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DRAWING AND MEMORY LOSS: MAPPING AND RECORDING THE JOURNEY THROUGH ALZHEIMER'S DISEASE

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While drawing has become a more common tool in art therapies for patients suffering debilitating diseases, it is not commonly seen as a means of tracing cognitive and memory deterioration in dementia patients. In this paper I examine the role of drawing documenting the experiences of two artists with Alzheimer's disease. Although the patients have different proficiencies, the act of drawing allows them to express their thoughts and emotions, recording their physical and mental decline and inexorable memory loss. Discussing ethical issues around the use of artworks made by people suffering from dementia, I note the importance of giving individuals opportunities to document their life with Alzheimer's disease. In the act of making images they are able to communicate and share something of their world and be comforted that they continue to share experiences with those around them, even as their faculties falter and fail.

Drawing in many forms continues to be an expedient tool for artists to use in communicating their personal experiences of ill health and mortality. It has also been an important tool for patients, carers and medical professionals as means of communication and explanation for those experiencing trauma and sickness. While there are many images that record processes of aging, illness and death it is not common to examine works as a measure of the decline of a human being in terms of their loss of memory or follow a journey into advanced dementia. For those living with Alzheimer's disease or other forms of dementia, drawing by hand has an immediacy and power to record and encode memories and emotions that are distressing, fleeting or fantastical, especially when spoken language is failing and memories are fading. Drawing supports and enhances dialogue between patient and carer, particularly reinforcing a feeling of respect and self-worth to a person undergoing mental or physical deterioration. Artworks produced by a patient can also provide a tangible example of the impact of disease, as images can over time track and trace the decline of memory, personality and physical ability. ¹

In choosing to look at the work of two artists who have used drawings to explain their experiences of living with different forms of Alzheimer's disease I explore common themes where drawing has been used as a means of communication and interaction with the world. While William Utermohlen (1933 – 2007) sadly succumbed to early onset dementia, Mary P continues to live with Alzheimer's in old age. Utermohlen's rapid deterioration over a period of five years meant that much of his later work has of necessity become interpreted by his family and supporters, while Mary's decline has been much slower and she remains able to explain her work to carers. Utermohlen's wife believed that he made self-portraits in order to understand how the disease was affecting him, while Mary uses drawings to clarify her thoughts and reinterpret memories of place.

The word dementia is applied to many neurodegenerative diseases relating to the loss of memory, communication skills, problem-solving and organisation difficulties that are severe enough to interfere with daily life. The most common forms are Alzheimer's disease and vascular dementia. In all cases dementia is progressive, as areas of the brain become permanently damaged either through small bleeds, as in vascular dementia, or high levels of proteins damaging brain cells, as in Alzheimer's disease. Alzheimer's disease erodes and distorts autobiographical memory, perception of space, perception of time and place becoming warped. Personality changes and mood swings are also not uncommon, with many patients experiencing visual and aural hallucinations. The degree and speed of the disease may vary from person to person; one person may exhibit a rapid decline necessitating palliative care in hospital, while another person may be able to live with support in their own home for many years. ²

¹ While focusing on the work of Utermohlen and Mary P, in this paper, I have been careful to respect the many ethical dilemmas involved in examining the work of individuals living with a life-limiting neurological disease. In the case of the Utermohlen I have been guided by written statements and observations of family members, friends and medical professionals who encouraged him to pursue his artistic endeavours and were able to report on his personal journey throughout his illness. In the case of Mary P I have sought and enthusiastically received approval from her, for her work to be examined and discussed in this paper and elsewhere. Her family members and carers are also in agreement and have been supportive of her work and my research. It was felt that it validated her creative work. While Mary P shows advancing deleterious symptoms of Alzheimer's disease, to date she remains able to make decisions and express opinions about her work. As she continues to undergo medical support and treatment I have chosen to anonymize her name.

