2016

Participatory Art and Aging: Proposal for Dementia Prevention Strategy

Colette Brown

*California State University Long Beach*

Follow this and additional works at: https://idun.augsburg.edu/honors_review

Part of the Art Therapy Commons

**Recommended Citation**


Available at: https://idun.augsburg.edu/honors_review/vol9/iss1/2

This Article is brought to you for free and open access by the Undergraduate at Idun. It has been accepted for inclusion in Augsburg Honors Review by an authorized editor of Idun. For more information, please contact bloomber@augsburg.edu.
Participatory Art and Aging: Proposal for Dementia Prevention Strategy

Colette Brown
California State University Long Beach

Abstract: As the population age increases, and Alzheimer’s disease death rates increase, the need for dementia prevention therapies grows in relevance and necessity. A cooperative model for teaching Conceptual art to older adults is proposed as a dementia prevention strategy. Preventive benefits of the proposed strategy are preliminarily suggested to improve: 1) cognitive reserve (CR), where a strong CR has been associated with longer lasting functionality in dementia patients; 2) cognitive lifestyle, a behavioral measure of CR; and 3) neuroplasticity, with promoting neuroplasticity being the goal of many non-pharmacological dementia prevention studies. Texts on art therapy, Conceptual art, social practice, neuroplasticity, brain reserves, aging, and dementia were analyzed. The research showed that CR is difficult to assess; but it is linked to cognitive lifestyle, which is measured by the Lifetime of Experience Questionnaire (LEQ). High LEQ scores indicate a more cognitive lifestyle and correlate with reduced dementia risk. Since Conceptual art encompasses cognitively challenging tasks, it could be used as a part of a cognitive lifestyle to reduce dementia risk. The cooperative model of participatory art facilitates Conceptual art in group therapy by encouraging interpersonal discourse, for a combination of social and cognitive enrichment, which has been linked to positive health outcomes, specifically lowered dementia risk. This research is limited by the lack of studies on using art therapy for dementia prevention. The hypothesis could be fully realized by conducting a comparative longitudinal study measuring the cognitive capabilities of older adults engaged in conceptual-participatory art therapy, versus other cognitive therapy, versus no therapy.
Since 2000, the rate of Alzheimer’s disease deaths has been increasing, with Alzheimer’s now being the sixth leading cause of death in America, and affecting one in three seniors each year (Cowl & Gaugler, 2014; Alzheimer’s Association, 2014). Alzheimer’s disease (AD) is a neurodegenerative disease characterized by losses in memory and learning capabilities, and is one of the most common causes of dementia in older adults (Tompa, 2013). As medical sciences now stand there is no known cure for AD, therefore increasing the relevance and importance of developing prevention strategies. Current uses of art therapy for dementia deal primarily with post-onset patients who are already in early to late stages of AD. These studies have shown expressive arts to be effective in buffering the emotional and behavioral challenges of the disease (Herholz, Herholz, & Herholz, 2013). However, there has been little research on art as a preventive tool. Furthermore, most existing art therapy research approaches art from the expressionist perspective of late 19th – early 20th century Modernism, but recent developments in art since the mid-1900’s Post-Modernism up to contemporary periods, such as Conceptualism and social practice, are not well understood or explored by therapeutic arts.

Since its conception in the early 20th century, art therapy has floated in its own practice-specific genre, neither valued by contemporary art discourse nor occupying a competitive empirical position in science. The discipline is split even within itself by an opposition between psychoanalytic art therapy and expressive art therapy. Although it is now chiefly aligned with medical psychology, it was originally suggested that it be placed within the field of education (Brown, 2012). Given the intellectual rigor of certain types of art – namely concept-based art – it is my position that the original angle to affiliate art therapy within the education sector was not entirely incorrect. This paper outlines how art therapy can employ Conceptual art and integrate brain health education into projects and group discussions, with the aim of reducing dementia risk. Literature on art, art therapy, and cognitive function has been analyzed and amalgamated to support this proposition. In addition to empirical research, examples will be referenced from the author’s non-research based, personal experience in elder care as an arts and crafts instructor at an assisted living center.

The idea of conceptual artwork has come into various meanings over the decades. This paper will use a definition of Conceptualism that was developed by a cohort of artists in the 1960’s who approached art through a series of analytic questions, both material and ideological. The Conceptual movement is a useful starting point, as it has played a part in redefining art as a mode of critical thinking and problem solving – two processes of executive functioning that rapidly decline with AD.

How then does one go about integrating this intellectualized form of art making with the highly expressionistic values that often accompany art therapies? To achieve this, a cooperative model of participatory art is suggested. Participatory art is a branch of social practice that is largely consumed with public interaction. Social art practices emerged intermittently throughout the twentieth century, but have recently begun
to crystalize since the 1990’s (Bishop, 2012). The field has since been characterized by the interconnectivity of art and its social context. Due to the inherent cooperative nature of participatory art, this paper suggests group art therapy as an ideal setting for this approach. Participants’ work would become activated through group discussions and social dynamics. Thus, a collaborative mindset, amongst participants and with the therapist, is central to the realization of the proposed strategy.

