use between the seven years the data was collected or, 2004 to 2011, revealed a 36% increased use in professional management tools and a 68% rate of increase in digital media use for clinical applications. Orr stated that she

> …re-issued the survey in order to determine how our perceptions, practices, and training as art therapists related to the use of digital media in art therapy have evolved, and whether or not this evolution in our understanding and use of digital media is keeping pace with that of the general population. (p. 234)

Orr (2012) found a 36% rise in technology use by art therapists in their professional practices including emails, word processing, professional presentations, photo archiving, research, and treatment planning. Orr reported that art therapists seem to be keeping pace with general users of technology and that the increased use seems to be due to more accessibility and support by employers to use computers and digital media tools for management tasks. Orr also reported that 56% of art therapists surveyed were using digital media for professional work purposes but not with clients in sessions.

Seventy one percent of art therapists from Survey 1 used technology for emails and word processing (Orr, 2006b) whereas in Survey 2, 93.8% of participants used email technology and 84.4 for word processing (Orr, 2012). Survey 1 had reported 57.1% of participants used technology for professional presentations and photo archiving and Survey 2 reported 76% and 72.9% for those same tasks respectively. Survey 1 reported 19% of participants using digital media for creative or therapeutic tools with clients in sessions and Survey 2 reported 32%.

Orr asked open-ended questions in both surveys to qualify more the choices made by art therapists to use digital media or not for professional management and clinical tools (2006b, 2012). Initial primary barriers to using digital media as creative or therapeutic tools were cited as restrictive costs and access, lack of training and knowledge in software, and perceived anti-therapeutic qualities of the media (Orr, 2006b, p. 195). Perspectives had both stayed and shifted in the seven years between surveys because participants noted barriers in the areas of "lack of training, concerns about ethical and privacy issues, the fact that clients are already technologically overwhelmed, that it is distracting to the art process, and that traditional art process provides sensory input that technology based media cannot" (Orr, 2012, p. 235). Orr noted that art therapist awareness regarding ethical issues for client privacy had become more of

a priority in the second study than the first. Also technology seemed more accessible, affordable, and valued both by employers and art therapists for professional management practices.

Orr (2006b) reported art therapy technology users were at a lower adoption rate than general users of technology in 2004. These percentages of use have changed significantly from 2004 to 2011 where art therapists are now reported as reflecting rates of adoption and use equal to that of general technology users (Orr, 2012). Orr noted that while art therapists using digital media as therapeutic art material with clients has increased by 68%, there continues to be a significant disparity between creative uses of digital media versus technology for professional management practices. She theorized that this is due in part to a lack of technology training in art therapy graduate programs. Additionally, one contested quality for digital media that remained consistent between Survey 1 and Survey 2 could be surmised as contrasted sensory differences between traditional and digital media. Participants identified creativity and sensual concerns "that technology itself lacks sensual qualities, that it distracts from the creative process, and that it has limited room for allowing for emotional or creative expression" (Orr, 2012, p. 236). Interrelated concerns are both client privacy safety and perceived interrelational detriments including avoidance of face to face interactions and disconnected states of being exacerbated by technology use. Orr (2012) theorized that a resultant trend is that the materials of digital media seem more tacitly known and explored rather than "intellectually understood" (p. 236) except by a small number of art therapists who continue to investigate and research digital media use.

Orr (2012) reported Survey 2 participants responded in depth and descriptive to three major themes including "comfort/lowering resistance (29), mastery/creativity (24), and adaptive qualities (11)" (p. 236) when asked about perceived positive qualities of digital media. These

respondants found technology accessable to clients and when used in sessions seemed to lower resistance to therapy and add rapport to the therapeutic relationship. Additional positive attributes of digital media reportedly assisted with the clients' sense of self mastery and creativity that reflected "cognitive, emotional, and social learning that was expressive, empowering, and that it increased self-awareness" (p. 236). For adaptive qualities, participants found digital media to have reduced client tactile resistance, increased client abilities to objectify stressors, and aided in client connectivity to social, albeit virtual, relationships.

Choe (2014) developed a participatory design study that investigated the qualities of art 'apps' on iPads for therapy use. She surveyed four art therapists using iPads actively with clients and created follow up experimentation of specific apps with four focus groups comprised of 15 art therapists. The focus groups engaged art directives with nine separate software programs for art making and identified "three distinct qualties and six concrete features of an 'ideal' art app for art therapy" (p. 145). The three qualities valued across the focus group participants were 1) ease of use/intuitiveness; 2) simplicity; and 3) responsiveness (p. 149). Furthermore, the therapeutic features deemed necessary for art therapy and identified as valuable by participants were 1) control over otions and tools; 2) artwork archiving features; 3) app features that record and playback the artmaking process; 4) abilities to change/shift between media and mixed media features; 5) possible assessment features; and 6) privacy and security control features. All participants agreed that art therapy media and specific digital media applications must be matched to individuals client and group needs. Other critical outcomes were in how digital media seemed to bring "a collaborative decision making process in digital culture" (p. 151) and specific apps for future clinical use would be highly desirable if they could be designed by art therapists and clients.

Tilberg (2014) applied digital art media study to a five-member art therapy group for six sessions. Participants were youth ages 9-13 who used touch technology to create artwork through various applications on individual iPads. Qualitative research design collected and analyzed individual and group data through observational and content methods. All participants were clients of an outpatient mental health agency. Research results found that the digital media offered distinct experiences to these youth that are not available or stimulated through the 'traditional' drawing, sculpting, and related non-virtual sensory media. Tilberg described how each group session with digital materials engaged multiple creative layers of music, animation, and interactive tools for the participants. The ability to use a variety of tools within one app brought to the participants a whole studio of choices within a less time consuming experience. Self-mastery of new apps and tool use were also cited as important therapeutic outcomes for participants. A therapeutic limitation related to the results of this study was indicated within "touch" parameters in the materials because the iPad screens "limited larger and more varying movement, potentially restricting the kinesthetic benefits of [gross motor movements in] art therapy" (p. 110). An additional concern of note was how "digital art makes erasures much simpler and quicker than traditional art media allows, potentially impacting some of the natural creative processes art therapists have historically valued" and where "…the practice of acceptance may be lost with the ease of change and erasure that digital media permits" (p. 112). These final inherent qualities of digital media point to previously cited research benefits of synthetic materials allowing therapy adaptive measures to decrease client tactile resistance and support emotional distancing.

L'Esperance (2014) created a Delphi discussion panel with six art therapist participants responding to questions regarding some complexities of digital media use without knowledge of

who the others were. These participants were purposively chosen because of their expertise in the application and use of digital media with clients. A written survey was initially emailed to the participants to spur open-ended responses "regarding their own methods of accessing technology and digital media while adhering to the ethical and safety codes of the profession of art therapy" (p. 7). Following the return of information from the first round, the researcher created a second and more detailed questionnaire to email again to participants for written responses. Following the submission of the second round of responses from the second survey, the researcher ranked issues of discussion in order of participant perceived importance to determine if consensus existed amongst the group. There was overall consensus among participants and key best practice procedures were distilled through a final round of clarifying, comparing, and contrasting responses.

Communication, technical considerations, and education were the three major themes identified by the participant experts (L'Esperance, 2014). For communication protocols, it was recommended that therapists' create and maintain a social media policy and discuss with clients any Internet use and privacy concerns that can occur with digital media before it is used. Similarly, technical knowledge and/or abilities to access experts in technology to build protocols around hacking risks, secure data storage, password protection and client possession of his or her own files, and fire wall prevention strategies for Internet privacy were recommended to use digital media with confidentiality and safety with clients. Participants also spoke to ongoing access and interest for digital media continuing education. Multiple leveled sources for self-learning were identified as on-line forums, reading and research, accessing colleagues and discussion forums to remain current, local or national trainings and workshops, and Internet learning. L'Esperance wrote how research participants "warned of isolation and discussed the

importance of participation" through many forms of communication that "also allowed users to overcome the gap between the rapid growth and adoption of technology as opposed to the slower dissemination of research" (p. 10) and still-forming ethical code parameters. Furthermore, research participants all agreed, "there is a need to conquer the fear of the unknown and for the art therapy profession to utilize education as power" (p. 11).

Intersecting Themes and New Ground for Digital Media

Overlapping points emerging from the literature highlighted a key theme that technological media, as evaluated by art therapists actively using photography, video, animation, and iPads with clients, have both unique and similar therapeutic art sensory qualities as traditional creative materials. There is growing description from the literature for how the inherent qualities of technological media can work well for diverse clients, in varied settings, and with specific creative qualities and relational impacts that traditional media can and cannot provide. There is increasing discerning description for how therapists and clients are finding digital media to have distinct qualities in touch and visceral sensation, portability and access ease, deletion and seriation abilities, movement and application of tools' color, texture and related palette choices' and depth of composition. In contrast, a majority number of art therapists have deemed digital media to lack a critical 'art feel.' To the point that digital media lack sensory qualities, the research illustrated how criticisms and concerns are often determined without direct experimentation or in-depth knowledge of digital media.

The contrasting sides of the debate regarding the sensory qualities of technological media correlated to variations in practioner levels of exposure and experience with the actual features or intrinsic qualities of specific modes and tools. For example, art therapists who reported value for emergent technologies in clinical use showed moderate to high experimentation and specialized

knowledge in certain media and direct observation of client outcomes. These evaluations contrasted with others' characterizations who reported less direct knowledge and low value in the media primarily because technology seemed to lack sensory qualities deemed essential to therapy. This theme from the literature indicated that investigative levels of experimentation, interest, and skill acquisition are needed for art therapists to use this media with clinical, artistic, and technical sophistication. An interrelated theme was the lack of exposure in graduate programs and self-reliance of interested clinicians to teach themselves new media and tools. Art therapy has possibly evidenced contradictory resistance and acceptance for emergent creative media because of a critical lack of educational curriculum inclusion for dialogue or for student development of competence through exploratory use. However, how do these media differ in training needs than the skills related to utilizing painting or sculpture with clients? These real and possibly imagined separations have been further accentuated through additional digital divides of access and affordability to decrease possibilities of wide spread skilled clinical use in our profession today. Moreover, there are difficult conclusions and perspectives to comprehend regarding the digital divides in art therapy including the miscategorizations of the materials and real complexities within the media of our digital era.

Because digital media fall into the nefarious category of 'synthetic' they are often thought of as unnatural or artificially derived. Some art therapists have evaluated these tools and art forms as lacking the tangible, sensory, and therapeutic qualities traditionally valued with the use of pastels, paint, and pencils. Digital media are often categorized as materiality experienced at a distance with impersonal tools or as untangible manipulations floating in a sometimes dangerous cyber space. While swiping a finger across an Ipad surface or synthesizing visual and audio tracks on a digital video timeline, there is focused body engagement and sensory

perceptions of sight, sound, and touch employed. This author believes that media affects are relative to the person and situation because whether machine-made or natural, tools and devices do not generate or hinder art because humans make creativity. A short list of qualities this author has found digital media to hold are visual depth and complex dimensionality in movement; novel to recognizable and multipurposed tools; immediacy in accessing tools; controlled to more fluid or chaotic lines, forms, and overlays; bold color and line expression even with limited strength or movement from the fingertip or stylus; immediacy in 'do and undo' choices with seriation or sequencing capacities; structured and predictable surfaces and frames; compactness and portability, tools immediately available and 'at hand' rather than complicated to set up; and diverse physicalities of variant visual, aural, and spacial constucts available through a variety of platforms and software available as 'freeware' or for purshase.

From the earlier section on reflective material practices, those art therapist teachers and researchers represent a shared vision and promotion of expansive media palettes for the clients that art therapy serves. Some research reviewed in this chapter suggested that the outlook and routines of therapists regarding media use are more of the determining factor than the skills, needs, preferences, or curiosities of clients. Discriminatory resistance to larger perspectives of art and creative forms could deny a collective responsibility for discerning the complex media properties imbedded in our contemporary epochs and experiences. It will remain that some art therapists believe that a choice can be made whether to engage with technology or not. Digital media it is experienced not as a single tool or medium but as interactive, communicative, and meaningful environments for users. Digital media convert the information they store and disseminate through abstract structures and platforms we do not necessarily 'see.' Digital medium is unlike analogue and previous art forms as "no imprint is pressed; a lattice is filled"

(Binkley, 1993, p. 96). These distinct tools of expression and dissemination reflect sensory-altering creativity and product forms that are difficult to discern from an uninformed distance. Digital media require closer examination, and through creative and visceral investigation, so that the materials within the terms *virtuality* and *interactivity* may represent key qualities in their own spaces that defy physicality as we have perceived and known it.

CHAPTER 3

Methodology

Art therapy has been experimenting with new technologies and adding media to existing palettes for creativity and expression. Disciplinary fields close to art therapy are also examining and adopting digitized media and communication platforms as viable and necessary materials (Cohen, 2012; Mavrou, 2011; Taylor & Carpenter, 2007; Tosone et al., 2005). To date, increasing numbers of art therapists and clients are using technology and digital media arts in clinical and educational settings (Orr, 2012). Further research is needed to investigate how emergent digital media and technologies are impacting communication and identify formation (van Dijck, 2008), knowledge and skills attainment (Bayne, 2004), and influencing modern behaviors, languages, and experiences (Binkley, 1997; Carr, 2008; Lòpez, 2012). The implications of digital media use span a continuum from excitement, to ambivalence, and rejection about which I have sought clarity. These considerations frame the focus of this research regarding the use of digital media in art therapy for art therapists and clients.

Research Design and Protocol

Digital Media Use in Art Therapy Interviews and *Blank Slate* were two-stage text and video research projects in which four art therapists and five clients of art therapy were interviewed for comparative and contrastive data. Both sets of interviewees had direct experience facilitating or using digital media in art therapy sessions. There were similarities in data collection methods such as how interview questions were sent ahead of time to both sets of interviewees and how methods of qualitative analysis synthesized digitally recorded responses regarding technological media experiences in art therapy. The data collection for stage one, or the art therapist interviews, employed methods of phenomenological and portraiture inquiry

methods through direct video recording and interviewer presence with the interviewees and their lived contexts. The four art therapist interviews were conducted at the participants' studio apartments, at an art therapy site, and a public venue after a workshop session on digital video green screening techniques. The participants' familiarity with their interview setting provided for meaningful contextual environments to conduct the interviews (Lawrence-Lightfoot, 1997). In contrast, the five client participants for the second stage of research were interviewed over the phone and Skype technologies to enhance their privacy and anonymity. With permission from the stage two participants, the interviewer collected some digital media artwork examples and audio recorded the interviews.

As described above, the artist researcher used digital video recording and editing as research tools and products but also as art-based, reflexive research processes that directed this researcher to themes, formed literal structure, and shaped non-definitive, interactive complexities (Leavy, 2009; McNiff, 2014). Vital to the reflexivity, the digital video recording and editing were art activities that granted the researcher deeper levels of inquiry where there was: constant reframing of the research, more questions generated, and a heightened sense of situational dynamics in the knowledge production. This engagement resulted in direct experimentation and application of research concepts, copious written and visual journaling, and the creation of two video media artworks that reflected related themes and descriptions from both sets of research participants in contrastive ways. For art-based data synthesis methods in both stages of inquiry, the researcher experimented with the content of the digital videos and their narrative structure, reflected creatively and critically on the inquiry processes and subject matter, and discovered and illustrated themes through direct use of visual media tools and materials.

Both stage one and stage two of research resulted in an art-based video products that explored and concretized the research, but how these videos were recorded, created and conceptualized, and edited for dissemination, were very different. The first video, *Digital Media Use in Art Therapy*, resulted in a 44 minute long 'talking head' style narrative video that is informational to the subject of digital media in clinical and educational use and it has been published on the Internet and presented at professional conferences. The second video, *Blank Slate*, is a four-minute montage artwork that was created solely as digital media exploration and creative play and will not be available on the Internet due to protecting the anonymity of participants and their artworks. The latter video was also created more as a reflexive process to the whole of the research process and to explore digital media more as an artist researcher than a researcher editor. Reflexivity methods noted multi-layered meaningfulness in the spaces between the client interviewees and their artwork provided, the audio recordings of interviewee responses to questions, the ideas and stories evoked in the interviews, and the art-based responses by the interviewer to the subject matter and other elements of inquiry. These interactive, meaning-making parts were all collaged together into a short video that reflected a nonlinear narrative about digital media.