² Further information about the progress of Alzheimer's disease and implications for home care can be found at https://www.alzheimers.org.uk/sites/default/files/pdf/factsheet_the_progression_of_alzheimers_disease_and_other_dementias.pdf

Studying artworks made by artists living with forms of dementia poses particular ethical questions. When can a person give consent to the use and viewing of their work and how far can discussions go about the subject and remit of a drawing or painting with an artist with the advanced disease? The views of people with dementia about their arts practices are habitually mediated by carers and support workers. Renée Beard explores the historical difficulties for those living with Alzheimer's disease in her article from 2004.

Despite intentions, attempts to give voice to the perspectives of people with AD (Alzheimer's disease) have encountered considerable obstacles. As with other marginalized groups, such as children, the learning disabled or the mentally ill, proxy interviews with carers have historically been seen as the best way to investigate issues of AD; thus, reinforcing the unfortunate notion that people with dementia are deficient. (Beard R L 2004 p 798)

In their work on co-creativity with patients with Alzheimer's, Hannah Zeilig, Victoria Tischler, Millie van der Byl Williams, Julian West and Sarah Strohmaier are particularly concerned with enabling patients to experience creative activities, thereby giving them a 'voice' to encourage participation and exhibit independence, challenging views of the deficiency of individuals.

The capacity to act and to effect change in the external world is a fundamental part of personhood. The standard association of agency with the capacity to act intentionally and the entrenched belief that the progress of dementia leaves people largely incapable of intentional, meaningful action has resulted in the assumption that dementia necessarily involves a loss of agency. (Zeilig et al 2019 p 17)

As spoken language becomes lost to the patient, very often it is only close family members or carers that interpret or decipher work. Even these explanations or inferences may be coloured by past relationships and experiences with the patient. At certain stages of dementia patients may become very disoriented and delusional, and their work contain meanings understood only to themselves. A person with Alzheimer's disease can express fluctuating contradictory opinions, especially in terms of time and space. Home may for a period of time become an unfamiliar and threatening place, long dead friends and family more real than those alive and present. It can be difficult to adequately respond to work made by a person whose memory can be centred in an alternate reality, coloured by recollections that are fragmenting and existing in a shifting temporal reality.

Marks made by a patient may carry a variety of meanings, conveying a record of emotion, form or space that can be open to a variety of interpretations. The patients' choice of media, use of colour, gestural or mark making energy may be affected by the substantial damage to particular areas of the brain. Lines made on paper can reflect simultaneously frustrations in communication or personality changes that the patient has undergone. Katherine Rankin, Anli Liu, Sara Howard, Hilary Slama, Craig Hou, Karen Schuster and Bruce Miller investigated dementia-induced changes in visual art production, looking at patients with Alzheimer's disease and different forms of dementia, comparing outcomes with a control group of 15 healthy older individuals.

The Alzheimer's disease (AD) subjects in our study also chose to use significantly fewer colours than controls, particularly in their representational drawings of the still life and the self-portraits, and a large proportion of the group's drawings were characterized by very light mark making and decreased saturation of colour, such that the details of the drawings were difficult to see from just a few feet away. Their more limited, subdued colour palette is difficult to explain, as both this study and previous research suggest AD patients show no differences in colour perception or preference. Perhaps the use of more muted mark making relates to previously documented deficits in visual association, particularly in their ability to recognize common objects and make figure-ground distinctions. Another possible explanation for the decreased intensity of our AD patients' drawings is based on evidence that individuals with AD undergo personality changes consistent with loss of assertiveness and increased insecurity. This more self-conscious attitude may have produced a more cautious, hesitant approach to the novel and challenging artistic tasks in this study. (Rankin K et al 2007 p15)

The effects of neurodegenerative diseases on a patient's creative work may be influenced by their previous experience and can vary depending on the type and phase of the disease as it affects motor skills and cognition. For those who are in the grips of early and middle stages of dementia, making drawings as a means of communication supports dialogue with family members and carers. The activity of making a mark on paper can help a patient to move forward with a thought or memory and for a period of time can relieve some unnamable disquiet caught in a continuous loop of worry.³ As language skills decline what a patient seeks to communicate may not always be easily comprehended. While images may become more abstract and marks less well-defined, emotions can be expressed through physical gestures scored and smeared onto a surface. By comparing the drawings of amateur artist Mary P and professional portrait painter William Utermohlen we can see commonalities in the use and choice of materials to express thoughts and emotions as they experience the symptoms of Alzheimer's disease.