This paper will discuss the potential brain-fortifying benefits of Conceptual art therapy in terms of: 1) cognitive reserve (CR), or the brain’s capacity to compensate for neurodegeneration; 2) cognitive lifestyle, a behavioral measure of CR; and 3) neuroplasticity, or the forming of new synapses. Specific types of concept-based projects that can enhance cognitive functioning will also be discussed. The aim is to grant participants a greater sense of agency, as well as expand their opportunities for social and cognitive enrichment. Studies have shown that these types of environmental enrichments can help prevent or slow the onset of neurodegenerative diseases such as Alzheimer’s (Williams & Kemper, 2010; Cracchiolo et al., 2007; Valenzuela, 2011), but art has yet to play a major role in these studies. This paper explores, through theoretical analysis, the hypothesis that Conceptual art within a cooperative model has the potential to reduce dementia risk among older adults.

Art Therapy and Conceptualism

The split between psychoanalytic and expressive art therapies originated with two sisters, Florence Cane and Margaret Naumburg, the mothers of American art therapy. Expressive art therapy, often called “art as therapy”, was developed by Cane, who believed the therapeutic quality of art to originate from the process of making (Detre et al., 1983). Art activities in this application are used for the inherent therapeutic benefits of hands-on creation. For elderly patients the visual and tactile sensations are considered rewarding and pleasurable stimuli, enabling emotional release. Out of Naumburg’s practice grew psychoanalytic art therapy, referred to as “art in therapy”, where art is used in conjunction with psychotherapy (Detre et al., 1983). Here, images generated by the patient are interpreted as expressions of the unconscious. Early art therapy practices of this vocation existed almost exclusively in mental institutions to assist in diagnosing and treating mental illness patients.

Existing modes of art therapy for persons with dementia stem primarily from the “art as therapy” branch, aiming to provide emotional comfort. For the patient and their family, art is seen to serve as a distraction from the inevitable collapse of cognition (Riley, 2001). While these are helpful goals, they are also limiting. The goal of art therapy for dementia patients should be, not only the preservation of optimism, but also the literal preservation of the mind. The presupposition that art is not an intellectual endeavor, as well as intuitive, is a detriment to the rich potentials of the practice. Especially in the context of therapy, it disregards the patient’s cerebral agency, confines the skill of the art therapist, and relegates the power of artistic production. While concept-based art making
may be too cognitively demanding for a person with existing impairment, an intellectual art form could be beneficial on the preventive side for at-risk individuals.

In Naumburg’s 1983 obituary in *The New York Times*, she was quoted speaking about the Walden School which she founded in 1914: “The purpose of this school is not merely the acquisition of knowledge by children. Its primary objective is the development of their capacities.” Naumburg’s alternative education school was focused on, not increasing students’ amount of knowledge, but on improving their ability to learn. Her mission was to nurture instinctive learning through creative expression (Detre et al., 1983). From this philosophy that expressive art opens the mind, this paper offers that Conceptual art can be used as an instrument for stretching and strengthening the mind in all stages and facets of life. However, the distinction between expressive art and Conceptual art must be made. Contemporary art has since evolved from early 20th century notions of expressivity and unconscious revelation, and entered an era of critical discourse. This turn more or less began with Conceptualism.

Fine art, as the institutions had established, was once about aesthetically appealing, largely representational, skillfully rendered visual imagery. The era of Conceptualism was a breakthrough in defining the artist as a questioner and challenger. Such an identity of nonconformity could be traced back to the bohemian Impressionists of 19th century France, who sidestepped classical training, excommunicated themselves from the traditionally renowned schools of art, and pushed boundaries of art mediums such as painting. By the 1960’s, Conceptualists came to question the nature of art in general (Kosuth, 1969). Artists such as Joseph Kosuth and Lawrence Weiner set the stage for a practice of making art that does not look like “art” (in the European classical sense of painting or sculpture). For instance, Kosuth worked with household furniture and dictionary excerpts; and Weiner dedicated his wall space, not to framed paintings, but typographic texts and slogans. Valuable traits of a Conceptual artwork became less about visual appeal and more about ideas. Art no longer relies upon aesthetic beauty; rather it is amplified by intellectual rigor.

The contemporary art scene is a stark contrast to that of an art therapy setting. In the context of the former, one could point at a chair and call it art. While the chair itself is not particularly interesting, the action of the artist calling our attention to it creates the framework for the interest. The supporting argument as to how this could be art is usually the most vital part of the piece, and potentially the very thing that fulfills the original claim. Thus, the value of an art practice is not found in a hand-made object, but in the idea that object represents and how it contributes to expanding the boundaries of a discipline.

The Sixties jumpstarted a collective and fervent inquiry: What is art? Any simplistic or conventional answer was contested, as exemplified by John Baldessari’s painting titled *What is Painting* (1966 – 1968) (see Figure 1). Artists contested the notion of art as a physical object, tangible mass, or material thing. With his piece *One in Three Chairs* (1965), Joseph Kosuth confronted fundamental perceptions about the art object (see
Figure 1. In 1973, contemporary art critic Lucy Lippard summarized Conceptualism as a challenge to the definition of art itself – highlighting the value shift from aesthetic objectness to ideological discourse.