Stage one: Art therapist interviews. The phenomenological and portraiture procedures in data collection resulted in multi-layered analyses to identify themes alongside the use of video media data analysis. The written transcripts and some video still imagery were initially printed on paper and placed in various proximities to one another on a large bulletin board. Video segments were likewise edited down to their core element of meaning, reviewed, and placed in theme folders and organized further into categories. The researcher read and observed the interview segments numerous times during the ongoing processes of research analysis to craft

both a written and visual narrative of digital media use. Responses regarding digital media became meaningful phrases of the four interviewees and were further broken into their most basic units to compare and contrast. These units or words and descriptors were then reconstructed together to form theme headings that used the participants' own constructs and literal descriptive words (Bruscia, 2005).

The intersection of phenomenological, art-based, and portraiture procedures in data collection resulted in further thematic analysis through "methodological, systematic, and rigorous" activities alongside artistic ones (McNiff, 1998, p. 166). The researcher used the computer-assisted program HyperRESEARCH to create four cases containing the textural and video files for each interviewee. To aid the analysis process with a 'hands on' and visualizing activities, the written transcripts and some video still imagery were transferred to paper and placed in various proximities to one another in a collage pinned onto a bulletin board. Elements were organized in constellations and rearranged over time; this visual map became a concrete and moving reference of the data in relation to both the video editing and writing processes. The specific artistic activities of research were editing interviewee segments onto a video timeline and experimenting with the order and flow to produce a cohesive narrative of data. Creativity was also employed in combining comparative and contrastive statements, documenting some of the influential life experiences of interviewees, and showcasing digital media examples and their applications in art therapy.

The researcher initially reviewed the written transcripts at least 10 times to immerse in the data and tolerate levels of ambiguity in the analysis process (Forinash, 2012). Both the visual map and HyperRESEARCH tools were used to review written and visual/auditory data repeatedly to eventually form "meaning units" (Forinash, 2012, p. 153) that reflected not only

regularities in the words of interviewees but also highlighted their contrasts and disagreements. Video from the four art therapist interviews was also loaded and logged in the HyperRESEARCH software as segments and coded into themes to compare to the textural codes from the written transcripts. What proved to be most helpful, however, was editing the video ahead of writing results to craft themes through the art form and creative 'logic' that ran ahead of the purely critical thinking analysis for theme synthesis. For example, video segments were edited down to their core element of meaning, reviewed and placed on the video timeline in a number of ways and sequences until the final product was organized, and crafted, to honor the content flow and layered ideas. The researcher observed the interview segments with at least 10 reviews in their raw video format and more than 150 times in the video-editing program to form a whole of the narrative. These reviews and crafting processes exposed vital narrative complexities that included body and verbal language, the interview interchange including the researcher's responses, examples of digital media use provided and described, artistic backgrounds and current interests of interviewees, and the diverse personalities and professional experiences of the four interviewees (Lawrence-Lightfoot & Davis, 1997).

Additional qualitative elements found in consultation and collaboration were used through member checking (Bruscia, 2005) during the research process to formulate the implementation of the study, review data, reshape researcher perspectives, and form emergent outcomes. The researcher used specific methods of member checking with interviewees to ensure accuracy in the written interview transcripts. A second layer of member checking included individual reviews by the interviewees for feedback regarding the video structure, flow, and representation of ideas and themselves.

Interviewee selection for the art therapist participants. Interviewees were recruited for a purposive sample and for their familiarity and expertise regarding digital media use in art therapy. The researcher wished to depict interviewees in "portraits" to provide aesthetic contexts and backgrounds to ground empirical descriptions of digital media through the use of video interviews (Lawrence-Lightfoot, 1997, p. 3). Five potential interviewees were contacted for this pilot study and one declined to be interviewed due to not working with digital media in therapy currently. The four remaining participants scheduled interview times in New York City where they all live and work. All interviewees consented to being identified in written and video pilot formats.

Interview questions design and procedure. Seven types of interview questions were employed including basic open-ended descriptive questions as well as clarification, comparison, paradigmatic, and closing questions (Forinash, 2012, p. 150). Interviewees described their current use of technology within both art therapy clinical and teaching applications. They also verbalized ideas about future digital media research, their origins and early experiences with digital arts media, ideas regarding increased inclusion of digital materials use in graduate training programs, and perceived interest of digital media amongst colleagues and students. Additionally, interviewees described positive and negative inherent qualities (Orr, 2005) with the digital media they used. Interviewees articulated needs to balance the liabilities and limitations of technology against the integration of clinical, creative, and technological abilities. The interviewees all noted that a quality of technology could be perceived as beneficial while also seen as a drawback in a different situation or circumstance. The specific details in the continuum of perceived cost benefits will be further discussed in the results of this study. The interview

questionnaire was sent ahead of the interview appointments by email for review by the interviewees (Appendix C).

All participants granted permission and signed informed consent to use their identities for both interviews and video (Appendixes A & B). One participant gave permission to photograph client animation work with previous releases signed by the youth for public viewing. The remaining three participants shared their own artwork that showed a mixture of digital and traditional media use.

Interviewee names, brief descriptions, and the designated initials. Barbara 'Basia' Mosinski, ATR-BC, LCAT (BM) has an undergraduate degree in video and graduated with her Art therapy Master's degree in 2005 from the Chicago Art Institute. Her work has incorporated performance art, video, painting, and digital collage. She was an educator for the film/video/new media department at the Chicago Art Institute before studying art therapy. Basia has practiced art therapy with inpatient and private adult clients and has used a variety of digital software applications including Mixel, Final Cut Pro, and Photoshop.

Brian Austin, ATR-BC, (BA) has an undergraduate degree in painting and graduated with his Art therapy Master's degree in 2006 from the Pratt Institute. His early work in the late 1980s included furniture making, drafting, and animation. Brian was an educator for computer animation at New York University and the School of Visual Arts. He studied art therapy as a second career after being a digital animator for 20 years. Brian founded of The Animation Project (TAP) in 2008. He has applied 3-D animation as both a therapeutic and skills-building process with urban youth populations. Brian has used many different digital arts media, but Photoshop and 3D Max4 are two of his favorite that he has worked with in the TAP programming.

Jon Ehinger, MPS, ATR-BC LCAT, (JE) has an undergraduate degree in electronic arts and graduated with his Art therapy Master's degree in 2009 from the Pratt Institute. He identifies as a multi-media collage artist who uses digital video and green screening techniques with youth and adults. Jon began studying art therapy after a several year broadcasting and digital media career. Jon has used Illustrator, Photoshop, In-design, iMovie, and Final Cut Pro video software with clients.

Robert Wolf, ATR-BC, NYS licensed psychoanalyst, (RW) has an undergraduate arts degree in industrial design and graduated with his Art therapy Master's degree from the Pratt Institute in 1973. He identifies creatively as a photographer, originally in film and now in digital media, and a stone carver. Bob began studying art therapy after a brief career as a teacher. He is currently an educator for art therapy graduate students at the College of New Rochelle. Bob used film and Polaroid photography technologies in the past and currently uses digital photography and Photoshop software.

Stage two: Art therapy client interviews. Phenomenological (Bruscia, 2005) and art-based research methods (Barone & Eisner, 2012; McNiff, 1998, 2014) were also employed for data collection and synthesis for the second stage of research, or the interviewing of five adult clients who had used digital media previously in art therapy sessions. Direct portraiture methods were not employed due to the protection and anonymity of participants and pseudonyms were chosen from fictional literature and film works where interactions between humans and technology are the subject matter. More indirect portraiture methods were utilized as four out of five interviewees did consent to recording of their voices and three out of five shared artworks to be included in short video. This video was conceived as a way to process responses to the interview questions and saturate in the data (Leavy, 2009) while art making in a nonlinear way to

contrast to the documentary product from first stage of research. The second video was created and edited by the researcher during a protracted process of art making and digital media reflection on the research and interspersed with the visual imagery provided by the interviewees. Other imagery and sound were field recordings or appropriated video content from the Internet to form illustrated examples of research concepts for the montage. Montage is a specific film editing technique in which a series of short shots are edited into a terse sequence to condense space, time, and information and artistic examples of it can be seen in popular music videos, movie sequences, and introductory segments to television shows.

Ongoing creation of video responses, journaling, and visual mapping of index data cards provided multi-layered analyses to identify and distill themes. Audio-recorded interviews were reviewed numerous times and resulted in meaningful phrases (Bruscia, 2005) graphically written onto numerous index cards placed and ordered together on a large bulletin board. The researcher read and listened repeatedly to the recorded interview segments to craft both written and art-based responses. Meaningful phrases from the five art therapy client interviewees were broken into their most basic units to compare and contrast. These units or words and descriptors were then reconstructed together to form theme headings that used the participants' own constructs and literal descriptive words (Bruscia, 2005).

Additional qualitative methods of consultation and collaboration were used through member checking (Bruscia, 2005) and where a collaborative transcript and thematic summation of the interviews were shared with the participants for feedback. The researcher wanted to employ specific methods of member checking with interviewees to ensure accuracy in the interview transcripts, meaningful phrasing, word choices, and distilled themes. A second layer of member checking included individual reviews of the researcher's art-based video response by

interviewees for feedback regarding the content, format, and sensory qualities. Because all client interviewees for part two of the research were identity protected and anonymous, the content, means, and intent of the second video are contrastive to the first. In essence, where the first video is informative and narrative to the practitioners of digital media use, the second video is more of an attempt to embody the research themes through an experimental and creative artwork. Moreover, the researcher abstracted concepts and themes by embedding digital media in layered visual effects to create imaginal, dream-like, and nonlinear spaces that move circularly within the video timeline linear format. This narrative structure was created in contrast to the first research video to illustrate some of the variety of application digital media can offer as diverse art forms and communication formats.

Interviewee selection for the art therapy client participants. Interviewees were recruited through a research description distribution and potential participants self-selected to email and state their interest in being interviewed with the researcher directly. The primary inclusion criterion was that they had previously used digital media in art therapy sessions. The researcher developed a research description (see Appendix D) and emailed this document out to 15 colleagues currently practicing art therapy and who have previously incorporated digital media in their materials palette. The potential interviewees were to contact the researcher at the email address and phone number provided on the research description. Seven potential participants contacted the researcher through email with stated interest in the research project. A total of five participants were interviewed for this stage of the study and two potential participants dropped out. One potential participant withdrew from the study because of personal reasons and the other was not eligible for the study because of no direct exposure using digital media in art therapy. After the consent forms had been shared, explained, and signed, the five remaining participants

scheduled interview times through email (Appendixes E & F). The researcher called each participant individually and the 45-60 minute interviews were completed over the phone/Skype technologies and in the course of approximately six weeks. Participants were located in three different states and spanned the ages of 25-79 years old. All participants self-identified as female and no other demographics were determined. All the interviewees consented to being identified by a pseudonym for the written results and all consented to their voices and submitted artworks being used in the short video where appropriate by the researcher.

Interview questions design and procedure. Seven types of interview questions were employed including basic open-ended descriptive questions as well as clarification, comparison, paradigmatic, and closing questions (Forinash, 2012, p. 150). Interviewees described their previous use of digital media within a previous experience of art therapy within the last year. They verbalized ideas about digital media in regard to their exposure to digital arts media, ideas regarding the relevance of digital media for therapy but in the greater world around therapy, and some personal reflections on what they find to be key sensory qualities of digital media. Additionally, interviewees described positive and negative qualities with the specific digital media they used in their previous art therapy experiences. Interviewees articulated needs to balance the liabilities and limitations of technology and how they saw the world evolving with digital media. The questionnaire was sent ahead of the interview appointments by email for review by the interviewees (Appendix G).

Interviewee pseudonyms. Interviewees from stage two of the research agreed to anonymity and research protocol that protected their names, demographics, and any other identifiers. For the purpose of discussing results in the following chapter, all interviewees from this stage of study were given pseudonyms specifically chosen from fantasy and technological

female characters that represent a heightened or altered consciousness of the fictional epochs they represent. Lilith, Helena, and Helva are heroine names chosen from science fiction authors and books including Octavia Butler's (1987) *Dawn*, Neil Gaiman's (2005) *Mirror Mask*, and Anne McCaffrey's (1961) *The Ship Who Sang,* respectively. The name Cameron was chosen from the television series *The Terminator: The Sarah Connor Chronicles* (2008) and one interviewee created her own name, Aearoth, from Elven words in J.R.R. Tolkien's (1955) legendarium book *Return of the King*. At their root, all these stories share fantastic visions of good and evil as interchangeably human, animal, or machine conditions. These fantasy characters are cross-species mergers and otherworld creatures that illustrate powerful humanoid states exemplified by muscled fighting Orcs or calculated cyborgs that fuse both organic and biomechatronic parts. The choice to use these names for interviewees was to give some form and reference to significant metaphors of blending 'human to non-humanness' that embody our increasingly intimate relationship with the machinic or other manipulated forms. There was also a desire to reflect how the arts predicted in some cases the very developments this research is discussing and the greater technological advancements we have seen 'made real' since the novels and films were first made.

CHAPTER 4

Results

Stage One: Art Therapist Interviews

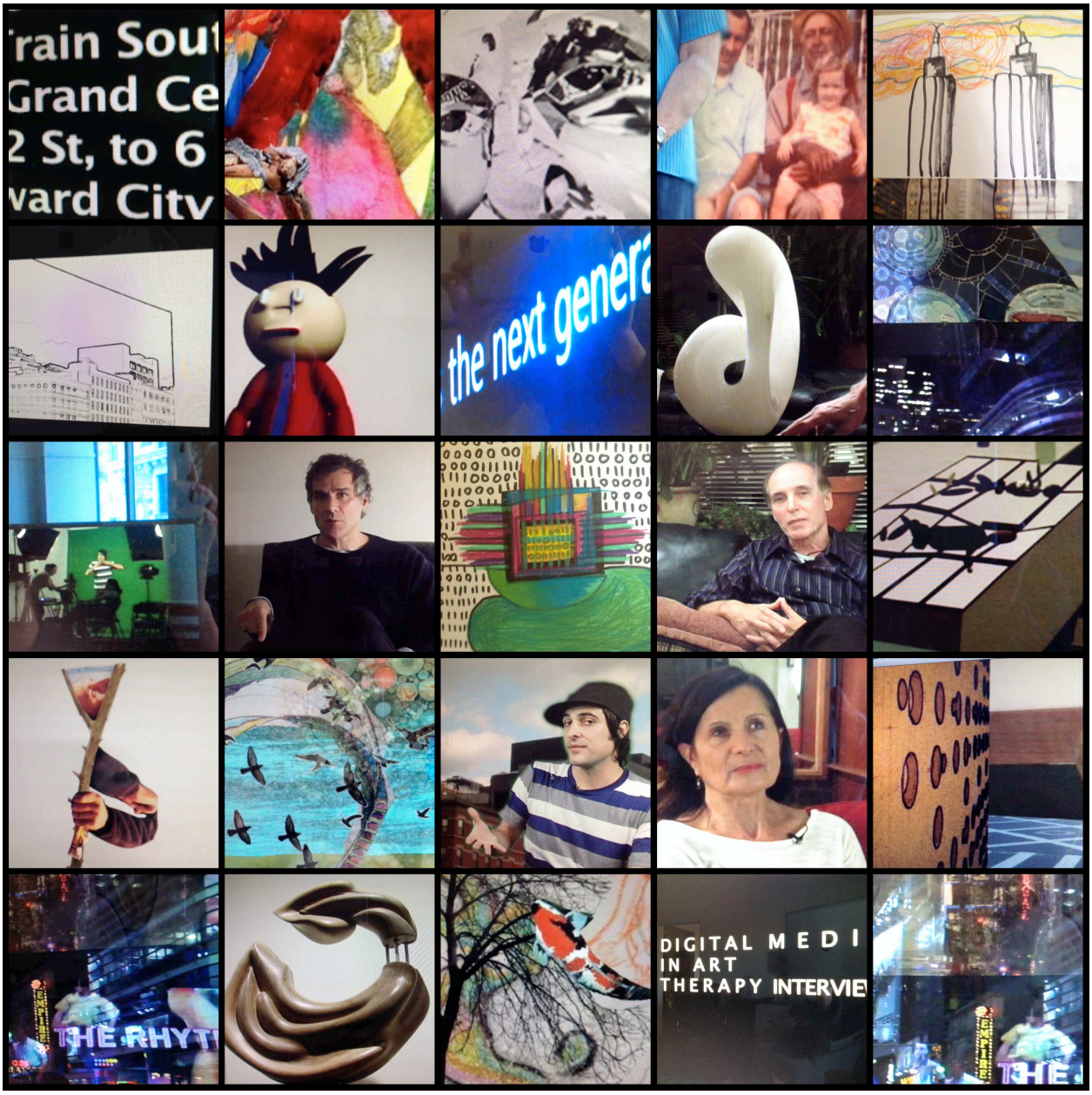
Data analysis of interviews with four art therapists using digital media concluded five major themes and seven subthemes identified below in Table 1. Following this table, there is a grid of video stills in Figure 1 that include interviewee portraits and their artworks, art-based researcher responses, and distilled thematic representations taken directly from the first video.