William Utermohlen: creative work in response to Alzheimer's disease

There can be a more confident interpretation of work where an artist has been able to give consent or makes a record of discussions about their work before dementia overwhelms all reason or physical mobility. Utermohlen was able to continue his practice and made many works journaling his experiences with Alzheimer's disease for several years. In 1996 at the relatively young age of 61 he received a presumptive diagnosis of Alzheimer's disease. Over the course of five years he was able to produce a series of self-portraits recording his deterioration and frustration as the disease began to control his life. While the fast decline of Utermohlen's visuo-spatial and motor skills would not be unexpected with cases of so called 'early onset' Alzheimer's disease, he nevertheless was able to draw on his painterly skills to produce many powerful pieces recording the gradual diminishing of his memory and abilities to recognize and record three-dimensional space. Sebastian Crutch, Ron Issacs and Martin Rosser detail some of the symptoms and treatment of Utermohlen in their piece in the 2001 edition of *The Lancet*. They worked with Utermohlen and his wife to produce a case study that examines changes in his self-

³ Patients with Alzheimer's disease may exhibit high degrees of anxiety during an episode of so called 'sundowning' where a patient may become increasingly agitated, aggressive or confused in the late afternoon or early evening. <https://www.alzheimers.org.uk/about-dementia/symptoms-and-diagnosis/symptoms/sundowning>

portraits as Alzheimer's disease affected his visuo-spatial memory and his verbal abilities. They noted that Utermohlen was able to produce new works even though his spatial perception and organizational skills were significantly impaired, indicating that he retained a great deal of motivation and drive to express himself through his work. This contrasted with amateur artists they observed, who usually relied on copying their previous work.

This discrepancy may reflect a premorbid difference in visual motor skills and technical expertise. Such a highly developed artistic talent may have left Utermohlen, a professional artist and portrait painter, better equipped than his amateur counterpart to tackle the challenges of new work in the face of neurological impairment... the abstract style may provide an outlet for expression unhindered by the restrictions imposed by realism and the unattainable accurate replication of colours, forms, angles, proportion, and perspective. (Crutch SJ et al 2001 p 2133)

Patricia Utermohlen and gallerist friend Chris Boïcos identify signs of his illness apparent in the work of the early 1990s, before his diagnosis. In works entitled Conversation Pieces, Utermohlen paints interiors full of colour and warmth, with his wife and friends enjoying each other's company, while he appears in several images as a more isolated, lonely figure. Juliet King, associate professor of art therapy at George Washington University, cites Boïcos in her online gallery notes:

Signs of the disease are made apparent in the shifting perceptions of space, objects, and people. They are premonitions of a new world of silence and sensory deprivation about to close in on the artist. (King J 2018)

Utermohlen's rapid physical and mental deterioration led to drastic stylistic changes, as can be seen in his later self-portraits: the former palette of rich, vibrant colours of his earlier work replaced by muddy monochrome tones; closely observed patterns from natural objects and interiors completely lost in his last works. He used the words "angry," "broken," "caged," and "falling" in the titles of his post Alzheimer's diagnosis work, expressing his fears and frustrations, all the while his self-portraits became more and more abstract. His extraordinary later works, as in the sketch entitled Head 1 made in 2000, became like the mescaline heads of Henri Michaux.

Unhappy heads, heads in extreme distress, ...fragments of heads, desolations of being, bearing their misery, rejoining me, in a clutter, in shreds. (Michaux H 2000 p 28)

In Head 1, Utermohlen draws himself with a distorted mask-like face, devoid of eyes - portraying a human losing personality and individuality, exposed and isolated. Patricia Utermohlen wrote of the post diagnosis works.