In her article *No Place Like Home* (2012), artist Andrea Fraser posed art discourse as the imperative structure that connects materiality with context. Discussions of Conceptual artwork require complex, critical thinking. Much like a good poem, a good artwork is one that keeps the viewer thinking long after they have left the piece. It may need to be revisited, each time revealing some new physical or conceptual element. This process is required of the viewer as well as the artist. A Conceptual work is wholly supported by the contemplation, communication, and discussion of its idea.

To incorporate concept-based art into a group art therapy setting, this attention to critical thought must be maintained and translated. Conceptual art involves processes of articulating thoughts and bringing ideas to fruition, which are skills used in daily communication. Practicing these skills through an engaging activity such as art would provide powerful agency for persons at risk of losing physical or mental abilities. In addition to increasing sense of agency, critical thinking in art can help concretize abstract goals and give greater significance to the work. Through these endeavors, art becomes a mode for creative problem solving that generalizes and transfers even to activities outside of the art studio. Solutions are found not only in the sense of art materials (e.g. “How can I cut out this circle?”), but in relation to communication and accomplishment on an everyday basis.

**Cooperative Model**

*Defining Participatory*

There is a deep-rooted perception that art is a product rather than an action. This is evident in the English language when it is grammatically correct to say, “I am making art”; and incorrect, or odd sounding, to say, “I am doing art.” Art theorist Ellen Dissanayake considered art as a behavior, rather than an artifact (2003, p. 24). She argued that art is not only the result of action, but also the action in and of itself. Participatory art, in part, emerges from this notion of art as action. Specifically, its interest is in social interaction. However, there is not yet a clear and decided vocabulary for discussing this type of art practice. The field has acquired titles such as: socially engaged art, social practice, cooperative art, or participatory art. All variations deal primarily with interrelational communication and societal structures.

In his book *What We Made* (2013), museum director and cultural affairs commissioner Tom Finkelpearl appropriates the term “socially cooperative” for organically orchestrated group projects, “participatory” for public works with one clear author; but reserves the term “collaborative” for clear and true co-authorship. In 2006, art historian Grant Kester (as cited by Finkelpearl, 2013) suggested that these terms are not exclusive, but form a spectrum along which any social practice may categorically reside.
The term participatory is broadening in application. In 2012, Langley Brown described his work in the mental health field as participatory art, though he considers himself aligned with what he calls “non-therapy-oriented artists.” Participatory Action Research (PAR) – a type of therapy dedicated to providing individuals with tools for agency – has adopted the arts as a way to integrate disabled persons into mainstream society (Spaniol, 2004).

Participatory art exists within the field of social practice; but also often falls along borders of therapy or activism. Berlin-based artist Annika Eriksson, for instance, conducted a sociological project for London’s 2004 Frieze Art Fair. Aptly titled Do you want an audience?, her process involved placing an ad in the local paper calling for individuals who desired a public audience. At the art fair, she arranged a stage and microphone upon which the ad-respondents were invited to broadcast their voice. As another example, Polish artist Pawel Althamer, in cooperation with Grupa Nowolipie, created Sylvia (2010), a bronze sculpture of a female figure functioning as a public fountain. It was produced by the group of disabled adults in a ceramics workshop run by Althamer. This part of his art practice falls loosely between contemporary art and therapy. Although, exhibiting the group’s work as an art piece lends toward labeling them as artists rather than patients. Both projects by Eriksson and Althamer are examples of what participatory art can look like. One is an event and one is a sculpture – both are results of socially cooperative art.

Transforming audience members into participators is the hallmark of this type of work. It is not merely “audience participation”, nor the removal of the audience; it is an integration of the two. The primary audience becomes “built-in” to the work itself. For this reason, in 2012, art historian Claire Bishop assigned the term “participatory art” to the broadening category of social practice. This art is not only dependent upon, but is activated by the participation of a group.

The work becomes localized within this interaction. Consequently, the discussion about material is recalibrated as well. Within a participatory art practice, the primary medium is people. Artists now consciously use the level of participation as a further means to explore ideas. The interworking structures of culture, politics, economics, and interpersonal relationships become the malleable target.

Integrating Intellect and Expression

As it emerged, Conceptual art aimed to sterilize art by removing from it all traces of affect and stripping it down to bare essentials. This manifested as cut-and-dry artwork, with no flourishes, just the facts. While this type of art is a great intellectual tool, it is not the easiest to swallow as it often lacks a human touch or appeal. Applying a participatory structure could help remedy this within an art therapy setting. Participatory art has a social aptitude that makes art both accessible to the public and open to the dissemination of ideas. Finding this balance between sterility and accessibility, and intellect and affect, is crucial to the success of the Conceptual art therapy strategy being suggested.
The following is a demonstration of how a participatory lens can build upon a Conceptual framework, through a dual analysis of Conceptual artist Sol Lewitt and social practice artist Rick Lowe.