Table 1

Themes and Subthemes Regarding Digital Media Use for Art Therapists

Theme	Subtheme
Omnipresence of technology	Digital divides in art therapy
Photography and video as access to memory	Storytelling
Inherent qualities of technology	Immediacy and playback
	Emotional distancing and pause
	Movability
	Mobility
	Re-presentation
Hybrid nature of digital arts therapists	
Fluid parameters in digital media	Fluid boundaries in ethical use of digital media

Figure 1: Photographic Stills from *Digital Media Use in Art Therapy Interviews*



Omnipresence of technology. All four art therapists interviewed did not see technology use as a choice in their media palettes. Interviewees indicated technology was an undeniable presence in their contemporary creative work as well as in the lives of their clients. All interviewees represented technology and digital media as valuable to art therapy processes, goals

of clients, and the therapeutic relationship. As one interviewee mused, artists are always experimenting with new technologies that result in media interactions and assimilation.

> RW: An artist really takes the world that he or she experiences and plays to create something that mirrors that. I think that is one of the ways I understand art and the role of art, and technology as parts of that changing world. So we have to integrate [technology] into how we reflect back what we are experiencing… I just hope we do not lose our roots.

Interviewees differentiated in their responses as to whether technology was their primary choice of media or typically used in combination with other media. BA used digital media exclusively in his current work with teens due to his perception of direct client benefits from the focused use of animation. The other three interviewees ranged from similar exclusive digital media use to combinations of technology and 'traditional' media. BM questioned why art therapists were not adding digital media arts to their art therapy "palette of tools" to reflect a modernizing range of potential choices for clients. RW and BM described their past media assimilation respectively with, "I had to get on board with [photography technology] to not get left behind" and "I needed to learn [video] well enough so I can let go of that frustration and anxiety in order to focus on the other part of my art."

All interviewees determined that clients and art therapists are readily using technology to aid communications, to access information, and to form new digitalized visual and auditory languages. All interviewees stated reasons for believing in and being cognizant of the human-technology interface. BM identified that "we are evolving and like it or not, technology is not going away." She added that we are "gravitating toward technology" and "this is a valuable topic to understand thoroughly and go into realms of exploring what this really means for us."

RW called technology "an important asset and potential liability if it is used improperly." BA associated the younger generation's current gestalt presence with technology as a fluid and seamless integration. JE suggested, "there is an evolution happening" and "we can open our minds to new things." Regarding the relevance that digital arts media carries to future generations, JE imagined some of your youth as "hybrid humans" that interface with technology in ways we cannot yet perceive.

> JE: We are noticing that technology is having an impact on our psyches. I just recently read an article about the IPad and the benefits being found with autistic children communicating through [those tools] and how that is a way they did not have available to them before. There is an evolution [of communication] happening right in front of us.

Overall, interviewees agreed that technology was not necessarily the only or the better choice in creative media, but it carried an advantage in working with certain populations such as youth in therapy or with graduate students in art therapy education learning to assimilate the use of digital media in practice. BM stated that technology should be "a consideration for graduate art therapy programs in every course that is taught."

All interviewees assessed that technology in art therapy needed further exploration and research. BA described art therapy as having "knowledge that other industries do not have" about working with digital imagery, and art therapists "should be on the forefront of talking about what it means to create imagery with this media and fully participating in a [multidisciplinary] dialogue about technology."

Digital divides in art therapy. Digital divides is a subtheme of technology omnipresence as all four interviewees reported responses to and knowledge of new media running along continuums. There was reported resistance and interest, growing research and training needs

contrasted with a lack of both, expanding digital culture participation for younger clients and art therapists, and richer dialogue needed to address the benefits and troublesome costs of our growing technological world.

Interviewees discussed how technology has brought changes in cultural paradigms and for persons without access or exposure to it, there can be a lack of understanding and experience that can make interface with computers stressful. RW reported from his own experience that "fear of technology is a lot worse than the actual experience" and that "anxiety can be a sign there is something to learn." Furthermore, there can be judgments in regard to digital media rather than dialogue or experimentation with its use.

> JE: I have not been asked a lot of questions but I have been told some things, I want to say the reactions have been very strong. Whenever you are educating someone on things there can be resistance and I don't mind it. It is a testament to the work when we get through the resistance and then I have a new [digital arts] member, or an alliance with other [creative arts] modalities. I think if you give this media a shot you are going to find a new aspect of yourself.

While there is some resistance to DAT, all interviewees reported positive engagement for a number of art therapy practitioners and a growing client and student interest toward DAT applications. RW reported that DAT is "a very powerful tool and [Phototherapy] is a strong graduate course that draws a lot of interest." RW further described how he has taught numerous workshops, seminars, and private trainings to DAT interested individuals other than his graduate art therapy students. RW identified that older clinicians who have been in the art therapy field before digital technology was available have shown interest and attended his phototherapy classes in recent years and have learned how to "transition into the digital age." BM reported

that researchers, contemporary students of art therapy, and people writing about digital technology have contacted her as well.

> BM: I invariably get emails from people who find me through a search of 'video technology in art therapy' and they're often asking me questions about where they can find more information, how people have used [technology] so I think there is a hunger for it. I think we are at a good time to bring [DAT] into the educational arena, to research it more, to see the validity of what a lot of us that are using technology see where the benefits are, to actually prove those benefits, or study those benefits further… it seems like a really good time for that.

Interviewees discussed how clients and art therapists are already using technology because it is accessible and seems to have meaningfulness in their lives. BM reported finding many of her clients using digital media on their own because "they are shooting with their cameras, texting each other, and creating languages that did not exist before texting. It is through those media that we can really gain some insight into the places that have meaning for our clients." BA also reported "youth are wanting to use [technology media] and we are not serving the population if we do not become experts in the field." RW and JE reported on expansive technological possibilities defining present realities while simultaneously envisioning the future with technology. Interviewees felt that creative arts therapist could be a vital part of that participatory experimentation and reflection for interrelated fields.

> BA: There has to be dialogue… it's inevitable. There is no reason to say I'm doing this and therefore someone should not be doing that. They should all be done and I think it will change as the AATA membership changes, there will be more people who are digital savvy and they will be talking about those things.

All interviewees further indicated that to be more than just observers of techno-digital culture, art therapy must broaden skills of digital manipulation but also deepen its understanding of the consciousness and cultural forces taking shape. RW and BM voiced that we must "tread softly" and "tread carefully" with technology use and recognize its limitations while also expertly pushing its boundaries of potential.

Photography and video as access to memory. Two interviewees connected digital image making with access to memory through the users' affective experience of recording and watching moving and still images. RW described how phototherapy techniques create self-development processes for art therapy students.

> RW: Phototherapy is a very powerful tool because it speaks directly to images. Images are really our first language. We learn words later on. So it is really a part of our primary process, that when we see a photographic image, it goes right through layers of defenses and it can stir up feeling and affective memories very, very quickly.

BM similarly spoke to the power of images for video editing techniques to "mirror memory." BM described her research interest into editing software that "might actually help someone reduce the impact of his or her flashback material" through clients' creation of imagery to loop, review, cut up, delete, and manipulate in a therapeutic process. Furthermore, the client control of the video timeline software provides safety through the power position of pushing 'on or off' to result in a client-modulated control of traumatic memory flow.

> BM: I have used video and media arts with my private clients to help them tell their stories. Someone might come in and we may work with another material for months before an idea surfaces about bringing all their pieces and parts of their story into one timeline. It is a very effective way to bring the information that someone has gathered

about their own lives, the self-reflection, the details of what they have uncovered for them to see in one, solid place.

Storytelling. In the development of an individual or group narrative in art therapy, clients' photography and video work were identified as the subtheme "storytelling." Storytelling included components such as past, current, and future experiences, though these were not identified directly as memories. Visual and aural narratives can be recorded on digital cameras or audio instruments and downloaded on a computer. These files can then be imported into editing software to create collaged segments reflecting a client or group's storytelling. These segments are edited, or placed side by side on a digital timeline, to form a cohesive whole. BM described how "clients interact with their [storytelling] material over and over again which desensitizes them to potentially difficult subject matter."

The following excerpt describes the patience required of facilitators and youth clients in using animation for their collective storytelling processes. BA described how the stories often shifted and unfolded through the entire 12-week group experience of his TAP groups for adolescents co-led by art therapists and digital animators.

> BA: So the art therapist has to be able to sit with unformed content and the story starts where the youth are…and the youth typically start with the idea that there are no choices- you need money and you are going to commit this crime… always by the end of twelve weeks there is an element that enters their stories saying, you know what? I want to do something else.

Storytelling and memory activation in DAT can be described as processes where digital media and skilled facilitation can afford multi-level client experience and may support self and group narratives.

Inherent qualities of digital media. Interviewee BA reported that digital media do not have to be used exclusively nor chosen as 'better' than other materials but, the inherent qualities make it a good choice for his project's goals of helping adolescents develop impulse control and positive group learning through bi-weekly digital animation sessions. All interviewees identified that the qualities of technological creative media can be appreciated in one moment and work against therapy goals in another. Inherent qualities of digital media identified in this study were: *playback and immediacy, emotional distancing and elements of pause, movability, mobility, and re-presentation*. Media qualities existed on a continuum according to their valuation under certain conditions and devaluation in other situations to match the needs of clients. For example, the benefit may change independent of the media because the later might compliment the developmental stage of a client. The clinicians' skills may also be challenged due to familiarity or lack of familiarity and in containing client emotional or behavioral discharge due to elements of media stimulation.

Immediacy and playback. JE asserted that the immediacy of viewing videotaped movement or interactions can work positively for clients through their improvisations, self-explorations, and with the art therapist and computer software "as subordinate ego… driving their ideas." Photo work had additional immediacy effects reported, in that digital formats allowed for instantaneous imagery versus analogue film media that would lose a client's interest "by the time they took the picture and had it developed" (RW). Playback was described by BM as a therapeutic tool and client-driven action that can lend to a process "working over and over with [video content]" and create "a deeper process with the piece" much like with painting or other traditional media. BM also perceived benefits in the playback process, including client

desensitization around certain images and the ability "to change their stories" for empowerment and trauma resolution goals.

Alternately, the inherent qualities of immediacy and playback in media can work negatively for clients. BM described the immediacy of a client's likeness and other imagery played back as potential triggers for flashbacks or dissociative states in some clients.

> BM: I think there are limitations with video and some area of caution is working with people with PTSD who might be triggered by certain stories they tell, particularly if they are telling them on camera. They might experience dissociation, or they may in some way have difficulty with the playback of the material. I think it is important to be cautions, to tread carefully as you would with any material when you are using video technology.

RW agreed that the digital arts therapists should "tread softly with technology" with certain clients and students due to compounded exposure and the ongoing "boom, boom, boom of images" bombarded at them by mass media.

> RW: I think on some level [technology is] creating a generation with ADD because I have seen a lot of the younger students come through, even on a graduate school level, where they are really having a hard time staying and really focusing on anything, for any length of time. They are used to moving around and they have to be stimulated. I think creativity requires focus, it requires ability and a discipline to stay focused, to explore something to its fullest potential… So again, there's a question of balance here.

Emotional distancing and elements of pause. Subthemes of 'emotional distancing' and 'elements of pause' related to how digital media might heighten and support the containment of affect and impulse control for clients. For example, emotional distancing might be achieved

through a youth "hiding out" behind a laptop that "lets them be defended for a long time" (BA). Additionally with digital animation, "there is no real button you can push to get things done, it is always a back and forth, and so that slowness is essential" (BA) as a therapeutic quality. BA reported that youth have to engage in a long-term process to learn and experiment with the digital tools and media to then create finished products at the end of several weeks. These slow processes and complex media elements of digital media can support positive developmental skills and tasks such as frustration tolerance and delayed gratification.

Both of these qualities were described positively in digital animation media work where BA reported youth "sitting with something they do not know how to do at first." BA identified emotional distancing as a desirable media quality so youth can initially "hide behind the computer" in the TAP animation groups until they learn the media and begin development of digital characters and stories. BA asserted that "going to the affect" is not always the primary goal of therapy and the computer screen can act as a safety shield that provides age-appropriate autonomy for a youth in a peer group. Furthermore, BA reported the tools of animation are not easy to learn and can support age-appropriate learning for youth through mechanisms in the media that teach youth to work toward results rather than receiving immediate gratification. BA gave the example of age appropriate learning regarding impulse control was supported and enhanced when youth may have wanted instant gratification but the animation process made them slow down and have "elements of pause." BA saw this dynamic as a positive media quality since "waiting for the results" was written into the medium of animation and became helpful to the cognitive and behavioral development of youth.

For other clients or therapy goals, the emotional distancing quality of digital media might create an art experience that lacks sensory or kinesthetic attributes that clients or therapists might

be seeking. Likewise, the pause elements can take up too much time and energy of the client and clinician and distract from therapeutic attunement (BA). Technology can be cumbersome and delicate to carry around, to learn, and to use with clients (JE). However, BM reported that as with all creative media, art therapists should be comfortable and not intimidated by technology software or tools if they plan to bring these materials into sessions. She felt DAT required a comfort level with the media that came through the art therapist's own creative explorations and "learning curve" experiences of technology use.

Movability. The subtheme of movability came from descriptions of visceral and movement sensations, the integration of traditional and digital media, and the various image and sound possibilities of creative works. For example, watching oneself on a recorded video affords the client the ability to see his or her own ability to move and to experience sensations watching his or her own movements, sound, and interactions. Interviewees referred to self-imagery as imagery and sound that can be captured on video and reflects back to the viewer his or her literal body movements and progression of movements. JE spoke of the integrating potential of dance/movement to the visual arts through digital video media.

> JE: There is movability…(interviewee spins in his chair) because there is sight, sound, and there is touch. I think [digital art] media has qualities that traditional media can lack. I think technology integrates all the above and we can use traditional media with this process as well. This media is very much a collage. You have moving components to the video and green screen and you can adapt other modalities into it. I am rethinking this whole process as having a dance and movement, as well as psychodrama components to it.