In these pictures we see with heart-breaking intensity William's efforts to explain his altered self, his fears and his sadness. (Montpetit 2015 p5)

Examination of the work of Mary P.

In 2016 at the age of 85, Mary P received the diagnosis of late onset Alzheimer's disease. Her problems with short term memory loss were attributed to mild cognitive impairment (MCI) in 2015. However, subtle symptoms of Alzheimer's disease had been slowly affecting her physical and mental capabilities for some time before the formal diagnosis of Alzheimer's disease. Over the next few years, the disease

became more marked and Mary began to exhibit signs of serious cognitive impairment, and she became subject to pronounced memory loss, personality changes, auditory and visual hallucinations.

Before her diagnosis Mary was an active member of her local art society, exhibiting work and occasionally selling some of her watercolours. When not out with groups doing life classes, she would roam across fields on the family farm taking photographs and sketching. One room of the large farm house where she currently lives was her dedicated studio. This is still filled with art materials and plants, a favourite topic of her work, but now largely neglected and unused. Evidence of her artistic endeavours, the late blossoming of her creative career is slowly fading, with the tangible traces of that passion gathering dust in many abandoned rooms of her home. Stacks of sketchbooks, drawings, notebooks and boxes of photographs, textiles and ceramics, a witness to her former passion and interests, Mary no longer recognizes these or acknowledges them as being an important part of her life.

Mary came to develop her artwork late in life. She joined in art classes in a nearby market town where she found companionship and intellectual stimulation. She flourished within the creative environment, excited by practical work as she experimented with materials and discovered artists and art works from around the world. She enjoyed the companionship of like-minded people travelling to Barcelona and New York to visit galleries, all the while continuing to draw scenes of her rural life. While she continued to enjoy growing flowers – a source of inspiration for many of her drawings – she no longer made sketches of them. The former confident lines and vivid colours found in her work began to falter and fail. Figures 1, 2 and 3.



FIGURE 1. MARY P, CIRCA 2010, FLOWERS FROM THE GARDEN, WATERCOLOUR, 30 X 15 CM



FIGURE 2. MARY P, CIRCA 2010, DAISY HEADS, PENCIL DRAWING 30 X 15 CM



FIGURE 3. MARY P, CIRCA 2014, LEAF SKETCH PENCIL DRAWING 30 X 15 CM

The combination of deteriorating eyesight and her cognitive decline had a marked impact on Mary's drawings, both in terms of quality and output. For example, a leaf drawing found in the last sketchbook that Mary used independently shows evidence of retina damage caused by untreated Age-related Macular Degeneration (AMD), where a dark spot clouds the central area in the image (Figure 3). This sketchbook also contained few 'finished' drawings, whereas most sketchbooks had previously been filled with images that were either well worked up or had a direct reference to completed paintings. Faces in her rare later figure drawings also became more distorted and crooked. While Mary did enjoy going to life classes, she was much more interested in making works of natural objects, which is reflected in her earlier ceramic and photographic work as well as her drawings and paintings.

Making a direct comparison with Mary's earlier drawings and her later work is difficult, as most of her work pre-diagnosis was made either from life or less often from photographs. Now, even when presented with the opportunity to make drawings of flowers from her garden or in the house Mary becomes upset and refuses to even attempt making a simple sketch. Previously working in the seclusion of her studio, Mary is now unable to work independently and makes drawings only with the encouragement and support of a carer as part of a conversation. Being faced with selecting and recording shapes, textures and colours, as for example in making a sketch of a flower, appears to be a daunting activity for Mary. Even though this has been a familiar and often repeated subject, and while she continues to spend many hours tending plants in her home and garden, she resists making a drawing of them.

Neurophysiological studies reveal that when imaging in the mind's eye there are not one but many internal representations present simultaneously in the brain. The person drawing then has to make decisions about the size, colour and texture of the object he or she is representing, in addition to its distance from them and the angle they are viewing it from. So, they have firstly to select the image and then remember it and define where the representation of the image ends. (Rankin Q et al 2005 p66).