As a Conceptualist of the 1960’s, Lewitt triumphed thought-process over any end visual result. For his well-known series of Wall Drawings, he worked by designing blueprints or sets of instructions, which were then carried out by draftsmen. Through this arrangement, a division was cast between the mind that constructed the geometric systems governing his drawings, and the hands that physically produced them. This has become the foundation of Conceptual art, which values the artist as savant rather than skilled-laborer. As a social practice artist, Lowe posited art as a thought-process leading up to an action-process. In the 1990’s, he began Project Row Houses. Two decades later, the project continues to operate as a fully established non-profit organization. Lowe’s social regard and Lewitt’s conceptual concerns are by no means exclusive. For instance, the unique relationship between Lewitt and his fabricators represents a transference of information between individuals. His systematic method is fuelled simultaneously by two distinct human desires: to accurately follow directions, and to think independently and solve problems through critical analysis. The success of Lewitt’s practice is contingent upon human communication, and is thus exemplary of how a Conceptual framework can be integrated and amplified by a community network and social interest.

Within art therapy professions, there is also a need to mediate affective interests, which have been partially compromised by a critical distance between therapist and patient. Art therapist and social activist, Maxine Junge, revealed the limitations of a practice that neglects empathy:

A part of our history as art therapists that may impede us is that we have been trained as “appreciators” of art, as reflectors, supporters, explorers of the intrapsychic landscape rather than pro-activist, co-creators engaged together with our clients in their struggle, which is ultimately also our own. (Junge, 2009, p. 109)

While her article seems partially focused on the power of emotion (and the aim of this essay is to, not negate, but momentarily steer away from affective emphases), her argument that the art therapist should consider their patients as collaborators is useful for this essay. In a 2004 publishing of her writings, art therapist Shirley Riley also noted the importance of a collaborative relationship with her clients. A shared mentality is becoming more and more practiced and recognized in therapy professions.

Avoiding Exploitation

Social art practices in which the artist works with disadvantaged or underserved populations, such as senior citizens or ethnic minority groups, sometimes results in unintended exploitation of that group. For example, artist Richard Ross interviews and photographs incarcerated youth. Some would say he speaks for those who are not given
a voice. Though, he speaks for them in such a way that reinforces their relegated state. When working with inpatients or inmates, the social practice artist more or less brings these individuals – or rather representations of them – into the art world through photos, videos, and discourse around the artist’s practice. In some cases, they exist in the art world in a secondhand fashion.

While regulations such as patient confidentiality raise potential issues by restricting representational autonomy, careful attention must be allotted to prevent exploitation. These concerns are critical to the establishment of the emerging field of social practice, and also relevant to broader discussions on individualistic versus collectivistic value systems. In the art therapy setting, these issues could be opened for dialogue about communal dynamic and deconstructing hierarchies. Inviting participants into the discussion on collaboration and representation could improve interest and intellectual stimulation. Additionally, hearing their opinions could clue the therapist in to new collaborative possibilities.

*Group Advantage*

The collective dynamic unique to group art therapy contributes strongly to the plausibility of a participatory art approach. Interpersonal relationships and group dynamics are that which activate a social practice. The cooperative model is dependent upon the voluntary contributions of involved participants. It is a collaborative practice. Collaboration is the combined, equal, and accumulative efforts of a group of individuals where they can build upon each other’s skills and ideas. The congregated structure of group therapy is a welcoming context, full of potential for the blossoming of interpersonal relationships and bonds. Additionally, the structure of therapy that is arts-based is already configured for creative thoughts and activities, where a “hands on” approach is expected and appreciated.

Group art therapy is almost always more fruitful than individual therapy sessions for patients experiencing age-related decline (Riley, 2001). For those who may have physically or consciously lost friends and family, the social quality of the group setting often serves as a replacement community. Nursing homes or assisted living facilities are sanctioned-off from larger social contexts. Family might come to visit, but they are distanced on the day-to-day. So being a part of a group, reintegrating into a new social sphere, provides crucial support.

*Cooperative Model in Action*

Connected Communities, a program run by the Arts and Humanities Research Council in the UK, is funding a new project called Dementia and Imagination. This project employs artists (not art therapists) to lead sessions in a similar vein of art therapy, but not for the purpose of emotional confrontation. As described on their website, a participatory art approach is used to overcome stigmatizations of dementia diseases and
to address larger, related issues outside the confines of a therapy setting.

This is a progressive research project working to develop more opportunities for dementia persons. Their focus is mainly to change social attitudes toward dementia. However, according to the principal investigator Dr. Gill Windle, their program is not set up to measure the preventative benefits of participatory art against neurodegenerative diseases. Adding this neurological element to their research could have immense potentials.

**Neurological Benefits**

The three brain regions initially obstructed by AD are the hippocampus, entorhinal cortex, and prefrontal cortex (Galbraith, Subrin, & Ross, 2008). These areas of the brain are key components in controlling working memory and executive functions such as goal-keeping and decision-making. These areas are affected first, at early onset, and continue to atrophy as pathology develops. Destructive plaques and tangles grow and spread, eventually throughout the entire cortex, until the brain can no longer function.

Recent adjustments to the National Institute on Aging – Alzheimer’s Association (NIA/AA) have produced a new diagnosable stage of AD. The disease can now be preemptively diagnosed as preclinical, or pre-symptomatic, when appropriate biomarkers are present (Sperling et al., 2011). Biomarkers, or biological indicators, are being studied to predict a forthcoming onset of the disease. The research of Sperling and colleagues (2011) advocates the opportune significance of this preclinical stage for prevention studies. If AD can be accurately forecasted, protective measures could have incredible implications for efficacy. Prevention studies must therefore be solidified and expanded upon in anticipation of identifiable clinical biomarkers.