Mobility. Mobility in the digital media of video might be the client's ability to take that recorded segment example and combine it with other video segments and to make a DVD to be taken home or transferred to a personal computer. Interviewees referred to mobility as the tools of technology being literally transportable from place to place. Mobility also referred to how the creative products of DAT can be uploaded, shared, printed out, or placed with other materials through manipulative digital file format choices. RW reported on how his phototherapy students "mix art materials with [digital photography]" and collage the images with "paints, craypas… to create artwork that integrates both." BM spoke to the transportable nature and smaller storage requirements of digital media. JE and BA reported on the transmutable nature of digital media and the numerous recombination and collage capacities of separate, disparate elements.

Re-presentation. Re-presentation from the video example is a media quality where digital media has become a vital part of documentation and saving of artworks from analogue to digital formats to save, submit, or show later. BM discussed how digital media was used "almost like a scrapbook, or an album of sorts, where they put all of these different pieces of information into one place." BA noted that his animation groups present their finished animation projects for the site and often for larger audiences too. JE noted how artists use digital media "to re-present" and archive artwork and show to others later. JE also spoke of re-presentation as a process for clients where technology allows an original painting to be digitally photographed, made into a digital file, and then recreated or transformed in therapy sessions with multiple possible formats. RW similarly reported on the ability of photo manipulation directives that gave students a process to alter feelings and thoughts by re-presenting and manipulating old images anew.

Hybrid nature of digital art therapists. The artwork and histories of these four art therapists revealed hybrid interests and talents in art therapy, digital and new media, electronic

arts, painting, industrial design, photography, and performance backgrounds. These art therapists all discussed how their creativity, clinical training, work experiences, and technology interests all combined to make them willing to adopt computer and photography technologies.

It might be that hybrid interests and backgrounds created a strong mix of technological, clinical, and artistic skills that cannot be used in isolation for these art therapists. BA discussed how his previous career as a digital animator as a crucial additive skill he combined with his art therapy work later. JE also discussed how he added art therapy study and work to his initial career as a digital arts technician to fulfill a reported missing component. BM reported on how she needed to learn the technical aspects of video to complete her work as an artist and have added to her skills as an art therapist. RW asserted that hybrid characteristics seemed necessary to mix the development of the three core skills of clinician, artist, and technician in mastering DAT, because unevenness can have one identity override the others. RW stated that, "artists need to learn the basics of art…before they are thrown into technology, otherwise we're going to create skilled technicians but they will not be artists." When discussing the additional clinical identity, RW reported, "we need to train our art therapists first with [clinical] theoretical and experiential skills and then we need to integrate the technology."

All interviewees described mixed skill sets in their backgrounds and ongoing learning about technology to stay current, while three noted previous degrees and/or careers in technology before they became art therapists.

Fluid parameters in digital media. How technology media and artwork can shift and change their formats in contrast to traditional media was an area of concern for some interviewees. This theme of technology use in therapy is often a considerable challenge for art

therapists in learning digital tools and software and staying current with the software updates and endless learning curves.

> BA: The hardest thing… is in the parameters [of technology]. When you do a painting you set up your canvas, it's 4X4, it's 8X10, you can always change it, but it is kind of set and you know what it is. But if you do work on a computer, I can render it as an animation and I can put it on YouTube, I can put it on television, I can make a film, I can make it a print, I can make it a T-shirt. So the art for the artist to decide what the parameters of their artwork are a real challenge. … And not knowing what the form is and having so many options, I don't think anybody's figured that out and that makes [DAT] complicated. That may just be something that the younger generation is not even going to be concerned with. My other frustration with digital technology is that it never stays still. I know how to use a number 2 pencil and I have a craft with it. It is not going to change in six months.

RW contrasted the additional learning of digital photography to his expertise of darkroom film photography as a necessity "to stay current and not get left behind" in arts media use. Staying current in digital media or any arts media use requires openness to ongoing learning curves in self study and session work with clients or groups.

Fluid boundaries in the ethical use of digital media. Ethical considerations regarding technology and social media have confounded art therapy's ability to go forward with the media use. JE voiced that the clients' identities "are real estate" and this consideration tends to be the center of debates regarding the display of client identities in photography and video work that may hinder confidentiality. BA reported, "ethics are going to radically shift over-time because the youth growing up today do not have the same boundaries that we currently have… so the

parameters of what is ethical is going to change." He furthered explained that youth might not be so inhibited to show their artworks made in a therapy session or sharing content of their email or Facebook page. Many ethical concerns with digital art therapy processes and products are focused on protection and privacy concerns for clients because this fluid media tests privacy boundaries in ways traditional media do not. BA added that "ethics are going to radically shift over time because the youth growing up today do not have the same boundaries that we currently have… they are going to have to come along and re-write their own ethical standards."

Results from the art therapist interviews conclude with the above subtheme and the following results are from the second stage of interviews conducted with five clients of art therapy.

Stage Two: Art Therapy Client Interviews

Stage two of this research was designed as a critical extension of stage one as it accessed clients of art therapy to inquire about their perceptions and experiences with digital media as similar or different than art therapists. There is a brief description of interviewees from stage two and previously on page 81. Ethical principles of anonymity and privacy protected many elements of their specific demographics and related identities. The pseudonyms related previously on page 82 were used to delineate their particular words and phrases, which are quoted verbatim and placed in quotations.

Art therapy client interviewees for this second stage of study had varying work identities as professionals from the fields of media research and science, anthropology, education, corporate communications, and art. One interviewee self-identified as a 'digital native' to technology use because she had research and professional experience using computers with sophisticated imaging and analysis software. Three other interviewees self-identified as 'digital

immigrants' and another as a 'digital moderate' when asked about their level of expertise with technology. The digital moderate had used technology in her professional capacities as well and the remaining three digital immigrants felt relatively new or unsophisticated in their use of technology. The use of immigrant, native, or moderate terminology is typically applied when describing levels of familiarity persons might show in using technology as work tools or art forms. These levels of familiarity sometimes correspond directly to age because older generations were less exposed to technology growing up as younger generations. As a strict term, digital native status is typically applied to the generation of 'millennials' born and coming of age at the turn the 21st century who were immersed in technological environments and tools since their birth. There is also a span of persons who identify as digital native if they studied, worked intensively, or otherwise integrated computer technologies since the earliest stages of consumer development and dissemination in the 1970s and 1980s. These previous maturing youth were more selectively exposed to differing levels of and exposure to early computer technologies and before their exponential proliferation we witness in the world today.

Data analysis of five interviews with art therapy clients who had used digital media in sessions concluded three major themes and seven subthemes identified on the next page in Table 2. There is a second grid of photographic stills (Figure 2) that follow the art therapy client theme and subtheme table (Table 2) and that represent the montage research video, or *Blank Slate*. The name of this short video was taken directly from a research participant's meaningful phrasing where she identified how all of our computerized devices look the same but how we customize and build preferences and details within those 'blank slates' are infinitely individualized. Images included in this grid include interviewee artworks, researcher artwork responses, a field recording of an augmented reality public mural wall titled "Production and Beauty"

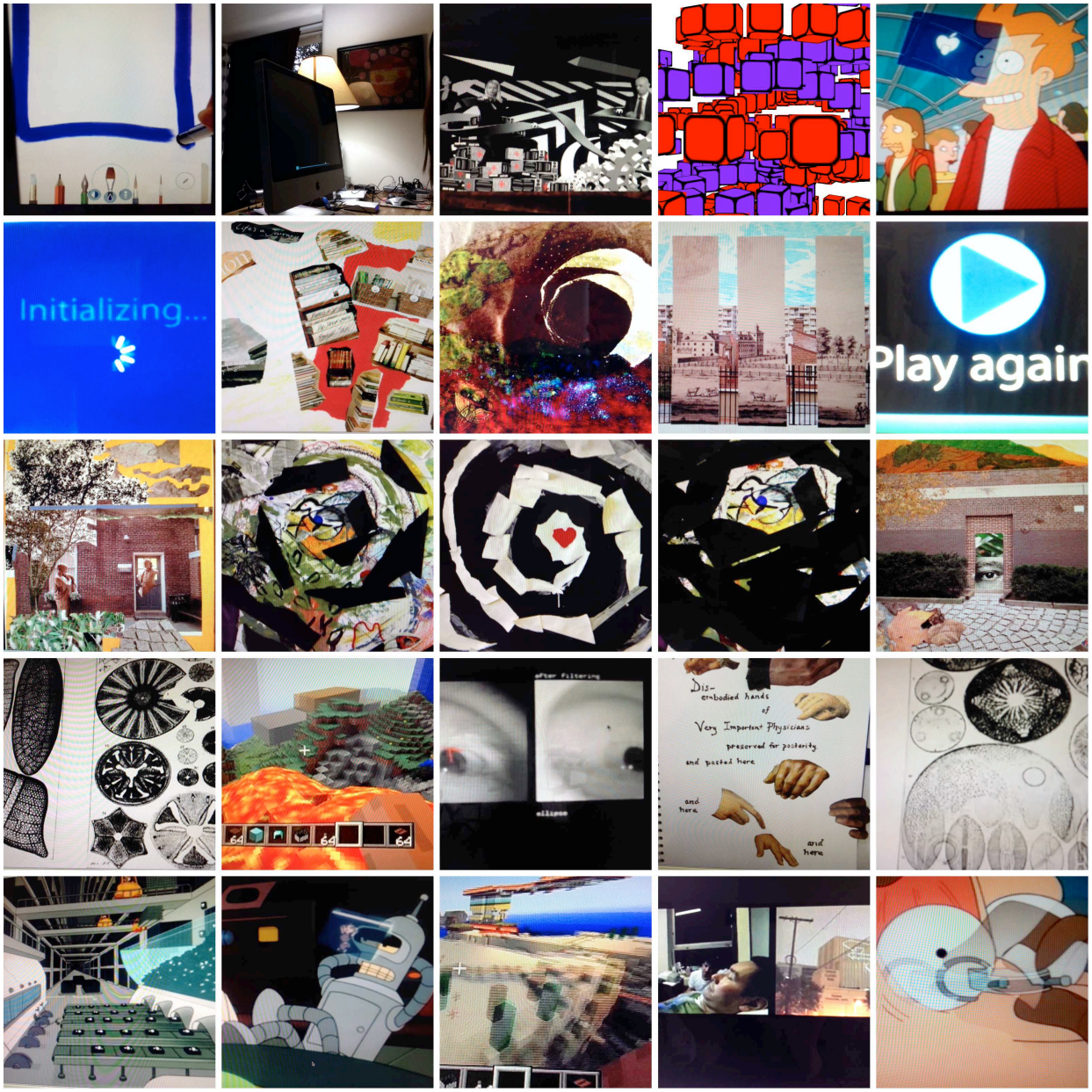
(http://www.republiclab.com/projects), and appropriated imagery from three Internet sources. Short sequences were taken from the animated television show *Futurama* and an episode called the "Killer App", a short video titled *The Diatomist* (https://vimeo.com/90160649), and from *Eye Writer* (http://www.eyewriter.org/) or, a deeply inspirational story of an eye activated assistive technologies project that enabled the paralyzed Los Angeles graffiti writer Tempt One to create again from his hospital bed. All of these elements were used in the short montage video created by the researcher to illustrate and respond to cumulated themes from the art therapy client research participants.

Table 2

Themes and Subthemes Regarding Art Therapy Client Digital Media Use

Theme	Subtheme
Technology as access and bridge to everyday	
Openness to new generations and evolutions	
Inherent qualities of digital media	Veracity of the image
	Ordering and winnowing
	Versatility
	Capture and documentation
	Roadblocks
	Curious and playful
	Predictable to unpredictable

Figure 2: Photographic Stills from *Blank Slate*



How interviewees had used digital media in their art therapy experience was somewhat varied. Two interviewees discussed their art therapy group experience where they completed walkabouts with digital cameras, took pictures, selected several, and fused them with other paper, paint, and collage materials in multiple sessions. Other interviewees had used drawing and painting materials as a group to create imagery on a single surface that was photographed at

intervals to create a stop motion animation video for an art therapy group. The final interviewee had used text and font software, printing on transparencies, and digital photography in her art therapy experiences. No interviewee participants in this study were exposed to animation software or drawing or painting programs on digital tablets.

Technology as access and bridge to everyday. A major theme expressed by all the interviewees was how digital media should "absolutely" be offered as media in the ever-expanding palette of art therapy. Interviewee Cameron described how a "whole range of art forms are important to offer" to diverse clients and Lilith stated that digital media was "particularly important to offer now." Helva described how digital media had critical importance to inclusion because it "links the therapy to contemporary and day to day tools that people use." She reported her digital media experience in art therapy broadened her use of digital photography into her life and well being. Helva concluded, "If therapy is going to have an impact beyond the walls of therapy room itself, engaging technology that is out there provides a bridge from the therapy to everyday life."

Aearoth described how technology and the Internet had "opened up worlds" for her in recent years because she had an "encyclopedia" at her fingertips where she could keep "current on authors' works" and research other interests. Another important access Internet technology had granted her in the everyday was a "world expansion" in the privacy of her own home because money and health constrictions had isolated her. Helena spoke to how using digital media in her previous art therapy influenced her to procure an iPad and apps for creativity and pleasure. She also reported being more "adventurous" in bringing digital media creativity and imagery into research and work. She and other interviewees reported using more digital media

now than they did previously in their day-to-day lives and in the forms of photography, drawing, and painting apps and hardware such as a digital camera, personal computer, and an iPad.

Openness to new generations and evolution. Interviewees reported on using digital media as a "necessity" for life and work but also described evolutions into its use for creativity. More than feeling forced to adapt, these interviewees described technology as materials of practicality but also in terms of interest and learning.

Cameron mused on how humans seem to naturally "always want to evolve and change" and often ask, "What is that like? Is there a better way to do things?" She remarked on how unexpected the technology changes and designs can look because we cannot foresee or imagine what the changes will be but nonetheless "look forward to seeing it." She identified that technology literacy was important for adults and youth alike because computers are in use for most.

Lilith reported of how digital media aided her to "think of something in a new way" and described how "that part of my brain was just sitting there for years" because she adapted readily to using computers. In relation to observing and being open to new generational changes, Lilith stated, "how your language is structured is often how you see and perceive things." She surmised that technology supports how "we already live" within visual cultures, dynamic sound, and evolving text because we "use what we have" and create new evolutions of technologies, knowledge, and experience.

Inherent qualities of digital media. Sensory and structural qualities of digital media were a major theme and had an impact for interviewees in therapy and their day-to-day lives. In its most basic form, digital media were newer vehicles of expression for two out of five of the interviewees and four out of five mused that the 'digital' aspects were not so important to the

self-generated imagery they previously created in art therapy. One interviewee reported that when she is asked about technology she feels confused as to what it specifically means because it can be many different processes, tools, products, and modes of dissemination. However, when asked what qualities interviewees wanted to identify specifically for digital media they are familiar with, there were many rich descriptions that formed the following subthemes: *veracity of the image, ordering and 'winnowing', versatility, capture and documentation, roadblocks, curious and playful, and predictable to unpredictable*.

Veracity of the image. Helva and Lilith spoke to the veracity of the image in particular. Lilith noted that photography has "truthfulness" and described how she used the Internet as a photographic research tool to search historical archives. Lilith spoke to how "hours can go by" while viewing Internet photograph sites and that she found after a while it was "seductive to stare at images." Helva also spoke to the veracity of the image when she discussed her self-chosen imagery taken with a digital camera in art therapy. She shared how she took multiple photographs, chose a few to work with, and had the "tiny images in the viewfinder" blown up to larger sizes on paper. Sometimes veracity revealed the images as blurry to document subtle movement when the image was taken. Afterwards, the chosen images stayed whole or were cut out, mixed in layers, and repurposed for final images on paper. Helva noted that the original authenticity of a photograph could change as editing and viewing the photographs often led her to take multi-perspectives on personal to more abstract, textural imagery. She concluded that multiple levels of processing the experience occurred during and after the original photographs were first captured.