Drawing is a complex activity, involving different areas of the brain. Each area has to function efficiently and effectively in order to produce an outcome that is satisfactory to the person drawing. For a person with short term memory difficulties manipulating and organising information poses significant problems. Elizabeth Glisky describes some of these difficulties in her paper examining changes in cognitive function in human aging.

Older adults exhibit significant deficits in tasks that involve active manipulation, reorganization, or integration of the contents of working memory. Although the mechanisms underlying these age-related deficits are as yet poorly understood, the effects of such deficits are very likely far-reaching. Many complex everyday tasks such as decision-making, problem-solving, and the planning of goal-directed behaviours require the integration and reorganization of information from a variety of sources. It seems likely that attention, speed of information processing, and the ability to inhibit irrelevant information are all important functions for effective performance of these higher-level cognitive tasks. (Glisky E 2007)

Drawing a map as part of a conversation relieves Mary of much of the decision-making and planning needed to draw an object from observation. A drawing is now a collaborative effort between artist and carer. Ideas and explanations are verbalised and occasionally annotated during the process of making. These map drawings are helpful for Mary as a both an aid to her memory and a means of sharing and explaining details of her former and her present imagined life. The sketches Figure 4 and 4(a) were made as part of a conversation that Mary and I had about her home town. The images record journeys over fields and along roads and streets based on childhood memories or imagined journeys. While I am familiar with the topography of the town as it exists in the present, I could see that many of these places that Mary describes no longer exist in the form that she had drawn. Many once familiar areas have been 'redeveloped' over the years, but they survive untouched in Mary's present world. She is convinced of the veracity of the images she has made, and feels that she could take you by the hand and walk you into this familiar place, and is bemused if an attempt is made to question the truth of the image or suggest that the places she has illustrated may have changed over time. The memory is real, so the drawing is real, so the place is real.

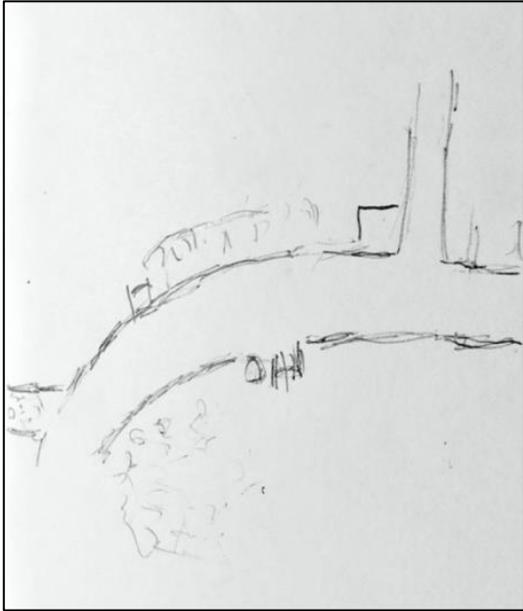


FIGURE 4. MARY P, MAP, 2020, PEN ON PAPER
20 x 15CM



FIGURE 4(A). MARY P, MAP 1, 2020, DETAIL

Glisky observes that older people appear to retain good language skills, finding that they usually have extensive vocabularies and are able to develop explanations when unable to remember individual words. Mary's map-making practice would appear to fit in with this observation, as the images appear to function now more as an extension of a conversation. During her cognitive function tests, Mary had very high scores for her use and understanding of language and is still able to give plausible descriptions of objects and people from her past, and while she is increasingly having difficulty finding some descriptive words, she provides circumlocutions to support her explanations.