**Reserves**

The brain has basically two defenses against decline: brain reserve and cognitive reserve. The quantitative measure of brain mass is called brain reserve – the number of neurons and neuronal axons in one’s brain. Brains with a higher neuronal count are generally denser, heavier, and have shown to be more resilient against dementia (Galbraith et al., 2008). Although brain reserve has been a long-standing determinant of disease pathology, recent research has revealed a more complex model of brain resilience that involves cognitive reserve (CR). A qualitative measure of the brain’s capacity for learning, CR is related to neuroplasticity, or the flexibility of neurons to form new connections (Stern, 2013). Such flexibility is what enables speed of thought, learning, and memory.

In 2013, Yaakov Stern suggested that the probability and severity of dementia pathologies are determined by a factor of both brain reserve and CR. While two people may have the same measurable amount of brain reserve, they may experience functional decline at different rates. This is due to a difference in levels of CR. A greater level of CR
enables the formation of new neuronal pathways to carry on the functions of deteriorated pathways; whereas lower levels of CR would result in the loss of that function altogether. In other words, the brain has access to greater resources in the face of decline. Stern also reports the drawback that a high CR defers timely diagnosis, as functional failures such as memory loss are not outwardly noticed until much later.

While CR is a promising theory for functional resilience, its limitation is that it is difficult to measure objectively. Stern (2013) proposed that CR be measured by a person’s a) level of education and b) occupational attainment, where higher achievement correlates with higher CR, and c) cognitive challenge of leisure activities. This is problematic for two reasons. First, it does not account for socioeconomic differences in access to education or employment. Second, it only loosely takes into account the myriad of activities outside of school and work that contribute to our intellectual capacities. To remedy this, Michael Valenzuela (2011) developed a behavioral construct of CR called “cognitive lifestyle” that can be observed and measured.

Cognitive lifestyle is defined as a combination of an individual’s level of education, complexity of their occupations, and diversity and frequency of their extracurricular activities (Valenzuela, 2011). A quantitative, self-report measure, the Lifetime of Experience Questionnaire (LEQ) (Valenzuela and Schadev, 2007), was developed to assess one’s level of cognitive lifestyle, with higher LEQ scores indicating a more cognitive lifestyle. The questionnaire has also been shown to reliably predict dementia risk. High LEQ scores have been correlated with less cognitive decline and larger hippocampal volume (Valenzuela, 2011). As this is one of the first brain regions attacked by AD, having a larger hippocampus means that it is more resilient against memory loss associated with dementia. Furthermore, Valenzuela’s research showed that a more cognitive lifestyle is indicative of a stronger CR, meaning increased capacity for neuroplasticity and lowered risk of dementia.

If we look at participatory art and Conceptualism from this cognitive perspective, all elements of social and cognitive enrichment are there. Processes used in these art practices including complex thought, experimental diversity, and intellectual stimulation are directly related to activities that have been shown to strengthen and fortify CR for dementia prevention. Returning to the example of Kosuth’s One in Three Chairs (1965), the piece raises philosophical questions about objectness and language. The example of Lowe’s Project Row Houses (1990 –) presents social activism as art, and in turn reassesses the realms in which an artist can function. These ponderings stir deep intellectual and cultural curiosity.

The contemporary understanding of art as a process of abstract problem solving broadens its instrumental scope. It now has potential at disciplinary intersections such as neuropsychology and art therapy. The cooperative model of participatory art framed by conceptual interests presents an opening for the pleasure of making to coincide with the challenge of thinking. Thus, having been evidenced as cognitively challenging, this art falls within the category of activities that designate a cognitive lifestyle.
Neuroplasticity

Neuroplasticity can be defined as the ability of neural networks and synapses to adapt in response to the environment, providing the foundation for learning (Doidge, 2007; Goldstein, 2010). Plasticity occurs on a daily basis according to our experiences, and is therefore a dynamic, competitive process (Doidge, 2007). The more we dedicate one part of our brain to a specific task, the more pronounced that brain area becomes. The opposite is also true. Less frequented tasks result in depreciated connections in those brain areas. Plasticity is for efficiency; so neural pathways that aren’t being used get “voted off the team”. If we stop learning or doing new things, there is no need for networks to adapt or rewire. In which case, plasticity hardens and we lose flexibility.

Plastic responses may be triggered by external or internal environmental changes. In the presence of AD, for instance, cellular plaques and tangles deteriorate the internal environment of the brain (Galbraith et al., 2008). Brains with higher CR, and greater capacity for neuroplasticity, may demonstrate resilience by recruiting alternative or additional neuronal pathways to compensate for loss (Valenzuela, 2011).

Research by Grady and her colleagues (2003) provides evidence for compensatory neuroplasticity in persons with AD. Their study showed that, during memory tasks, healthy older adult brains were predominantly activated in the left hemisphere, which was considered normal. Patients with mild AD displayed cortical activity in both hemispheres, indicating that additional neural networks had been recruited to perform the memory tasks. Interestingly, AD patients who performed worse in memory showed less bilateral network activation. This suggests that memory proficiency in AD patients may be sustained by increases in compensatory neuroplasticity. For this reason, promoting neuroplasticity has been the goal of many non-pharmacological interventions for dementia prevention (Herholz et al., 2013).