Ordering and winnowing. Aearoth identified the computer and Internet as research tools better than her rural library and a great assistant in "winnowing papers," or, reducing them to

their lesser elements. The ability to sort a "gazillion" material papers and folders and "condense" them into digital files that no longer take up any space on a table was an identified sensory quality for this interviewee. She also described how some of the structural qualities of the computer, keyboard, and the tasks she completed with digital media have an "all in one" comforting order to them. Another interviewee described how the final products of digital media can have a magical effect of creating order where there might have not seemed to be any. For example, Cameron described the final stop animation video of her art therapy experience and how "amazing" it was to watch and reflect on many parts becoming one image framed and reduced to a fluid movement and sound event.

Versatility. Combining and layering the imagery was one quality under the subtheme of versatility and how digital media is a "multi-thing." A few interviewees described digital media as having many possibilities and as a multi-leveled sensory experience. Lilith spoke about how computers provided access to information, research, and people and was "very much of a help" to her. Helena positively described computer hardware like an iPad as "transportable, no mess, compact, no storage or set up needed, and easy access." She described how in her art therapy experience the digital camera assisted with her low energy and "brain fog" and the structure and ease in the process created low frustration for her. Another interviewee spoke to how digital photography can be straightforward, immediate, and simple in contrast to adding techniques of editing. Editing software added to that process could make it more challenging, multi-stepped, and possibly more engaging to levels of frustration for clients and therapists. Helva described how her digital photography experience in art therapy presented many choices in materials use and creative combinations of imagery and texture possibilities.

Capture and documentation. Helva identified that with a digital camera she captured textures or "whatever caught my eye" to "more personal perceptions and experiences." She talked about the challenges of "slowing down and looking at things through a slowly paced eye" and how finding composition and framing for a photograph in a wider context translated to mindfulness in the moment and added positively to her internal processing. She added that choosing the composition of the image and having control in the framing, depth, and lighting focused "[my] eye on whatever that is." Helva also discussed the variety of experience photography can capture effortlessly in seriated imagery and document for reviews later.

Cameron spoke to how photography captured the process and the essence of what was happening in her group experience by playing back progressions in a final product she could go back and re-experience or review. She valued how the photography and video captured a sensory process she was having with other art materials while ripping paper and being "messy" with paints. Cameron further highlighted how digital media can be distinct from other art mediums and forms because of how the creative products are disseminated or shared with others through tangible material products like a DVD and flash drives to intangible uploads. Moreover, she felt that through viewing the documentation a few times, the stop animation revealed themes and smaller elements that changed and emerged with time passing.

Lilith described a growing curiosity she had for the documentation qualities of digital media and where she felt inspired to re-appropriate older creative projects of hers into new formats and art forms and disseminate them online for a wider audience.

Roadblocks. Lilith described how using the Internet or computer too much became a "time waster" for her. She described how both at home and in her art therapy experience, a technological process could create disconnection for the person or persons using it.

Disconnection in the process for Lilith happened when "collated art and imagery from many people [was made] with no insight shared and no definition of emotions." She also identified roadblocks in technology as lacking the knowledge and skills to accomplish something she wants to do and the struggle to afford computers and all their programs and upgrades. Aearoth also reported frustrating qualities when she gets stuck in a digital media task or sequence and "feels stupid." She described the frustration as that of standing in front of a "roadblock" not knowing "there are detours." However, "once I accomplished something it gave me more facility with it" and the detour around the roadblock is found.

Curious and playful. Aearoth described how art making on paper or canvas always set up some "rigid expectations" inside of her whereas digital surfaces seemed to bring more "flexible expectations" internally. She identified processes with digital media as "no pressure" and "malleable play and experimentation" that "frees me up." She found that through many recent experiences with the computer she "felt less intimidated by technology" because it somehow circumvented the "self expectations of performance." Moreover, she felt "excited to use digital media because it is play and it frees me up." Aearoth described how historically different media, besides fine art forms and museums, have introduced people to art and art making such as the book arts or film. She noted that stylus use on an iPad to draw "takes the paintbrush to a whole new level."

Other interviewees identified a curiosity they felt towards the innovations of technology and how they saw it in the wider worlds around them. Helva reported feeling that she did not "have to be a good artist" because digital media had scaffolding capacities in its creative forms and platforms. Moreover she described how the "blank slate" quality of iPads and iPhones essentially gives everyone the "same starting place" but devices become individualized with

photos, settings, and apps that essentially express the characteristics, interests, and relationships of the user.

Predictable to unpredictable. The 'blank slate' description of technological devices continued into how further qualities of digital media were termed as predictable to more unpredictable. Helva felt that automated images, or those taken from the Internet, were not the valuable part of creating with digital media because they lacked substance compared to images self-made. Lilith stated that she liked older, more predictable art forms such as "books and paper and pens that smell" but she also found within computer imagery a mix of the mundane to the more exciting and "unpredictable" vehicles of expression. Two interviewees described how the format of computers and iPads had a predictable square frame, which reflected structure and order. However, within that surface many unpredictable things can appear and be manipulated. Cameron spoke to evolutions over time of the image and the word and expected human expression would always evolve into unpredictable and new vehicles of expression.

One important footnote to this large theme of inherent qualities of digital media was an insight from one interviewee. She thought that to simply focus on beneficial or hindrance qualities to particular media in therapy might be missing an important point about creativity. Helena stated "humans make creativity with whatever tools" are around them. She did not necessarily find the digital or any other media to be particularly 'healing' in her therapy but what did help was being around others, participating in the group process, and the "making of something." Helena concluded that "people always find ways to create" and "they will always learn the tools to make things."

Results Summary

The researcher intended to study firsthand experiences from four art therapists and five clients of art therapy using technology in clinical and educational settings. Methods of art as research and portraiture were used to develop artist-researcher responses and context and voice for participants while interpretive analysis by this researcher formed emergent themes and synthesized the data into text and video products. The results included many themes of connectivity, normal resistance, and adaptively that bridge art therapy to larger cultural shifts occurring in our immediate societal and world cultures with technology. This researcher has found research results to have profound implications for future visions of computer mediated spaces in therapy and how the conscious use, balancing with, and understanding of technology are not casual choices or behaviors but dynamic interactions with cultural beliefs, behaviors, critical thinking, and self-reflection within growing media sphere contexts. The results also revealed enriching impacts and sensual qualities of digital media that are inspiring hybrid material interactions to their users and facilitators in art therapy. As discussed before, media and materials are valued in the expressive therapy fields as core conduits and change agents by their 'presence' in and effects on the therapeutic exchange. Digital media will continue to have profound effects on therapy, therapists, clients, and the environments we inhabit.

The results supported existing literature on digital arts media use in art therapy and highlighted additional areas of needed study. The researcher evaluates and responds to key concepts from both stages of interviews in the following chapter and places outcomes alongside existing research when relevant. The merits of using video as a research product and art-based tool and reflexive process, the limitations of this study, and refinements for future digital art therapy research will complete the discussion.

CHAPTER 5

Discussion

This current study focused attention on four art therapists and five art therapy clients who actively used digital media arts, to different degrees and levels of engagement, for specific goals to clinical or educational applications. Re-contextualizing and claiming technology with its emergent, large scale presence was a challenge articulated by all interviewees of this study as they noted their own and art therapy's mixed and patterned responses to digital media. Like other technology users, these art therapists and clients of art therapy have evolved in their use of technology for their own personal, professional, creative, and organizational practices.

All interviewees in both stages of this study described the omnipresence of technology in our everyday lives and shared that they incorporated digital media into their work and creativity because they valued evolving technologies as contemporary and relevant materials for practical, therapeutic, and educational circumstances. Art therapist interviewees stated high importance to teaching students and clients of art therapy critical technology and digital literacy skills for employment and educational readiness skills. Similarly, art therapy client interviewees described digital media as a material of access and bridge between therapy, therapists, and the social and technological capital of clients.

This researcher was struck by how the art therapist interviewees spent years in other career paths before becoming art therapists and how they combined those hybrid skills and interests in their current professional work. The art therapy client interviewees showed similar integrative paths in how they have learned and incorporated technology into their own work and creativity. Both groups of interviewees perceived a constantly changing world and have readily assumed interest and a learning stance toward what they see as emergent, innovative, and

necessary art and communication forms. Several interviewees stated in different ways that whether or not one is directly engaged with digital culture, developing technologies are becoming an operational consciousness through the ubiquity of digital instruments and everyday computerized systems of communication and creativity. Furthermore, there were musings from interviewees related to how technology has manifested in a variety of surprising ways and will evolve further or be necessary adaptation for younger generations that will inhabit future worlds.

There was openness to future generations and evolutions of change with technology expressed and both groups of interviewees addressed how society at large has changed with technology. Art therapist interviewees specifically discussed how digital savvy youth and adults are evidencing group cultural upheavals such as new forms of identity, creativity, and communication through computer platforms. Details regarding digital media, as the medium or conduit of information and imagery in our modern day Internet, and how it makes use of invisible forces to shape our thoughts, behaviors, and even emotions was noted by a few individuals in both groups of interviewees. One art therapist interviewee shared that when these intimate elements of our creativity, work, and social identities are shared on the Internet, concerned therapists' are prudently discussing identity privacy and other relational boundaries within the expanding use of social media, while clients and other digital culture participants do not always share the same concerns or self-restrictions. These divergent realities might be evolving social ethics that reflect misalignment and digital divides between generations of computer and Internet users but they might be seen as adaptive behaviors toward an unfathomable future with technology. In recent years, ethics, privacy, and informed consent have been some of the heaviest debated topics in art therapy related to safe use of digital media on Internet platforms and in virtual communities (Alders et al., 2011; Alders & Allen, 2010;

Mosinski et al., 2012). These concerns relate back to early and ongoing, complex discussions in the literature regarding ethical technology use in therapy.

Art therapist interviewees indicated that the majority of their colleagues have resisted investigation of digital media for client creative use until recent years. They also indicated there was a growing interest amongst other colleagues and students of art therapy who made contact occasionally to ask where more information regarding clinical applications can be found. Furthermore, art therapist interviewees suggested that divided attitudes towards digital media within the growing, ubiquitous presence of technology have created polarities of enthusiasms for discoveries and development as well as criticisms and perceived costs to clients in technological environments. Digital media use in art therapy has brought constant contradiction in characterization just as the histories of all new technologies have brought. Moreover, this sort of critique and investigation of emergent media are critical to the development of any field. While some art therapists are exploring digital realms and expanded virtual palettes, others seem wary of virtual speeds, digitalized immediacy, symbolic conversion, and the constant distracting gear and gadgetry for various reasons (Kuleba, 2008; Orr 2006b, 2012). The answer seems to lie in consciousness and balance. Both groups of interviewees from this study discussed that there is time for virtual engagement and time away from the machines in human and haptic sensory consciousness. Interviewees also suggested that the assimilating and automating qualities of technology run in parallel to other material complexities where conscious participation over complacence or 'painting by numbers' drives the media to expand senses, creativity, and the art. One art therapy client interviewee was adamant that humans drive creativity and not the tools or media they use.

Art therapist interviewees discussed challenging elements of fluidity in digital media while two art therapy client interviewees described their roadblocks in computer use that engage ongoing skill development and constant problem solving while making the technology work they way they want it to. A few interviewees from both groups contrasted technology anxiety against attainable levels of craft with digital media that heighten media literacy learning, reward patience for working through technology challenges, and empower computer users through negotiating ongoing learning curves. Digital media skills cited in this study included playfulness and an openness to discovery that can run parallel to self or online tutorial learning for technical problem solving. I believe that bias and strong reactions to technology often result from unconscious fears of the machines threatening our capacities to learn new things and a reluctance to embody patience through technological challenges. Technology can mislead the uninitiated because it can appear as mere buttons to push in order to create a complex product.

Some interviewees from this study reported positive qualities of digital media bringing distinct connectivity between client and therapist in contrast to perceptions of 'traditional' arts media being the only tools to enhance to therapeutic relations and communication. One art therapist interviewee carefully described how one distinct quality could afford the therapeutic relationship in particular. In essence, computers were described as structuring safe connectivity through how they present structure, slow and careful process, and a literal physical eclipse behind the screen for adolescents approaching age appropriate needs of control, restrained affect, and learning tasks of delayed gratification. An art therapy client interviewee similarly described how her art therapist facilitated a mindfulness practice with digital photography in her sessions. This multi-leveled photo capturing and processing allowed this client to connect to her own imagery but also the natural environments and textures around her that held and reflected back

her own internal processes. Digital media might receive criticism and caution because of perceived loss or blurring of the 'real' with the 'as if,' but most interviewees noted similar to added value in synthetic materials as other art forms. They described in detail how distinct and novel qualities can be applied therapeutically and skillfully or create disconnect and frustration if not facilitated skillfully (Edmunds, 2012).

Discussions regarding the sensory and inherent qualities of digital media were particularly strong from both groups of interviewees. Art therapist interviewees conceptualized various inherent qualities of technology as important aspects of how they choose this media in combination with other choices to compliment a client's or group's needs and goals in therapy. A few art therapy client interviewees went into detail regarding the meaningful and helpful qualities they found within digital media applications and tools. Moreover, both interviewee groups described sensual qualities such as sound, touch, and depth in visual fields, movability, 'hands on' manipulations and tools, and visceral responses in their digital media experiences. Synthetic, digital art materials have been historically perceived as very different from sensate art materials in art therapy and have been too often described through intuitive understanding of benefits and drawbacks (Kuleba, 2008) while not "intellectually understood" (Orr, 2012, p. 12) or experientially applied and evaluated.

Media chosen for use in art therapy have a theoretical basis in its applications to promote and not regress the goals or therapeutic support for clients in sessions. The findings from this study supported the research of Edmunds (2012) and Austin (2010) who both reported on distinct therapeutic qualities of digital media such as emotional distancing that can aid in containment of affect for the client in the therapy experience. Similarly, one art therapist and one art therapy client interviewee each spoke of the 'blank slate' potential of technology that gave users

structured, square screens for predictability with automated to more unpredictable capacities for content within that frame. Another art therapy client interviewee spoke of how we should use 'what we have' and by allowing clients to bring own social capital or virtual devices into sessions, therapists can bridge therapy to everyday lives, skills, and interests. The veracity and playback or review of video and photographs were valued in particular by the art therapist interviewees as important visceral experiences that can structure client self-objectification and self-learning while watching themselves possibly as others see them (McNiff & Cook, 1975; Mosinski, 2010; Wolf, 2007). The art therapy client interviewees expanded this review quality of photography and video into 'capture and documentation' events and postulated how images can change in their review, be meaningful in a protracted process, or morph into new ones that emerge over as time and with further review of, or incubation with, the artworks. Another distinct media quality example was re-presentation where digital imagery can be seriated or saved in multiples and worked in different versions. An art therapy client interviewee discussed her ability to frame, focus, and record as opportunities to slow down internally as she found subject matter or texture in the world through her digital camera lens. Arts therapists might choose to use these and other qualities of digital media to promote positive goal attainment for specific populations and goals of therapy but also pay careful attention to other underlying characteristics of the client-media interaction. One art therapy client interviewee spoke to the versatility of digital devices such as iPhone cameras and iPads because they are compact, transportable, and easy to access for clients who might be experiencing pain, low energy or lethargy, and/or low frustration tolerance.

From this study, the collective expertise and burgeoning interests of art therapist interviewees in digital media of their choice was gained through self-learning, previous new

media and arts degrees, and other career paths and professions. In contrast, the growing numbers of art therapists in AATA who are using creative technology with clients have indicated that they want quality training in digital material theories and how to use the advancing media (Kuleba, 2008). Researchers and their participants have questioned how to support continued learning and willing adoption of new media by therapists wanting to engage with technology for further professional development and clinical use (Asawa, 2009; Kuleba, 2008; Orr, 2006b, 2005; Peterson et al., 2005; Peterson, 2010). Heightened educational efforts might close the skill gap between art therapists but other critical barriers still remain such as technology's historical high costs and lack of access for lower socioeconomic groups of people that result in inequity among users (Asawa, 2009; Peterson et al., 2005). While the current reality of lowering technology costs might or might not impact more equitable access over time to more people, other considerations such as the ever developing and updating technologies are challenges for educating and exposing both beginning and veteran art therapists to any standardized clinical technology use. Current digital media workshops that focus on software training, software development, clinical goal attainment with computer software and applications, and explorations of ethical issues could also include access and affordability dynamics and be elaborated into graduate classroom technology curriculum. Classes across diverse graduate programs could be implemented to examine interest, benefits, and impediments to technology as a media choice like any other such as paint, collage, clay, and fabric or as a vehicle of learning for the students themselves.