There is evidence that Mary continues to use her past drawing and painting skills in her present map drawings. At art college and in subsequent work she was interested in recording the surface structures of natural objects. She often drew and replicated varying textures and patterns in sketches, paintings, photographs and other forms of artwork, including ceramics and textiles. Attempts to capture physical properties of plants using a variety of rapid marks can be seen in both the sketch of memories of her childhood environment (Figure 4) and in the small watercolour image made on a field trip (Figure 5). The parkland area with trees and bushes is indicated by squiggles and dashes in the bottom left-hand corner of her map drawing detailed in 4a. These marks become lighter and fainter as her energy levels declined.



FIGURE 5. MARY P. FIELD GATE, CIRCA 2000, WATERCOLOUR ON PAPER 20 x 15 CM

It was interesting to observe that while making her simple map drawings she continued to move her pen or pencil above the paper surface indicating the three-dimensional structure of a tree or plant, making invisible pattern forms recalling their outlines and textures. The facility for capturing the solidity or spatial properties of an object seems to be deeply ingrained in Mary's memory, while she now lacks the wherewithal to reproduce this on paper, she remains keen to express shape and form through actions above the drawing surface.

Barbara Tversky explains the importance of all forms of gesture and graphic communication in her book *Mind in Motion* where she explains that drawing can

Externalize thought and thereby promote thought. Taking ideas that are in the mind out of the mind and putting them into the world in front of our eyes helps our own thinking and that of others. Putting thoughts into the world is key to collaboration, to working together, to the joint action that is core to human society, and to survival. Both gesture and graphics abstract. They abbreviate, truncate, schematize, generalize. Gestures don't capture entire actions, only thumbnails of them. (Tversky 2019 p 284)

Two artists, two experiences

Both Utermohlen and Mary P have been able to use their creative skills to make work that records the devastating impact that Alzheimer's disease has on their lives. The differences in approach to their work and their output reflect in part both their individual circumstances, personalities and the character of the disease they suffered. Both Mary and Utermohlen spent time recording their home environments. Utermohlen's urban social scenes contrast with Mary's rural images. Their pre-Alzheimer's work shares bold colours and an interest in observing patterns in natural objects (Figure 1). Although Mary enjoyed going to life classes, she only occasionally produced figurative work, while as a professional portrait painter, Utermohlen's work often included friends and family in a social setting.

Utermohlen exhibited symptoms of memory loss and some lack of coordination in his 60s, a relatively early age for Alzheimer's disease to be diagnosed. Mary P's diagnosis was at a more typical age in her mid 80s, when she had problems with her memory in terms of organising tasks and remembering names. Her verbal abilities have diminished slightly with the advance of the disease but her coordination and gross motor skills have not been too badly affected. While Utermohlen's work showed the deep levels of anger and despair about the diagnosis of Alzheimer's disease, Mary's acute frustrations are born of delusions and hallucinations. From an early stage of the disease Mary was unable to understand or perceive the realities of the diagnosis of Alzheimer's disease (anosognosia)⁴ and as a result does not have the fear or anxiety that Utermohlen expressed. While this means that Mary does not exhibit the angry personal turmoil of Utermohlen in her work, she nevertheless does experience extreme frustration and irritation when unable to match her delusions with reality.

Both Utermohlen and Mary appear to have substantial disruption to their comprehension of place and location. Utermohlen's increasingly abstract works record his experience of a gradual deteriorating of memory of his body and space, where he portrays himself as isolated or trapped. In Utermohlen's Conversation Pieces pictures, increasingly the images of his domestic world become disorientated, with interiors and exteriors existing in a single flattened plane. Some paintings contain figures foreshortened from above with objects that appear to defy gravity floating between seated individuals, adding to the feeling of confusion and unease in what should have been for Utermohlen a familiar, comfortable and intimate scene.

