Applied Theatre and Biomedical Research: An Embodied Approach to Alzheimer’s disease symptoms in the rehearsal process

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Abstract

Gibson (2020) argued that because medicine frames bodies in a normal/abnormal dichotomy, stories told about people with dementia constructed using a biomedical framework can only tell of failure. Gibson termed this the ‘right kind’ of dementia story, where simple linear narratives obscure the complex realities of disease (p.39). Basting (2009) and Batch (2023) further evidence that biomedical research, as an authoritative dialogic framework, has further disabled people with dementia, by maintaining a medical model of disability. This thesis examines the extent to which biomedical research can shape practical workshop exercises that encourage actors to develop an embodied understanding of AD, rather than limiting this research to an authoritative didactic resource.

Centrally, this thesis asks to what extent a biomedical research-informed theatre director’s workshop guide can create an enhanced method of embodying AD symptoms within the rehearsal process. To achieve this, the thesis adopts a practice-led approach to research, to develop and refine exercises that have not previously been considered in the context of enhancing the actors’ process of embodying symptoms of AD. The results demonstrate that using biomedical research in more considered and nuanced ways can positively shape and enhance an actors’ empathetic understanding of illness by emphasising unique responses to dementia symptoms. Further, the work illustrates that biomedical research serves an important role in helping to determine the unique, embodied experiences AD. In so doing, it reveals the social, emotional and cognitive challenges that dementia presents, and how theatre can present AD as far more complex than mere tragedy.

This thesis is accompanied by a portfolio of videos. These document the practical sessions testing exercises for a theatre workshop guide for directors to enhance the actors’ process of embodying AD symptoms.

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Preface

My first exposure to any form of dementia was at the age of 12, when my aunt – affectionately known to me as ‘Auntie Margaret’ – first began developing signs of a rare form of dementia, a combination of Alzheimer’s disease and dementia with Lewy Bodies. While this was difficult to comprehend as a child, I vividly recall one occasion when my dad, a social worker at the time, encouraged Auntie Margaret to help him with the washing up. Since her diagnosis, Auntie Margaret had increasingly been stripped of any responsibilities for fear of “getting things wrong” and mitigating possible injury. Coming from a place of love for and ensuring the safety of her sister, my Mum initially expressed concern at my dad’s request: “What if she scalds herself?”, “Is she alright holding slippery wet plates?”. Despite Mum’s concerns, Dad persisted, and Auntie Margaret stood up and walked over to the sink to help him. While aspects of the task may have been performed in an unusual sequence, Auntie Margaret did everything my dad did. She was laughing, excited by the bubbles in the sink as they blew around her face. Her eyes sparkled, and I was overcome with a profound feeling that dementia did not have to mean a full stop to every activity. Rather, it first caused a person to pause, before attempting something with an almost infinite number of alternate approaches, many of which could be successful.

It was not until I developed this research project that I began to fully reflect on the significance of the scene of my dad and auntie washing up together. My experience of that day continues to colour how I understand this disease – one that is characterised with a difference in being, but still full of purpose and joy. From that moment, what I understood as dementia had changed. What I had been told by neurologists, doctors and family members about the condition could be reframed in my mind to mean something else. Dementia did not mean Auntie Margaret was completely ‘incapable’, ‘lost’ or ‘missing’. Instead, how she approached the things she had previously been able to do needed more thought and modifications to her usual methods. She – like many people living with dementia – was effectively being eclipsed by the idea that it consumes a person and their abilities, and so they must be protected by a series of metaphorical safety blankets. But, for me, the act of my auntie washing up the dishes with my dad profoundly disrupted this perception. Instead of understanding dementia to be a silent thief of identity and ability, I began to see this disease as a force of disruption, one that demanded a person to navigate their environment according to different, often unseen, rules. These rules might include those given by others who cared for her, with the view to protecting her from harm, as well as Auntie Margaret's own ideas for navigating the world around her while adapting to a life with dementia. Auntie Margaret didn't 'come back' or 'reappear' out of the dementia fog; she was always there. To empathise with this, I had to understand how her views and perceptions of the environment were affected by dementia. I wanted to discover a method of exploring her version of the world from an embodied perspective.