Art therapist interviewees from this study perceived that there is growing interest for digital media use in art therapy and further development of informed discourse, professional development, and research. Art therapy client interviewees also surmised that digital media

should be ‘absolutely’ offered in expanding therapeutic palettes. There have been editions of the AATA journal dedicated to computer media trends in theory and descriptive studies in both 1999 and 2009. A few years ago, AATA added a track for annual conference learning termed technology under a contemporary issues and current trends category. In turn, there have been steady increases in workshops, panels, videos, and papers that reflect clinical practices, research, and applied ethics that have created cumulative dialogue and community for practitioners using or curious about digital media in therapy. This study documented similar forward motion and levels of investment for digital media use by informed art therapy clients and passionate art therapists discussing current applications that parallel wider social developments with technology. One important digital culture consideration voiced was how clients are using digital arts readily and subsequently, art therapists must show competence for this expanding and relevant art form. Competence with the media was a reported balance of clinical, artistic, and technological skills that heighten the digital media experience for clients by driving the process and tools to their fullest potentials. Moreover, openness to digital media in art therapy was emphasized because it supports the communication and creativity many are using and ‘already have.’ To deny its existence and place amongst many material possibilities is to deny its relevance to a growing number of people and opportunities.

The art therapist interviewees reported that art therapy graduate programs are not teaching digital media skills and other key considerations to keep pace with young and technologically-abled clients. They indicated that the resistance to digital media is a normal part of the process of media adaptation rather than an ultimatum or rejection. Another important consideration observed was shifting social ethics and behaviors for newer generations because of media effects and struggles in the current professional ethics of practice to keep pace with the

evolving technologies and digital native uses of media. Four out of five art therapy client interviewees from this study were all adults when they learned their technical skills and reported them as 'practical' and 'necessary' for work and life and their use has increased over time. Kapitan (2009) noted caution that expanding digitalized cultures reflect contemporary materials for art therapy practice and research but also predicted polarization and further digital divides in the field if "techno-digital culture" (p. 51) growth and effects are not taken seriously. Interviewees identified a need for current art therapy students to learn digital media in graduate programs so that clinical applications would grow technically, creatively, and ethically through discourse and discernment. Previous research identified that art therapists are not developing wide spread technology use on their own because of the lack of formal training to learn digital media applications and the absence of ethical DAT guidelines addressed in graduate programs (Edmunds, 2012; Kuleba, 2008; Orr, 2012). Growing questions surrounding appropriate technology use with clients have led to heightened awareness of the need for more nuanced ethical guidelines related to emergent media (ATCB, 2014). These guidelines and best practices will remain in flux as the technology continuously evolve and never remain static. Digital media use will continue to be defined by informed, reflective practices and by those therapeutic arts practitioners developing and dialoging alongside each other (L'Esperance, 2014).

As indicated by a few art therapist interviewees, the fluidity in the parameters of technology media creates challenges of constant adaptation to digital media in clinical application. Much like the ethics of use, the myriad new and evolving technologies and software do not remain fixed and they are difficult to contain or integrate without constant discernment, purchase, and adjustments from the art therapist. There is a tangible polarity indicated between those who adhere to traditional ways and routines and those who embrace new things because of

curiosity or as an instinct to not get left behind. I think the broader implications of these differences in adaptation may have to do with a future singularity between humans, technology, and our ecological environments that some are intuitively integrating that which most of us cannot conceive of yet (Ptolemy, 2009). On a smaller but parallel scale, emergent platforms, 'apps' and software are in parallel flux to evolving ethical boundaries and safe practice with digital media because the latter is always trying to keep pace with the former. The Art Therapy Credentials Board (ATCB) recently updated ethical practice codes and technology considerations in professional management, clinical communications, and clinical applications (2014). Concerns and lack of guidance regarding ethical practices with digital arts media have been reported as complex barriers to some users' confident use of media. This is in stark contrast to smaller numbers of fluid adaptors who are experimenting and establishing safety and best practices in ever-shifting parameters. There is some historical focus in art therapy literature regarding how to 'destandardize' or individualize computer art programs as well as optimize their tools by art therapists collaborating in software design specific to client needs and therapeutic spaces (Choe, 2014; Gussak & Nyce, 1999; Malchiodi, 2000; Mihailidis et al., 2012). For example, there was focus at an annual conference panel discussion regarding software development designed by art therapists to create safe virtual boundaries such as the ability to specify viewer group assignments or control share settings on digital media to better contain artworks and projects in the therapeutic relationship (Mosinski et al., 2012).

How art therapy training programs can teach students the new media relevant to techno-cultural contexts for themselves and their therapy clients are complicated and interrelated questions. One art therapist interviewee from this study raised a concern regarding art therapy fragmentation and how each practitioner comes with their own application of materials and

specializations, which are both a benefit and drawback to the profession as a whole. He reported this making for individuality in digital media learning and application but not furthering a professional stance on digital arts media use due to a lack of cohesion in theory, education, and ethical practices. Standardization for the application of materials in art therapy has always been problematic in that the same materials use with individual clients often reflects varied results. For interviewees in the study, there were differences in their consideration of digital media qualities which seemed due in part to particular technology implementation techniques, long-term goals for the particular populations, and perceived benefits and challenges for the art therapist using the media in each particular circumstance. Some interviewees in particular cautioned that we should not accept computers as all encompassing, superficial, or mere conjuring and 'magical' entities but choose to be cognizant, open, and participatory in their presence.

Both groups of interviewees spoke to the veracity of the photographic image and the power of video and digital cameras to elicit memory and storytelling for individual clients. They also referenced the value of photography and video in group work where the narratives can shift and develop through the media processes that take time and conscious reviewing, editing, and crafting of the story for a final product. The action of taking, reviewing, editing, and otherwise reframing of the photographic imagery can create an imaginal space for clients to self-generate new 'memories' or story lines that integrate newly constructed, reformed, and healing self-narrative scripts. The interrelated themes from this study regarding the capacity for video and photography to represent and elicit re-contextualized memory is the foundation of numerous treatment processes and goals that target trauma recovery, ego control, behavioral changes, and mastery for clients in art therapy (Ehinger, 2009; Malchiodi, 1998, 2012; McNiff & Cook, 1976;

Mosinski, 2007, 2010; Weiser, 1988, 1999; Wolf, 2007). Similarly, photography and video were purposefully used for this research project to concretize interview narratives and details, create an art-based response to the research through digital media creativity, learn through fluid and structured media shaping, and form context for the forward movement of digital media use in art therapy.

Video as Research Methodology and Aesthetic Whole

My motivation to use art making, as an essential mode of investigation through the technological and creative processes of video, was to reflect my own digital media experimentation and learning by doing. It seemed appropriate to engage deeply with digital media and allow it to represent and 'speak' through this research by merging tools of creative and scientific enquiry (Eisner, 2008; Rahn, 2008; McNiff, 2014). Rahn (2008) described how application of "the same critical attention to research and craft in structuring the video medium as in the writing process" (p. 303) forms artful and informative research products.

Both videos for this research were created through protracted processes of video editing which involved fusing one half technical and one half creative efforts and drives for the artist researcher. The technical side of video editing focused on media quality and organization, hardware tools and recording, and the use of software to manage file storage and works in progress through an editing program of choice. The technical side of video editing also honed the researcher's abilities in making imagery and sound high quality, creating transitional effects and cuts, and appeal to viewers while also remaining apt to the narrative of the research. The video editing took a great amount of time and trial and error to do it well and this researcher was challenged by a myriad of elements in the stages of media production and output. The creative side of video editing crafted the story to create a whole of disparate parts. Creative skills

employed for the first video included editing techniques of pacing and building flow, respect and love of the subject reflected with quality content, and layered visual and auditory details designed to inspire future audiences to learn more about the subject matter and its nuances in art therapy practice. Creative skills for the second video included mixing and appropriation of imagery and sound to make visceral impressions rather than sharing or telling a linear story. Editing both videos was not simply cutting things out or apart from raw footage but finding visual and aural nuance, adding atmospheric details, creating flow and pacing, placing juxtapositions of contrast and comparison, bringing important emotions or concepts to the forefront, and crafting two edited products that communicate very differently about digital media.

The first video was 44 minutes long and displayed interwoven video interviewee segments that describe digitized creativity in application, how digital culture is affecting clients and therapists, and inherent, distinct qualities to the media. The video content was created to be accessible and non-esoteric to interested persons outside the field of art therapy. The second video was four minutes long and reflected artist researcher responses to the interviewees' words, self-expressions in interviewee artwork that was shared, appropriated Internet images and events to further manifest themes, and critical sensory and dynamic qualities of digital media all collaged through the editing technique of montage. Real persons embodying ideas, experiences, and examples of digital media use in therapy and education were represented through both videos and in the various audio/visual data in dynamic ways. The video format created composites of the comparative themes and contrasted responses through the participants describing their own experiences and expertise with visual examples of the work either self produced or researcher created and appropriated. This researcher utilized and claimed diverse

technical and creative video processes to both respond to and critically evaluate digital media through protracted and engaged activities with that media. The aesthetics and language of video were used to collect data, integrate the living and fluid knowledge surrounding the phenomenon into a digitized art form, offer a glimpse into a dynamic, moving sound and visual art form, and inspire complex engagement between researcher, participants, and audience members.

The contradictory qualities of digital media were a major theme throughout the whole process of research and these elements were highlighted in the *Blank Slate* video in particular and through appropriated and reflexive imagery. Shadow elements of contemporary digital technology such iPhones being fictionally installed directly into characters' eyes from the animated television show *Futurama* were sampled and placed alongside both valued and aesthetically pleasing qualities of digital media. Similar and contradictory elements to digital media were portrayed indiscriminately through layered sound and imagery that flowed both nonlinearly and in fast-paced montage sequences.

Limitations and Refinements for Future Study

There were some checks and balances employed in the research methods that revealed a need for clarity and attention to structural considerations for future procedural design. Written transcripts for the first stage of art therapist interviews were sent via e-mail back to the interviewees to provide member checking. One comment was: "I found my many 'umms' distracting to read. By taking them out, the ideas might flow better, keep up the good work." Another comment read that the transcript was "full of odd redundancies, and peculiar grammatical issues … much of the underlying thought would need to be clarified for parts to make sense." When participants read the verbatim wording and use of natural language transcripts, it seemed to make them nervous to see their spoken words in print. The transcription

product could have been conceptualized and discussed with interviewees ahead of time. Naturalism in the transcript was chosen due to this researcher seeking a literal data representation like the video media captured. Denaturalism in transcription practices (Oliver, Serovich, & Mason, 2005, p. 4) could have been employed to clean up the awkwardness that was part of the participants' natural speech but disarming to read later. Transcription turned out to be a powerful mirror of representation so to ease the interviewees' reading of the transcript, grammar, stutters, and involuntary vocalizations could have been fixed or removed while retaining the exact meaning of the responses.

For the second stage of interviewees, the transcripts were denaturalized as they were typed and the offer to send the transcripts to each participant seemed not as important to interviewees. There was interest expressed to read the collated statements and themes from the results section so the second stage of the results chapter was sent out by email for feedback from the participants. One interviewee wrote back and stated in her email, "Very interesting way to organize your data. You are a sympathetic researcher [because you] take what they give you and turn it into positive themes." To date, no other art therapy client interviewees have responded to the collated research responses from their group.

A critical missing demographic for the second stage of art therapy client interviews was the inclusion of both teenage and child participants because youth might have additional and/or different reflections and perspectives on digital media. This researcher tried to contact colleagues who work with children and youth to secure possible interviews but no possible participants contacted the researcher under the age of 25. One subsequent limitation of this study was in the accidental selection sample design and there might be better ways to create access to younger interviewee participants that this researcher did not have the resources for at the time of

study. A necessary and valuable extension of this research would be to interview younger participants and give them voice to what seems to be the relevant and expansive media of their multiple generations.

This researcher incorporated further suggestions and welcomed dialogue from the art therapist interviewee group in particular regarding the content and structure of their recorded videos. Both groups of interviewees received a copy of their final videos and the art therapy client interviewees sent back no specific feedback. Two art therapist interviewees had different suggestions in how to edit interview segments in order to create flow whereas another thought that grouping the commentary into theme segments might work best for the overall structure. It was also suggested to list creative degrees, identities, and media use with the professional titles and names. The art therapist participants seemed particularly supportive of this project and excited by the results and the quality of the product. The art therapist participants expressed desires to distribute the video to colleagues and places where they work.

Further extension for this study might be to delve into digital divides as dynamic topographies to be spanned and explored to reveal more the inner mechanisms of the technology and human interface. A focus group study could actively describe technological tools or the digital media art therapists and clients are using to critically evaluate emerging effects of techno-digital culture. An art therapy graduate program could be approached with research results that evaluated growing student needs for increased training opportunities. A subsequent digital art therapy pilot class and curriculum could be designed and facilitated for instructor and student evaluative feedback.

To date, digital media use in art therapy research has remained art therapist observational around the clinical and creative use of technology with clients. Research conceptualizations of

how digital media can affect the treatment outcomes of others positively or negatively needs participants from art therapy to evaluate and explain their own experiences. Some of these participants are adult and youth clients working currently with art therapists and client-narrative research could capture direct experiences with digital media and art therapy for short and long term goals. More research with diverse client feedback regarding benefits and challenges to their clinical experience using digital arts media tools would deepen the complexity of outcome measures and help to importantly shape digital media's future use, theories, and applications.

Conclusion

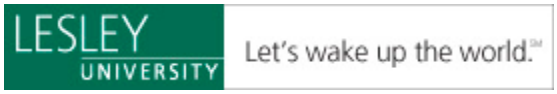
Art-based video creations and phenomenological data collection and analyses were integrated to inform summary and discussion of digital art therapy current practices and vital themes. The researcher addressed benefits and ongoing challenges of digital media uses by reflecting its art forms technically and creatively and also by gathering and synthesizing descriptive data from art therapy practitioners and clients accessing digitized materials in sessions. The methods of interviewing, member checking, portraiture, and artistic responsiveness through journaling and video creation and editing were central to the inquiries and dual products of research. There was systematic review and analyses to the emergent themes regarding digital arts media in clinical and educational applications. Moreover, the methods of portraiture representation and artistic examination through video helped to structure the presentation of outcomes of this study and use digital media to contribute to its own developing research base.

Consistent themes in this study relating to creative digital media use connect previous art therapy literature on the subject. They are the omnipresence of technology, openness to new generations and evolution, and digital divides in art therapy, photography and video as access to

memory and storytelling, and the inherent qualities of digital media including: playback and immediacy, emotional distancing and elements of pause, movability, mobility, re-presentation, veracity of the image, ordering and winnowing, versatility, capture and documentation, roadblocks, curious and playful, and predictable to unpredictable characteristics. Themes emerging from this study and other recent research are asking how digital media can be seen as access and bridge between therapy and everyday lives of clients and therapists. Increasing numbers of clinicians and educators are using digital media in their reflective practices and they are defining more the fluid parameters of digital media with heightened consciousness and strategies for ethical boundaries (L'Esperance, 2014). The hybrid nature of practitioners who use digital media with their fine arts, clinical, and technological abilities to drive the media and amplify the creativity of clients is another emergent theme in this study. Based on these trends, the core implication regarding research evaluation to the benefits and drawbacks to the use of digital media have confirmed they are viable materials in art therapy but requiring some skills in application. Enhanced discernment of digital media applications and quality in continuing education and training to develop skilled digital arts therapists must be addressed. Interrelated, and somewhat contradictory, is a greater reckoning that art making is no longer confined to a specialized studio space. Digital art forms can be created by anyone with access to computer-mediated devices and communication platforms. Digital media tools and processes have further expanded creative material palettes that are weaving into the fabric and consciousness of our everyday lives.