A small, but significant, part of the brain that facilitates neuroplasticity is called the nucleus basalis (Doidge, 2007). Located within the basal forebrain, this structure is involved in the production of acetylcholine (ACh) – a chemical that controls arousal and attention (Carr, 2008). Attention is what enables the processing of jumbled stimulus input into useable, memorable information (Goldstein, 2010). Thus, increased production and absorption of ACh enhances attentional capacity, making for more efficient learning. Alzheimer’s has been linked to a reduction of ACh and degeneration of the nucleus basalis (Ferreira-Vieira et al., 2016).

Using art as a concept-based tool in art therapy for older adults could be used to stimulate ACh production within the nucleus basalis. Critical thinking and focus are elements of Conceptual art that precipitate the learning of new ideas and materials. The process of communicating ideas through visuals may flow smoothly, intuitively at times; and at times it may require arduous contemplation. Such heightened attention is more likely to promote neuroplasticity, in turn strengthening CR (see Figure 2 for example art project).
Neurogenesis

Aside from reserves, which mainly pertain to axonal growth, there are other studies concerned with the growth of entirely new neurons. This phenomenon is known as neurogenesis. In 2012, neuroscientist Sebastian Seung stated that, while nothing has been exclusively proven, many neuroscientists now concur that the hippocampus and olfactory bulb are two brain areas that undergo neurogenesis throughout a lifespan. The majority of this research pointed to enriched environments, physical activity, and intellectual stimulation as means of promoting neurogenesis.

As the hippocampus is one of the first brain areas affected at initial onset of AD, this discovery of its capabilities is a breakthrough. Seung (2012) suggests that neurogenesis in this area is not regenerative, but a process of experiential learning. This means that the hopes for neurogenesis are primarily preventive, rather than curative, of brain disease. Again, this supports the increasing need for dementia prevention studies.

Conversely, neurogenesis in the olfactory bulb is a regenerative process of cell death and re-birth (Goldstein, 2010, p. 356). This is evolutionally necessary since receptors in the nasal cavity are often exposed to harmful pollutants. Looking at the mechanisms of olfactory neurons could give scientists insight to curative types of neurogenesis, but any research on this has yet to be fully realized.

Applications and Tactics

Keeping Participants Informed

“At last I am getting some information here that I have been waiting for!” (Riley, 2004, p. 189), was a man’s response upon being informed, during an art therapy session, about how Alzheimer’s was affecting his brain. The man’s art therapist was Shirley Riley who had innovatively combined brain science and art therapy to help her patients understand their brains at a neurological level. Riley’s work exemplified a combined educational-therapeutic approach. She experienced a particular breakthrough in her practice when she began to teach her patients about basic brain biology in relation to their illness. She proceeded by directing her patients to draw their own brain. This incorporated visual and verbal communication pathways, as well as allowing them to draw on personal experience and past memories. The man’s response in the aforementioned quote implies desire for information that is either being withheld from or deemed irrelevant to geriatric populations. This lack of communication is especially problematic when the uncommunicated pertains to a person’s physical, mental, or social condition.

Everyone should be informed about how the brain works, how experiences affect brain plasticity, and how to keep the brain active. Anne Galbraith, Ruth Subrin, and Drew Ross (2008) are a team of art therapists who also spread this awareness to their patients. They have developed practices that incorporate teaching their geriatric groups about neurogenesis and plasticity. The lessons resulted in an increased willingness to participate
and experiment during art activities. This technique provided their patients with a sense of hope and agency, as well as challenging them cognitively through academic learning.

The evidence for plasticity in adult brains is a promising lead for neuroscience. Additionally, it establishes a basis for new and higher goals of therapy, specifically art therapy, for older adults. Art therapy now has the potential to function in line with cognitive therapies. It can be used as a pro-active tool for cognitive engagement and social enrichment.

The Checklist

According to a compilation of research by Riley (2004) and her partners Galbraith, Subrin, and Ross (2008), there are three key qualities an art therapy activity should possess: application of memory, use of repetition, and attention to spatial awareness. These are the factors most relevant to art therapy for dementia patients. Projects that involve these elements are more likely to improve cognitive functioning.

In regard to memory, specific memories are almost always attached to broader concepts (Goldstein, 2010). The use of concept in art therapy would open more opportunities for memory connections to be made. This would allow for more engagement by referencing past experiences that relate to the present, as well as stimulating areas of the brain involved in memory retrieval (see Figure 3). However, this type of intellectual memory is not the only type of memory we possess.

Riley (2004) was interested in the notion of body memory, or parts of the body that carry memory through the senses. This is the foundation of procedural memory, such as riding a bike – also commonly referred to as “muscle memory”. Riley noted that the brain-body connection allows for storage of these memories in the mind, even when they are unable to be articulated through verbal language.” She found that this was an important distinction to provide for her dementia clients. Since intellectual memory is often emphasized over muscle memory, many patients felt they had “lost it all” when they lost their ability to articulate memories (p. 189). However, many still retained their ability to perform actions from memory, or procedural memory. Riley found that participants were highly optimistic upon this discovery.