While Auntie Margaret was eventually bedbound by dementia and unable to speak, she squeezed my hand as I sat reading to her. Auntie Margaret's life had meaning right up until her last days, as do all those who live with dementia. Her story will always serve to remind me of what it means to be human when living with a complex illness and crucially, to see the person at the centre of the disease.

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Finally, I want to thank my Auntie Margaret and Uncle John, both of whom helped to care for me as a child. Auntie Margaret, your pearls of wisdom shone through until the end.

Author’s declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for a degree or other qualification at this University or elsewhere. All sources are acknowledged as references.

For my mum

Introduction

Dementia is an umbrella term that encompasses several neurodegenerative diseases. This includes Alzheimer's disease (AD), Frontal Variant Alzheimer's disease, Post Cortical Atrophy, dementia with Lewy Bodies, Frontotemporal lobe dementia, Parkinson's dementia, Vascular dementia and Mixed dementia. Of these, AD is the most common form of all dementias.

AD is a complex neurodegenerative disease, thought to be caused predominantly by an excessive build-up of beta-amyloid plaques and neurofibrillary tangles in the brain, which has physical, psychological, cognitive and social consequences for those with it (Keohane and Grace, 2019). AD is split into different categories depending on the age at which a person is diagnosed. AD that develops at or after the age of 65 is termed late-onset (LOAD) and is typically accompanied by symptoms of memory impairment. Those who develop signs of AD before the age of 65 are typically diagnosed with early-onset (EOAD), which in rare cases can be the result of an inherited genetic defect called Familial Alzheimer's disease (FAD). The initial symptoms of EOAD (and FAD) may vary considerably from those of LOAD and affect things like speech and movement (Dickerson et al, 2017). The exact cause of AD onset at any age is not yet understood, although certain lifestyle factors have been reported to increase the chances of developing the disease (Livingston et al, 2024). Further, there is no consensus that AD is 'clinically homogenous', meaning that the disease does not have a uniform presentation (Stopford et al, 2008, p.185). Therefore, and most importantly, AD does not cause people with the same diagnosis to act or react in the same ways, meaning they retain their individuality and identity, even as the disease progresses (Robins and Byrne, 2011, p.1027).

Biomedical research on the symptomatic manifestations of AD highlights a complex picture of the disease. There is, however, a significant difference between how biomedical research describes the disease and what has been represented in many high-profile theatre productions about people with it. There are several reasons for this. Over the past two decades, many of the plays that have portrayed the effects of living with dementia (primarily presented as AD) – including *Notes on Falling Leaves* (Din, 2005), *Halcyon Days* (Kinahan, 2013), *Plaques and Tangles* (Wilson, 2015), *The Father* (Zeller, 2015), *Still Alice* (Dunford and Genova, 2018), *In Other Words* (Seager, 2019) and *Maggie May* (Poet, 2022) – suggest that AD is predominantly about 'memory loss'. In these play texts and subsequent performances, memory is often considered the most significant measure of identity, hence memory loss equating to the loss of identity. Consequentially, when viewed collectively, these productions build the homogenised picture that AD typically affects everyone in the same way. This is also exacerbated by a lack of specificity around what type of disease (e.g. AD or Vascular dementia) or age at diagnosis (LOAD or EOAD) is being portrayed in the performance.

Theatre and performance academics, Anne Basting (*Forget Memory,* 2009) and Janet Gibson (*Dementia, Narrative and Performance,* 2020), assert that the stories told about people with AD are frequently over-simplified to serve a specific agenda. For example, they can be used to support greater awareness of AD or lobby for funding increases and provisions in health and social care. While both Basting and Gibson acknowledged this is a significant aspect of responding to the challenges of dementia, they argued that the stories told about the disease must do more to reflect the reality of dementia, beyond simple linear tragedy. As this thesis will go on to explore further, these academics provided insights into the relationship between biomedical definitions of AD and the reality of the disease portrayed on stage. Basting argued that people with dementia are presented as helpless, and that science (or rather scientists) is the hero with the capacity to save them (2009, p.35). Further, Gibson (2020), while not suggesting the complete removal of biomedical discourse, argued that because biomedical language frames bodies as 'normal and abnormal bodies' (p.39), stories told about dementia that rely heavily on biomedical discourse can 'only tell of failure' (p.39). This restricts the ability to see the person behind the disease, as they increasingly become replaced by their symptoms. To move beyond the incongruence and friction between biomedical language and the potential for seeing AD in a more empathetic manner, this research suggests an alternative method that explores the process of embodying AD symptoms - combining biomedical research with creative practice to explore and consider the multifarious symptomatic impact of the disease.