APPENDIX A

STAGE ONE: INFORMED CONSENT



29 Everett Street, Cambridge MA 02138

You are invited to participate in the research project titled "DIGITAL MEDIA USE IN ART THERAPY INTERVIEWS". The intent of this research study is to ask how four art therapy practitioners are currently using DAT tools and techniques in their clinical practice?

Your participation will entail a single interview by the researcher coming in person to your place of work or another choice of venue. Consent will be asked by the researcher to both video and audio record your interview. If you request anonymity, protection will be granted and only an audio recording being utilized. During the interview process there will be both open-ended questions and structured, topical interview questions asked by the researcher. If requested, you can be provided a transcript of your interview to check and give feedback to the researcher.

In addition

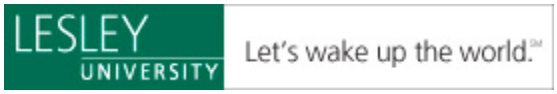
- You are free to choose not to participate in the research and discontinue your participation in the research at any time.
- If requested by the participant, identifying details will either be kept confidential by the researcher. Data collected will be coded with a pseudonym and never revealed by the researcher if the participant requests this. Only the researcher will have access to the data collected.
- Any and all of your questions will be answered at any time and you are free to consult with anyone (i.e., friend, family) about your decision to participate in the research and/or to discontinue your participation.
- Participation in this research poses minimal risk to the participants. The probability and magnitude of harm or discomfort anticipated in the research are no greater in and of themselves than those ordinarily encountered in daily life.
- If any problem in connection to the research arises, you can contact the researcher Natalie Carlton at 575.770-6713 and by email at lacuna@taosnet.com or Lesley University sponsoring faculty Dr. Michele Forinash at 617-349-8166.
- The researcher may present the outcomes of this study for academic purposes (i.e., articles, teaching, conference presentations, supervision, etc.)

My agreement to participate has been given of my own free will and that I understand all of the stated above. In addition, I will receive a copy of this consent form.

Participant's signature	Date	**Researcher's signature** Natalie Carlton lacuna@taosnet.com	Date

APPENDIX B

STAGE ONE: CONSENT TO USE AND/OR DISPLAY ART AND PHOTO IDENTITY



29 Everett Street, Cambridge MA 02138

CONSENT BETWEEN: Natalie Carlton and _____.

Expressive Arts Therapy Doctoral Student **Artist/Participant Name**

I, _____; agree to allow Natalie Carlton

Artist/Participant Name **Expressive Arts Therapy Doctoral Student**

to use and/or display my artwork and identity (photographs from Phototherapy class) for the following purposes(s):

☐ Reproduction and/or inclusion within the video and written research currently being completed by the expressive arts therapy doctoral student.

☐ Reproduction, presentation, and/or inclusion within professional conferences or articles including but not limited to a doctoral work, currently being completed by the expressive arts therapy doctoral student.

It is my understanding that neither my name, nor identifying information will be revealed in any presentation or display of my artwork, unless waived below. This will include name credit identification in the video *Four Digital Art Therapy interviews*.

☐ I DO ☐ I DO NOT wish to remain anonymous

This consent to use or display my artwork may be revoked by me at any time. I also understand I'll receive a copy of this consent form for my personal records.

Signed _____ Date _____
Printed name and Mailing address:

I, Natalie Carlton agree to the following in connection with the use of photos and video:

Expressive Arts Therapy Doctoral Student

I agree to keep your imagery safe, whether an original or reproduction, to the best of my ability.
I agree to safeguard your confidentiality if that is what you wish me to do.

Signed Natalie R Carlton Date_ May 4, 2013

Expressive Arts Therapy Doctoral Student

Natalie Carlton
lacuna@taosnet.com

APPENDIX C

STAGE ONE: ART THERAPIST INTERVIEW QUESTIONS

1) Could you give an introduction about yourself including your name, details of your educational background, professional credentials, where you currently work, and current areas of interest in your work?
2) Was art therapy your primary career choice or have you had other professional or creative work paths?
3) Do you have a creative background in the digital arts or media?
4) Do you use technology in your own art materials or tools?
5) How did you begin to use or be interested in digital arts media or technology?
6) You were chosen to be a participant in this research study due to an article, view point, and/or thesis you have written regarding the use of digital art therapy tools and techniques. Could you explain how you use technology tools creatively in art therapy with clients?
7) How do digital media tools and materials benefit or challenge therapeutic processes, relationships, and goals?
8) What do you see as the inherent qualities to the digital media and tools you use?
9) Are there times you chose not to use digital media with clients?
10) Do you find digital media as a therapeutic material you use often or as one choice amongst other materials for clients?
11) Do you find interest amongst other practicing art therapists to learn more about digital art therapy? If so, what are some particular questions you have been asked?

12) Do you see a future for digital art therapy techniques, media, and ethical considerations to be taught in art therapy graduate programs?

13) Do you have any particular interest in further research regarding the use of technology in art therapy? If so, what research questions do you have regarding your work and experiences?

14) Do you have any further thoughts to share in regard to technology, our relationship to technology, or how you see the future of art and creativity in regard to technology?

APPENDIX D

STAGE TWO: RESEARCH DESCRIPTION

You are invited to participate in art therapy research regarding the creation of artworks with digital photography, video, drawing tablets, and animation

Why?

Digital media is being used more frequently in art therapy sessions through computerized photography, video, animation, drawing materials, and creative projects. As a researcher I am interested in investigating how these computer-based technologies are applied in art therapy and how clients might value this media for their therapy session or goals. I want to anonymously interview art therapy participants who have used computer-based, creative technologies in their sessions and both ask and recreate with video how they have experienced this media.

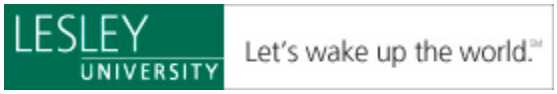
How can you contact this researcher?

Please email Natalie Carlton at

lacuna@taosnet.com

APPENDIX E

STAGE TWO: CONSENT TO USE AND/OR DISPLAY ART



29 Everett Street, Cambridge MA 02138

CONSENT BETWEEN: Natalie R Carlton and _____.
Expressive Therapies Doctoral StudentArtist/Participant Name

I, _____; agree to allow Natalie R Carlton
Artist/Participant Name Expressive Therapies Doctoral Student
to use and/or display and/or photograph my artwork, for the following purposes(s):

☐ Reproduction and/or inclusion within the research currently being completed by the expressive arts therapy doctoral student and for both video and written dissertation formats.

☐ Reproduction and/or presentation at professional conferences.

☐ Reproduction, presentation, and/or inclusion within future publications in professional articles or books.

It is my understanding that neither my name, nor identifying information will be revealed in any presentation or display of my artwork. I agree for the following special considerations to be upheld:
____ My voice may be used as recorded
____ My artwork may be shown
____ My voice is to be obscured and filtered digitally to obscure any recognizable features
____ My artwork processes and products may be 'recreated' by the researcher
This consent to use or display my artwork may be revoked by me at any time. I also understand I'll receive a copy of this consent form for my personal records.

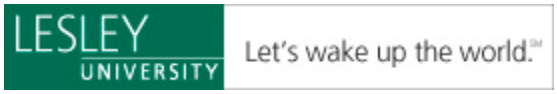
Participant signature _____ Date _____

Parent/Guardian (if required) _____ Date _____

I, _Natalie R Carlton agree to the following conditions in connection with the use of artwork:
To the best of my ability, I agree to keep your artwork safe and treat it with the utmost respect as a digital reproduction in my care and through video editing processes. I also agree to safeguard your confidentiality by not disclosing your identity by name and by working with other identity features in the manner agreed to above.
Signed _____ Date _____
Expressive Therapies Doctoral Student
Natalie R Carlton lacuna@taosnet.com

APPENDIX F

STAGE TWO: CONSENT TO RESEARCH



29 Everett Street, Cambridge MA 02138

You are invited to participate in the research project titled "DIGITAL MEDIA USE IN ART THERAPY INTERVIEWS." The intent of this research study is to ask how youth and adult art therapy clients have experienced computer technology tools and media in their clinical sessions with art therapists?

Your participation will entail a single interview by the researcher coming in person to your choice of venue, by phone, or through an electronic Skype meeting. Consent will be asked by the researcher to both video and audio record your interview. All demographic and identifying details of participants will be kept confidential by the researcher. Data collected will be coded with a pseudonym and never revealed to anyone else by the researcher. Only the researcher will have access to the data collected. During the interview process there will be interview questions asked by the researcher. If requested, you will be provided a transcript and video segment of your interview to check and give feedback to the researcher.

In addition

- You are free to choose not to participate in the research and discontinue your participation in the research at any time.
- Any and all of your questions will be answered at any time and you are free to consult with anyone (i.e., friend, family) about your decision to participate in the research and/or to discontinue your participation.
- Participation in this research poses minimal risk to the participants. The probability and magnitude of harm or discomfort anticipated in the research are no greater in and of themselves than those ordinarily encountered in daily life.
- Please feel free to contact Dr. Robyn Flaum Cruz, rcruz@lesley.edu or 412-401-1274, Co-Chair of the Lesley University Institutional Review Board if you have any questions or concerns in connection to the research.
- Additionally you may contact the researcher Natalie Carlton at 575.770-6713 or email at lacuna@taosnet.com and also contact the Lesley University sponsoring faculty Dr. Michele Forinash at forinasm@lesley.edu or 617-349-8166.
- The researcher may present the outcomes of this study for academic purposes such as future articles, books, teaching materials, conference presentations, or in supervision.

My agreement to participate has been given of my own free will and that I understand all of the stated above. In addition, I will receive a copy of this consent form.

_____ _____

Participant's signature Date

_____ _____

Parent/Guardian (if required) Date

_____ _____

Natalie R Carlton Date

APPENDIX G

STAGE TWO: ART THERAPY CLIENT INTERVIEW QUESTIONS

1) How has a computer, digital camera, or iPad been used for your art therapy?
2) Did computers, or digital media tools and projects, work well or not so well in therapy as creative or expressive forms for you?
3) What was important about digital media or its qualities, tools, and platforms for your art therapy experience?
4) Were there particular sensory qualities that you appreciate or find therapeutic in digital media?
5) Do you have previous experience with digital arts or media?

    If so, how did you begin to use or become interested in digital arts media or technology?
6) Do you use technology as your own art materials or tools or in compliment to other materials outside of therapy?
7) Do you think it is important for art therapists to offer this art media?
8) Do you have any further thoughts to share in regard to technology?
9) Do you have questions about our broader relationship to technology as humans?
10) How do you see the future of art and creativity in regard to technology?

REFERENCES

Alders, A., Beck, L., Allen, P. & Mosinski, B. (2011). Technology in art therapy: Ethical challenges. *Art Therapy: Journal of the American Art Therapy Association*, *28*(4), 165-170.

Alders, A. & Allen, P. (2010, November). *Ethics of representation: Ethical movie making in art therapy*. Paper presented at the 41st Annual Conference of the American Art Therapy Association, Sacramento, CA.

Asawa, P. (2009). Art therapists' emotional reactions to the demands of technology. *Art Therapy: Journal of the American Art Therapy Association , 26*(2), 58-65.

Art Therapy Credentials Board (2014). *Ethics and Standards of Practice Code*. Retrieved from http://www.atcb.org/code_of_professional_practice/

Austin, B. (2009). Renewing the debate: digital technology in art therapy and the creative process. *Art Therapy: Journal of the American Art Therapy Association*, *26*(2), 83-85.

Austin, B. (2010). Technology, art therapy, and psychodynamic theory: Computer animation with an adolescent in foster care. In C. H. Moon, (Ed.), *Materials & media in art therapy* (pp. 199-213). New York, NY: Routledge.

Austin, D. & Forinash, M. (2005). Arts-based research. In B. L. Wheeler (Ed.) *Music therapy research*, (pp. 458-473). Gilsum, New Hampshire: Barcelona Publishers.

Barone. T. & Eisner, E. (2012). *Arts based research*. Los Angeles: Sage Publications.

Bayne, S. (2004). The embodiment of the online learner. In R. Atkinson, C. McBeath, D. Jonas Dwyer & R. Phillips (Eds.), *Beyond the comfort zone: Proceedings of the 21st Ascilite Conference* (pp. 105-115). Perth, 5-8 December. Retrieved from http://www.ascilite.org.au/conferences/perth04/procs/bayne.html

Belkofer, C. M. & McNutt, J.V. (2011). Understanding social media culture and its ethical challenges for art therapists. *Art Therapy: Journal of the American Art Therapy Association , 28* (4), 159-164.

Binkley, T. (1993). Reconfiguring culture. In P. Hayward & T. Wollen (Eds.) *Future Visions: New Technologies of the Screen*, (pp. 90-122). London: British Film Institute.

Binkley, T. (1997). The vitality of digital creation. *The Journal of Aesthetics and Art Criticism, 55*(2), 107-116.

Blythe, M., Light, A., & O'Neill, S. (2007). Untitled: Emerging Cultural Form in the Digital Age. *Human Technology , 3*(1), 4-11.

Bruscia, K. E. (2005). Qualitative data analysis. In B. L. Wheeler (Ed.) *Music therapy research*, (pp. 179-196). Gilsum, New Hampshire: Barcelona Publishers.

Butler, O. (1987). *Dawn*. New York, NY: Warner Books.

Canter, D. S. (1987). The therapeutic effects of combining Apple Macintosh computers and creativity software in art therapy sessions. *Art Therapy: Journal of the American Art Therapy Association*, *4*(2), 17-26.

Canter, D. S. (1989). Art therapy and computers. In H. Wadeson, J. Durkin, & D. Perach (Eds.), *Advances in art therapy*, (pp. 296-316). New York: John Wiley & Sons.

Carr, N. (2008, July/August). Is Google making us stupid? *The Atlantic*. Retrieved from http://www.theatlantic.com/doc/200807/google

Chilton, G., Gerity, L., LaVorgna-Smith, M., & MacMichael, H. (2009). An online art exchange group: 14 secrets for a happy artist's life. *Art Therapy: Journal of the American Art Therapy Association*, *26*(2), 66-72.

Chin, R. J., Chin, M. M., Palombo, P., Palombo, C., Bannasch, G., & Cross, P. M.

(1980). Project Reachout: Building social skills through art and video. *Arts in Psychotherapy, 7*(4), 281-284. doi: 10.1016/0197-4556(80)90007-6

Choe, N. (2014). An exploration of the qualities and features of art apps for art therapy. *The Arts in Psychotherapy, 41*(1), 145–154.

Cohen, J. (2012). *Film and soul: A theoretical exploration of the use of video and other film-based therapy to help transform identity in therapeutic practice*. (Unpublished dissertation). Pacifica Graduate Institute: Santa Barbara, CA.

Davis, J. H. (1997). Artistic refrain: Representing rapport. In S. Lawrence-Lightfoot & J. H. Davis, *The art and science of portraiture,* pp. 175-179. San Francisco, CA: Jossey-Bass.

Dilger, S. C., & Roland, D. C. (1993). Preparing students for the twenty-first century: A rationale for integrating new technology into school arts programs. *Viewpoints*. Tallahassee: FL: Florida Department of Education.

Edmonds, E., Weakley, A., Cany, L., Fell, M., Knott, R. & Pauletto, S. (2005). The studio as laboratory: Combining creative practice and digital technology. *International Journal of Human-Computer Studies*, *63*, 452–48.