Mary's descriptions of the place where she currently lives matches some of the flattened and tilted elevations seen in Utermohlen's paintings. This has been particularly noticeable with Mary as her disease progresses and affects her spatial and temporal orientation. At times she has become unable to recognize her home, especially when moving from one part of the garden or from one room to another. She describes rooms as looking familiar but different, becoming unsure of the orientation of places, objects or people. Often at night she will turn on all the lights to check where she is because she is uncertain if she is awake or in a dream as things 'do not look right'. Occasionally she describes seeing her

⁴ Anosognosia is a medically recognized symptom of dementia and severe mental ill health. It concerns a patient's inability to acknowledge the existence or effects of their illness or realize how a disease may progress or limit life. Acharya AB and Sánchez-Manso JC (2020) Anosognosia. [Updated 24 Jun 2020]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; Jan 2021. Available at <https://www.ncbi.nlm.nih.gov/books/NBK513361/>

late sister enter a house, simultaneously viewing the scene as she stands next to her and from across a road. The waking dreams that she describes in some detail confuse and disorientate her. Making the map drawings, however, seems to reassure and calm her.

Utermohlen's anger and distress at losing himself is matched by Mary's yearning to find herself in an imagined familiar safe time and space. Both artists' drawings contain strong expressive marks, reflecting their passion to communicate their feelings on paper. For Utermohlen his drawing techniques mirror his anguish, while Mary's work records her frustrations and frailty. At an early stage of a drawing activity Mary is able to build images that respond to her memories and emotions with dynamic action. This can be seen in Figures 4 and 4(a) where darker areas with thicker lines represent boundaries and edges of space. The repeated scratchy lines seem crude and rough when compared with those in the earlier flower and leaf drawings, but they carry a vivid energy reflecting Mary's emotional state. Mary is able to configure the curved 'roadways' with some proficiency while maintaining enthusiastic descriptive dialogue. Marks are reinforced as part of explanation in order to clarify and emphasize key points and particular memories. In some maps words are added to support understanding of orientation. The writing has a particular temporal meaning for Mary, as in naming an object or place she becomes satisfied that it has a present existence in her memory. However, an image that took some minutes to make, while appearing to fulfill her wish to explain her thoughts, also exhausts her. This is particularly noticeable in marks representing trees and bushes in Figure 4(a) that fade and disappear near the bottom of the page. The conversation together with the drawing appeared to give Mary some emotional release. Towards the end of the session, she is calmer as if she had been able to make some order in her memories.

Katherine Rankin's findings from the 2007 case study on the impact of Alzheimer's disease on the artwork of patients is appropriate to both Utermohlen and Mary. Mary has had some personality changes common in those with Alzheimer's disease noted by Rankin et al, which is reflected in the tentative qualities of her mark making. The limited colour palette that the researchers observed in those with dementia when making artwork is also obvious in both Utermohlen and Mary's work. Although the additional difficulty that Mary has with her vision may also have an impact on her perception and use of colour. When given a choice of using coloured pencils or graphite or pen, Mary will always choose the latter. This reluctance to select colourful materials or make decisions about elements contained within a drawing could also be explained by research into changes in cognitive functioning with aging. Utermohlen's 'muddy' colours may be the result of continually reassessing his work and erasing sections. His wife attributed his blurred, disjointed portraits to a decline in his skills in painting rather than to artistic device (Crutch et al 2001).

Research into Alzheimer's disease is ongoing and it is good to note that there are many papers examining the use of drawing and other creative activities to support those with the disease. Drawing is a primal form of expression and for those losing physical and mental capabilities it can be an important tool of communication and dialogue. For family, friends and carers of those with Alzheimer's disease it is distressing to watch as a person loses their independence, their character and their voice. Making a drawing to express a memory or an emotion can be comforting as it is a tangible artefact capturing, if only fleetingly, the person trapped by an atrophying and dying brain.