Procedural memory, or “muscle memory” such as brushing teeth, outlives semantic and episodic memory because it is reinforced through repetition on a daily basis (Galbraith et al., 2008). Repetition works on a neurological level through reinforcement. Repetitive output or input activates the same neural pathways over and over again each time it is repeated (Doidge, 2007). This “trains” the brain and creates specialized neurons. Repetition accompanied by minor innovations reinforces established pathways and helps form new ones – keeping the brain flexible and plastic. Again, neural plasticity contributes to increasing cognitive reserve (Stern, 2013).

Spatial awareness and social engagement are crucial elements of an effective therapy session. Spatial awareness, on a biological level, employs more sensory receptors, which connects to more brain areas being utilized (Goldstein, 2010). On a social level, engaging
with one’s surrounding inevitably means engaging with others in the environment. Additionally, engaging with surrounding space encourages thinking outside of the self, a practice that has been linked to more effective learning and conditioning cognitive activity (Grossberg, 2013). An example of an art project that could activate spatial awareness and repetition can be seen at Figure 4.

Four-step Plan

Art therapist Dr. Aina Nucho developed what she called the psychocybernetic model of art therapy (2003). Her book describes a four-step therapeutic process, which is now widely used by clinical art therapists. The four steps are broken down into the “unfreezing phase” where the client is brought into mindful awareness; the second “doing phase” where the client creates the artwork; the third “dialoguing phase” opens up for discussions and analyses of the work produced; and the “ending and integrating phase” occurs when desired therapeutic goals have been reached.

This four-step therapeutic process bears some resemblance to the pedagogic process at work in university art schools. Academic procedures typically initiate with a lecture about artists and materials relevant to the upcoming assignment. This is followed by a series of “work days” where production time is maximized. Finally, there is a critique, or class discussion, used to assess the artwork each student has produced.

Nucho’s model and the described art school curriculum exhibit similar protocol. Both consist of preparatory, action, and reflection stages. One is therapy and one is education, but they are not so far removed in the logic of their approach. This goes back to illustrate legitimacy in original attempts to align art therapy within the education sector. To combine them in a conceptual-cooperative approach to art therapy would be highly beneficial.

Orienting, or extending, the opening phase towards a more educationally driven message could direct participants’ thoughts to be more open to learning and experimenting, as seen in the research of Galbraith and colleagues (2008) whose patients’ interest peaked after an educational lesson on brain health. Using the action phase to produce conceptual work would activate brain regions associated with executive functions such as problem solving and critical thinking. The reflection or critique phase would include group discussions on emotional response as well as academic language and constructive criticism, making excellent use of the cooperative model to encourage socialization and communication skills.

In this proposed plan for integrating therapeutic and educational modalities, finding the balance between emotional sensitivity and intellectual awareness is essential. Andrea Fraser, in her 2012 written work of art called No Place Like Home, calls for more raw honesty in the contemporary art world, which she criticizes has become sterilized by sapience. Art in all contexts is complimented by a combination of affect and intellect. Addressing work from an academic angle makes for a more goal-oriented process with the satisfying reward of refined knowledge about the topic, or work, at hand.
Simultaneously, having the ability to express one’s thoughts or feelings is important for reducing apathy and cultivating sense of confidence. Thus, the overall approach should allow for subjective reflections, as well as informed considerations such as form, context, and concept.

Benefits of an educational approach are also evidenced in health and science. In 1999, the Health Education Authority of the UK conducted a review of community-based arts for health projects, in which they found that the most successful approaches were those that assumed a structure more similar to art workshops or traditional art school. Additionally, as previously mentioned, Stern (2013) and Valenzuela (2011) have shown that educational and enrichment experiences have the potential to increase cognitive reserve in early as well as later life stages.

Thus, educational approaches are indeed beneficial, but a strictly educational environment may be too demanding for persons at risk for dementia. Bringing educational elements of Conceptual art into a therapy setting allows for more sensitivity and lenience. A therapeutic environment is set up to cater to emotional and medical needs, as well as intellectual reaches. The goal would be to capture the joys of education, while meeting participants at their learning level. Education in this sense is not the memorization of facts, but the ability to think critically and problem solve.

**Conclusion**

Ideas and action are inseparable and inherent to Conceptual art and participatory art. Adopting these practices into an art therapy plan would provide more rigorous opportunities for increasing neuronal health. Using Conceptual art to strengthen CR is a strategy for prevention against dementia of the Alzheimer’s type.

Critical thinking layered with multifaceted experiences are ingredients for inventing creative solutions to life’s challenges. As Naumburg believed, education is not only means of obtaining information. Rather, educators should teach how to collect, and build upon, existing knowledge. From this synthesis of research, a direct way to engage art therapy participants is to keep them informed. Expand their knowledge about CR, neurogenesis, and neuroplasticity. Include them in discussion about collaboration and representation. With so many years of experience, a geriatric group can offer as much to their therapist as the therapist can offer them.