Edmunds, J. D. (2012). *The applications and implications of digital media in art therapy: A survey study*. (Unpublished Master's thesis). Drexel University: Philadelphia, PA.

Ehinger, J. F. (2009). *Exploring dreamspace through video art with at-risk youth*. (Unpublished Master's thesis). Pratt Institute: New York.

Forinash, M. (2012). Qualitative research methods, data collection and analysis: Interviews, observations, and content analysis. In R.F. Cruz & C. F. Berrol (Eds.) *Dance/Movement therapists in action,* (pp. 141-166). Springfield, Illinois: Charles C. Thomas.

Forinash, M. & Grocke, D. (2005). Phenomenological inquiry. In B. L. Wheeler (Ed.) *Music therapy research*, (pp. 458-473). Gilsum, New Hampshire: Barcelona Publishers.

Friedman, J. (Screen-writer). Nutter, D. & Friedman, J. (Executive Producers). (2008). *Terminator: The Sarah Connor Chronicles* [Television series]. United States: Warner Bros.

Fryrear, J. L. (Ed.). (1981). *Videotherapy in mental health*. Springfield, IL: Charles C. Thomas.

Fryrear, J. L., & Corbit, I. E. (1992). *Photo art therapy: A Jungian perspective*. Springfield, IL/ England: Charles C Thomas.

Gaiman, N. & McKean, S. (2005). *Mirror Mask*. New York, NY: Harper Collins.

Gerity, L. (2001). Josie, Winnicott, and the hungry ghosts. *Art Therapy: Journal of the American Art Therapy Association*, *18*(1), 44-49.

Gerity, L. (2010). Fourteen secrets for a happy artist's life: Using art and the Internet to encourage resilience, joy, and a sense of community. In C. H. Moon, (Ed.), *Materials & media in art therapy* (pp. 155-182). New York, NY: Routledge.

Gussak, D. & Nyce, J. (1999). To bridge art therapy and computer technology: The visual toolbox. *Art Therapy: Journal of the American Art Therapy Association*, *16*(4), 194-196.

Hanhardt, J. (2000). *The Worlds of Nam June Paik*. New York: Guggenheim Museum.

Hartwich, P. & Brandecker, R. (1997). Computer-based art therapy with inpatients: Acute and chronic schizophrenics and borderline cases. *The Arts in Psychotherapy*, *24*(4), 367-373.

Hinz, L. (2009). *Expressive therapies continuum*. New York: Routledge.

Holzwarth, P. & Maurer, B. (2001). Aesthetic creativity, reflexivity and the play with meaning: A videoculture case study. *Journal of Educational Media*, *26*(3), 185-202.

Jacobs, J. (1994). Photography and confidentiality. *Art Therapy: Journal of the American Art Therapy Association*, *11*(4), 296-297.

Jacobs, J. & Milton, I. (1994). The art of art therapy might be toxic. *Art Therapy: Journal of the American Art Therapy Association*, *11*(4), 271-277.

Johnson, E. (1981). Invidious mirror? Ethical problems in the use of video recording. In J. L. Fryrear & B. Fleshman, (Eds.), *Videotherapy in mental health* (pp. 305-316). Springfield, Illinois: Charles C. Thomas.

Kagin, S. & Lusebrink, V. (1978). The expressive therapies continuum. *The arts in Psychotherapy, 5*, 171-180.

Kapitan, L. (2007). Will art therapy cross the digital divide? *Art Therapy: Journal of the American Art Therapy Association*, *24*(2), 50-51.

Kapitan, L. (2009). Introduction to the special issue on art therapy's response to techno-digital culture. *Art Therapy: Journal of the American Art Therapy Association*, *26*(2), 50-51.

Klorer, P. (2009). The effects of technological overload on children: An art therapist's perspective. *Art Therapy: Journal of the American Art Therapy Association*, *26*(2), 80-82.

Knill, P. J. (2008). When pictures move are we moved too? In Levine, E. G. & Antze, P. (Eds.) *In praise of poiesis: The arts and human existence*. Toronto, Canada: EGS Press.

Kramer, E. (2000). *Art as therapy: Collected papers*. London: Jessica Kingsley.

Krauss, D.A. & Fryrear, J. L. (1983). Phototherapy introduction and overview. In J.L. Fryrear & D.A. Krauss (Eds.) *Phototherapy in mental health,* (pp. 3-23). Springfield, Illinois: Charles C. Thomas.

Kuleba, B. A. (2008). *The integration of computerized art making as a medium*

in art therapy theory and practice. (Unpublished Master's thesis). Drexel University: Philadelphia, PA.

Lawrence-Lightfoot, S. (1997). Illumination: Framing the terrain. In S. Lawrence-Lightfoot & J. H. Davis, *The art and science of portraiture,* pp. 41-59. San Francisco, CA: Jossey-Bass.

Lawrence-Lightfoot, S. (1997). Illumination: Expressing a point of view. In S. Lawrence-Lightfoot & J. H. Davis, *The art and science of portraiture,* pp. 85-105. San Francisco, CA: Jossey-Bass.

L'Esperance, N. (in press). Current practices: A Delphi study concerned with current technology use in art therapy. Retrieved from personal email.

Lewis, T. (2009). Creativity in technology education: Providing children with glimpses of their inventive potential. *International Journal of Technology & Design Education, 19*(3), 255-268. doi: 10.1007/s10798-008-9051-y

Lòpez, A. (2012). *The media ecosystem: What ecology can teach us about responsible media practice*. Berkeley, CA: Evolver Editions.

Lusebrink, V. (1990). *Imagery and visual expression in therapy*. New York: Plenum Press.

Malchiodi, C. (2000). *Art therapy and computer technology: A virtual studio of possibilities*. Philadelphia: Jessica Kingsley.

Malchiodi, C. (2009, November 11). Art therapy meets digital art and social multimedia. *Psychology Today*. [Web log post]. Retrieved from http://www.psychologytoday.com/blog/the-healing-arts/200911/art-therapy-meets-digital-art-and-social-multimedia

Malchiodi, C. (2013, November 11). Digital Art Therapy. *Cathy Malchiodi, PhD*. [Web log post]. Retrieved from http://www.cathymalchiodi.com/art-therapy-resources/digital-art-therapy-2/

Malchiodi, C. (2012). *Handbook of art therapy*. New York: Guilford Press.

Mavrou, K. (2011). Assistive technology as an emerging policy and practice: Processes, challenges and future directions. *Technology and Disability*, *23*, 41-52. doi:103233TAD-2011-0311

Mayadas, N.S. & Duehn, W.D. (1981). Stimulus/Modeling (SM) videotape formats in clinical practice and research. In J. L. Fryrear & B. Fleshman, (Eds.), *Videotherapy in mental health* (pp. 146-162). Springfield, Illinois: Charles C. Thomas.

McCaffrey, A. (1985). *The ship who sang*. New York, NY: Random House.

McLeod, C. (1999). Empowering creativity with computer-assisted art therapy: An introduction to available programs and techniques. *Art Therapy: Journal of the American Art Therapy Association, 16*(4), 201-205.

McLuhan, M. (1966). *The Gutenberg galaxy.* Canada: The University of Toronto Press.

McNiff, S.A. & Cook, C. (1975). Video art therapy. *The Arts in Psychotherapy*, *2*, 55-63.

McNiff, S.A. (1981). Video enactment in the expressive therapies. In J. L. Fryrear & B. Fleshman, (Eds.), *Videotherapy in mental health* (pp. 79-92). Springfield, Illinois: Charles C. Thomas.

McNiff, S.A. (1998). *Art-based research*. London: Jessica Kingsley.

McNiff, S.A. (1999). The virtual art therapy studio. *Art Therapy: Journal of the American Art Therapy Association, 16*(4), 197-200.

McNiff, S. A. (2000). Computers as virtual studios, In C. Malchiodi, (Ed.), *Art Therapy & Computer Technology*. Philadelphia: Jessica Kingsley.

McNiff, S.A. (in press). Art speaking for itself: Evidence that inspires and convinces. Retrieved from personal email.

McNiff, S.A. (2014). *Art as research*. Chicago, IL: Intellect, The University of Chicago Press.

Mihailidis, A., Blunsden, S., Boger, J., Richards, B., Zutis, K., Young, L., & Hoey, J. (2010). Towards the development of a technology for art therapy and dementia: Definition of needs and design constraints. *The Arts in Psychotherapy, 37*(4), 293-300. doi:10.1016/j.aip.2010.05.004

Miller, G. (2004-2013). Gretchen on the grid & on the go: Blogging, online communities, events, and more [Web site]. Retrieved from http://www.gretchen-miller.com/OnTheGrid.html

Moon, C. (2010). Introduction, A history of materials and media in art therapy, and Theorizing materiality in art therapy. In C. H. Moon, (Ed.), *Materials & media in art therapy* (pp. xiii-88). New York, NY: Routledge.

Mosinski, B.B. (2007). A tool for healing. *Afterimage*, *34*(6), p. 5-7.

Mosinski, B.B. (2010). Video art and activism: Applications in art therapy. In C. H. Moon, (Ed.), *Materials & media in art therapy* (pp. 257-270). New York, NY/East Sussex, England: Routledge.

Mosinski, B., Doby-Copeland, C., Brandoff, R., Choe, N. & Gibbons, K. (2012, July). *Media Arts and Technology in Art Therapy: Practice and Ethics*. Panel presentation at the Annual Conference of the American Art Therapy Association, Savannah, GA.

Mosinski, B., Carlton, N., Garner, R., St. John, P., & Orr, P. (2012, July). *Media Arts and Technology in Art Therapy: Research and Education*. Panel presentation at the Annual Conference of the American Art Therapy Association, Savannah, GA.

Oliver, D., Serovich, J. & Mason, T. (2005). Constraints and opportunities with interview transcription: Toward reflection in Qualitative research. *Soc Forces*, *84*(2), 1273-1289.

O'Rourke, R. (2001). Anya's movies. *Afterimage, 3*, 9.

Orr, P. P. (2005). Technology media: an exploration for "inherent qualities". *The Arts in Psychotherapy, 32*, 1-11. doi:10.1016/j.aip.2004.12.003

Orr, P. P. (2006a). A documentary film project with first-year art therapy students. *The Arts in Psychotherapy , 33* (4), 261-287. doi:10.1016/j.aip.2006.03.002

Orr, P. P. (2006b). Technology training for art therapist: Is there a need? *Art Therapy: Journal of the American Art Therapy Association, 23*(4), 191-196.

Orr, P. P. (2010a). Distance supervision: Research, findings, and considerations for art therapy. *The Arts in Psychotherapy, 37*(2), 106-111.

Orr, P. P. (2010b). Social remixing: Art therapy media in the digital age. In C. H. Moon, (Ed.), *Materials & media in art therapy* (pp. 89-100). New York, NY: Routledge.

Orr, P. P. (2012). Technology use in art therapy practice: 2004 and 2011 comparison. *The Arts in Psychotherapy*, *39*, 234-238. doi: 10.1016/j.aip.2012.03.010

Parker-Bell, B. (1999). Embracing a future with computers and art therapy. *Art Therapy: Journal of the American Art Therapy Association*, *16*(4), 180-185.

Peterson, B. (2010). The media adoption stage model of technology for art therapy. *Art Therapy: Journal of the American Art Therapy Association , 27*(1), 26-31.

Peterson, B., Stovall, K., & Elkins, D. (2005). Art Therapists and Computer Technology. *Art Therapy: Journal of the American Art Therapy Association , 22*(3), 139-149.

Postman, N. (1998, March 27). The five things we need to know about technological change. [Transcript]. In *Speech for New Tech 98 conference delivered in Denver, CO*. Retrieved from: http://www.michaelzimmer.org/2008/01/04/neil-postman-five-things-we-need-to-know-about-technological-change/

Potash, J. S. (2009). Fast food art, talk show therapy: The impact of mass media on adolescent art therapy. *Art Therapy: Journal of the American Art therapy Association*, *26*(2), 52-57.

Ptolemy, B. and Ptolemy, F. (Producers). Ptolemy, B. (Director). (2009). *Transcendent Man* [Documentary]. United States: Ptolemaic Productions and Therapy Studios.

Rahn, J. (2008). Digital content. In J.G. Knowles and A.L Cole (Eds.) *Handbook of the arts in qualitative research,* (pp. 299-312). California: Sage Publications.

Rao, A. (2011). TED Speakers, Aparna Rao: Artist [Web site]. Retrieved from http://www.ted.com/speakers/aparna_rao.html

Richtel, M. (2010, November 21). Growing Up Digital. *The New York Times*, A1, A20.

Risner, D. & Anderson, J. (2008). Digital dance literacy: An integrated dance technology curriculum pilot project. *Research in Dance Education*, *9*(2), 113-128. doi: 10.1080/14647890802087787

Robards, J. (2012). *How effective is the iPad as an art therapy medium?* Manuscript submitted for publication.

Robbins, A. (2000). *The artist as therapist*. Philadelphia, PA: Jessica Kingsley Publishers.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY: Free Press.

Rubin, J. (1984). *The art of art therapy.* New York: Brunner/Mazel.

Safarov, I.S. (2005). Within and beyond the bounds of creative methods. *Journal of Russian and East European Psychology, 41*(6), 101–15.

Taylor, P. & Carpenter, S. (2007). Mediating art education: Digital kids, art, and technology. *Visual Arts Research*, *33*, 84-95.

Taylor, P., Wilder, S. & Helms. K. (2007). Walking with a ghost: Arts-based research, music videos, and re-performing the body. *International Journal of Education & the Arts*, *8*(7), 1-26.

Thong, S. (2007). Redefining the tools of art therapy. *Art Therapy: Journal of the American Art Therapy Association*, *24*(2), 52-58.

Tilberg, A. L. (2014). *Digital art therapy with children in a community mental health agency*. (Unpublished Master's thesis). Ursuline College: Pepper Pike, Ohio.

Tolkien, J.R.R. (1955). *Return of the king*. United Kingdom: George Allen and Unwin.

Tosone, C., Gelman, C. R., & McVeigh, L. (2005). Through Their Own Eyes: A Media-Based Group Approach to Adolescent Trauma. *International Journal of Group Psychotherapy, 55*(3), 415-432. doi: 10.1521/ijgp.2005.55.3.415

Van Dijck, J. (2008). Digital photography: Communication, identity, memory. *Visual Communication*, *7*(1), 57- 76.

Wadeson, H. (2000). *Art therapy practice: Innovative Approaches with diverse populations*. New York: Wiley and Sons.

Weinberg, D. (1985). The potential of rehabilitative computer art therapy for the quadriplegic, cerebral vascular accident and brain trauma patient. *Art Therapy: Journal of the American Art Therapy Association*, *2*, 66-72.

Weiser, J. (1988). PhotoTherapy: Using snapshots and photo interactions in therapy with youth.

In C. Schaefer (Ed.) *Innovative Interventions in Child and Adolescent Art Therapy.* New York: Wiley.

Weiser, J. (1999). *Phototherapy techniques*. Vancouver, Canada: PhotoTherapy Centre.

Weiser, J. (2001). PhotoTherapy techniques: Using client's personal snapshots and family photos as counseling and therapy tools. *Afterimage: The Journal of Media arts and Cultural Criticism*, *29*(3), 10-15.

Williams, K., Kramer, E., Henley, D., & Gerity, L., (1997, November). *The seductive environment revisited: Addressing the problem.* Panel presentation at the Annual Conference of the American Art Therapy Association, Philadelphia, PA.

Wolf, R. I. (1976). The Polaroid technique: Spontaneous dialogues from the unconscious. *The Arts in Psychotherapy, 3*(3), 197-201.

Wolf, R. I. (1990). Visceral learning: The integration of aesthetic and creative process in education and psychotherapy. *The Arts in Psychotherapy, 9*, 60-69.

Wolf, R. (2007). Advances in phototherapy training. *The Arts in Psychotherapy, 34*(2), 124-133. doi: 10.1016/j.aip.2006.11.004