References

- Beard, R.L. (2004) Advocating voice: organisational, historical and social milieu of the Alzheimer's disease movement, *Sociology of Health & Illness*, Vol. 26 No. 6, pp. 797-819. Available at: https://www.researchgate.net/publication/8332042_Advocating_voice_Organisational_historical_and_social_milieu_of_the_Alzheimer%27s_disease_movement [accessed 21 September 2020].
- Crutch, S.J., Isaac, R., Rossor, M.R. (2001) Some workmen can blame their tools: artistic change in an individual with Alzheimer's disease, *The Lancet*, Volume 357, Issue 9274, 2129-2133. Available at <https://www.thelancet.com/action/showPdf?pii=S0140-6736%2800%2905187-4> [accessed 5 September 2020].
- Glisky, E.L. (2007) Changes in Cognitive Function in Human Aging. In: Riddle, D.R., ed., *Brain Aging: Models, Methods, and Mechanisms*. Boca Raton FL: CRC Press/Taylor & Francis. Available at: <https://www.ncbi.nlm.nih.gov/books/NBK3885/> [accessed 21 September 2020].
- King, J. (2018) Gallery: William Utermohlen. *Issues in Science and Technology* 35, no. 1 (Fall 2018). Available at: <https://issues.org/issue/35-1> [accessed 5 September 2020].
- Kooken, W. and Kerr, N. (2015) Patient-Centered Communication and Interventions for Patients with Alzheimer's Disease. In: Utermohlen, W., Green, J., Montpetit, M.A., et al., *Pursuing the Ephemeral, Painting the Enduring: Alzheimer's and the Artwork of William Utermohlen (Book 1)*. Bloomington IL: Wesleyan University. Available at <http://digitalcommons.iwu.edu/utermohlen/1> [accessed 22 September 2020].
- Lane, J., Rohan, E.M.F., Sabeti F., et al. (2018) Impacts of impaired face perception on social interactions and quality of life in age-related macular degeneration: A qualitative study and new community resources. *PLOS ONE* 13(12): e0209218. Available at <https://doi.org/10.1371/journal.pone.0209218> [accessed 10 September 2020].
- Michaux H. (2000) *Emergences/Resurgences*. New York NY: The Drawing Center.
- Montpetit, M. A. (2015) A Glimpse into Identity and Alzheimer's Disease: The Self-Portraits of William Utermohlen in Utermohlen, W., Green, J., Montpetit, M.A., et al., *Pursuing the Ephemeral, Painting the Enduring: Alzheimer's and the Artwork of William Utermohlen (Book 1)*. Bloomington IL: Wesleyan University. Available at <http://digitalcommons.iwu.edu/utermohlen/1> [accessed 22 September 2020].
- Rankin, K. P., Liu, A.A., Howard, S., et al. (2007) A case-controlled study of altered visual art production in Alzheimer's and FTLD. *Cognitive and behavioral neurology: official journal of the Society for Behavioral and Cognitive Neurology*, 20(1), 48-61. Available at: <https://doi.org/10.1097/WNN.0b013e31803141dd> [accessed 8 September 2020].
- Rankin, Q., Davies, M., Riley, H. (2005) Cognitive styles and drawing practice. In: Rust, C., ed., *The proceedings of the 13th Improving Student Learning Symposium*, London. Available at: https://www.academia.edu/32424361/Cognitive_Styles_and_Drawing_Practice [accessed 22 September 2020].
- Taylor, D.J., Smith, N.D., Binns, A.M., Crabb, D.P. (2018) The effect of non-neovascular age-related macular degeneration on face recognition performance. *Graefes Arch Clin Exp Ophthalmol* 256, 815-821. Available at: <https://doi.org/10.1007/s00417-017-3879-3> [accessed 10 September 2020].
- Tversky, B. (2019) *Mind in Motion: How action shapes thought*. New York NY: Basic Books.
- Utermohlen, W. (2008) *Portraits from the mind: The works of William Utermohlen 1955-2000*. Chicago IL: Alzheimer's Association. Available at: <http://www.neurohistoriasztuki.umk.pl/pliki/utermohlen2008.pdf> [accessed 22 September 2020].

Zeilig, H., Tischler, V., van der Byl Williams, M., et al. (2019) Co-creativity, well-being and agency: A case study analysis of a co-creative arts group for people with dementia. *J Aging Stud.*, 49:16-24. Available at: <https://www.sciencedirect.com/science/article/pii/S0890406519300040> [accessed 10 September 2020].