Research and practices within art and mental health fields are progressing. Some alternative approaches are using “art therapy” as a reference title that can be most closely associated to their present direction. However, professional and social currents are flowing toward more integrated, holistic techniques. Dementia and Imagination, a community health project in the UK, for example, uses art workshops to address wider social and cultural issues relative to their senior population’s entire life contexts. Arts-based PAR projects are reaching towards social integration and self-sufficiency for adults with disabilities. Galbraith, Subrin, Ross (2008), and Riley (2001; 2004) combined clinical neuroscience with art therapy. Projects such as these are beginning to delve
into pluralistic practices – calling upon multiple disciplines and combining methods for unique applications. It has been the aim of this essay to contribute to these emergent studies.

Arguably, there are certain problems with the sanctioning-off of geriatric facilities. It acts as a barrier between generations, isolates the elderly, and quarantines end-of-life realities. There are many social, cultural, and economic aspects involved. However, with aging populations on the rise, it is a subject worthy of extended investigation.

With the new diagnosable stage of preclinical AD, preventive measures are being more closely considered. Prevention studies could be expanded by looking to Conceptual art as a way of non-pharmacologically strengthening CR. Additionally, the field of Conceptual art would be expanded and diversified if addressed in relationship to neurological research.

Looking at the relationship between art and play could also advance this investigation. As seen with examples from my experience at the assisted living center (i.e. “The Memory Game”) (see Figure 2), playful elements can be incorporated into art projects. Competition and teamwork are also factors to consider in relation to participants’ levels of interest and involvement. Conceptual art that involves gameplay would be an area to explore.

Much of this paper has focused on intellectual activity, but physical activity should be addressed as well. Somatic and cognitive components work together. Potentials of the mind-body connection could be evidenced in the realm of conceptual dance. The connection between memory and muscles, as explored through dance, is another area for further research.

Overall, this paper shows the cognitive and therapeutic benefits of fusing the intellectual devices of Conceptual art with the integrative qualities of participatory art. Furthermore, this paper reveals the need for further investigation into these contemporary art practices as potential non-pharmacological strategies to prevent or slow age-related cognitive decline. Such research could be fully realized by conducting a comparative longitudinal study measuring the cognitive capabilities of older adults engaged in conceptual-participatory art therapy, versus other cognitive therapy, versus no therapy. The brain-fortifying potential of academic, professional, and extracurricular enrichment activities is a message with widespread applications. The ideas and methods described in this paper are not limited to geriatric group art therapy, but can – and should – be adapted for demographics across the spectrum.

---

"If the brain were a bucket, instead of filling up the bucket, the goal would be to make the bucket bigger" (Pentz, 2015).

"Non-therapy chiefly implies anti-therapy. Criticisms against therapy are largely related to the negative stigmas attached to the term. “Some artists...see their role...as an antidote to...the patronizing and disempowering effects of therapy” (Brown, 2012, p. 34-35). This paper is not anti-therapy, but this viewpoint must be noted, as it is not an uncommon
position for artists working in mental health fields.

iii There is interesting anthropological research (Nanda & Warms, 2011) about culturally specific values of aging. Industrial cultures associate age with death; they tend to employ nursing homes and the like, relinquishing caretaker responsibilities to non-family members. Rural cultures equate age with longevity, tend to champion their elders, and assume in-home care.

iv For full interview with Windle go to http://dementiaandimagination.org.uk/the-project/
the-project/

v As economic and political inequalities disintegrate the middle class, it seems that wealthier persons with access to educational and occupational resources will have less probability of developing dementia; whereas working class individuals with fewer available resources will be at greater risk.

vi Conceptual dance is non-performative, stemming from natural motion. As a conceptual art form, it could be a way to address the mind-body connection. An example of conceptual dance would be Yvonne Rainer performing Trio A (The Mind is a Muscle, Part I) (1966). Enriched physical activity also contributes to cognitive improvement (Seung, 2012; Stern, 2013).


Dementia and Imagination. (2014). Dementia and Imagination project. Retrieved


IL: Charles C Thomas Publisher, Ltd.


T-Shirt Rope. Personal photograph by the author. 6 Nov. 2013.


Appendix

Participatory Art and Aging: Proposal for Dementia Prevention Strategy

Figure 1

What is Painting (1966 – 1968), Baldessari (right); One in Three Chairs (1965), Kosuth (above). Two fundamental examples of conceptual art.
“Memory Game” (2013). Project directed and facilitated by the author at an assisted living center. The Memory Game requires no set strategy other than paying attention. The group requested to re-play the game many times in a row. There has been cognitive therapy research specific to the study of gameplay, where more complex games result in broader cognitive improvement (Basak et al., 2008 as cited by Stern, 2013)

“Childhood Homes” (2013). Project directed and facilitated by the author at an assisted living center. Residents constructed collages of their childhood homes from memory. Those who were physically unable to use the materials described their home to the facilitator, who pieced together the visual image. As the
image developed, the individual recalled progressively more details and memories about their home.

*Figure 4*

“T-Shirt Rope” (2013). Project directed and facilitated by the author at an assisted living center. Process involved repetitive motions by cutting and tying t-shirt strips together, and spatial awareness by forming a physical line of connection between all people in the room as each person held a piece of the finished rope.

**Goals of the Actors Within the BDS Movement**

*Image 1*

AWC members protesting University of Minnesota Law School ‘breach of academic boycott’ (Photo credit: Julian Kritz)