By asking different questions of both the biomedical and the cultural representations of the disease, this thesis instead asks to what extent biomedical research can *enhance* the process of embodying AD symptoms through rehearsal, when it is used to inform and shape practice in the form of theatre workshop exercises. The aims, objectives and methods are informed by the author's academic and professional experiences as an actor, theatre director and workshop facilitator. Using practical testing, the central practical output of the research is a workshop guide for directors, consisting of nine different exercises shaped by biomedical research, with each one examining a different aspect of how AD impacts a person. The workshop guide is designed for a director to support actors in developing their character for performance, explore the role of biomedical research in shaping how actors portray specific symptoms of AD, and, with the actors, reflect on their experiences of the tasks. Importantly, because there is no one way to experience or portray AD, the guide is intended to help actors develop more empathetic, individualised and nuanced understandings of the embodied experience of the disease.

As this thesis will show, the collation of medical data, practical testing and analysis of the workshop guide and accompanying video footage, revels that biomedical research can be used effectively to shape practical methods of embodying AD symptoms within the rehearsal process. It supports directors and actors in developing enriched understandings of characters with AD and supports an actor in embodying similar circumstances to those documented in medical text. Importantly, the workshop guide is intended to function as a key part of an otherwise extensive rehearsal process, which must include an open discussion with those directly affected by AD (both people with the disease and those who care for and interact with them). There is no 'right' or 'wrong' way to perform any complex illness. There is, however, an urgent need for theatre makers to review and redevelop approaches to the crafting of stories about living with dementia, which must include a re-examination of the use of biomedical discourse and definitions when examining the process of embodying AD symptoms. Overall, this research aims to enhance the actors' ability to embody symptoms of a complex illness in a more nuanced and empathetic way, by providing a practice-led and creative approach to working with biomedical research in the rehearsal room.

Structure

Chapter 1 reviews the existing literature that informed the aims, objectives and design of this research project. Primarily, it investigates the relationships between people with dementia and performance, including a discussion of Basting's earlier work on *Time Slips* (2001), applied theatre approaches (McCormick, 2017 and 2023), and the methods used to perform dementia in public (in Batch, 2023), before moving the discussion on to how biomedical research has been applied to frame the impact of living with dementia by Basting (2009) and Gibson (2020).

Chapter 2 details the methodology developed and used to respond to the central research questions. This includes an examination of practice-led research, an analysis of the types of biomedical research used to design the workshop guide (and how this information was interpreted), and an analysis of AD from a biomedical perspective, before highlighting the methods adapted using practitioners who have worked with biomedical research. Following this, the discussion moves to explain how biomedical research and ethnographic accounts were used and interpreted from a non-medical perspective and, subsequently, how this was used to shape the workshop exercises.

Chapter 3 is the completed workshop guide, containing all nine exercises made for theatre directors to work together with actors to explore and develop a process of embodying the effects of AD. It is the culmination of the creation, testing and refinement of the exercises, through incremental developments made over a two-year period of working with professional actors. Separated into each of the exercises, *Chapter 4* then provides a set of critical self-reflections on the design, testing and refinement of the workshop guide, which is designed to be read alongside watching the video recordings of the exercise testing workshops. The analysis details the actors' responses and reactions to testing the workshop exercises, examines these responses in relation to the central research questions, and provides a series of reflective conclusions.

Chapter 5, the conclusion, returns to the central research questions and considers the overall impact and effectiveness of the practice-led approach to using biomedical research to create a workshop guide for actors to embody AD symptoms. The thesis argues for the continued development of exercises and methods used to develop how AD is understood through creative practice using up-to-date, peer-reviewed biomedical research in collaboration with people directly affected by the disease. Overall, the thesis concludes that trying to create an ‘exact’ image of AD, given the evolving nature of research and the diverse nature of AD, is a problematic, and overly simplistic concept, and that future storytelling of AD must fundamentally change to better present lived experiences of the disease.

Chapter 1 Literature review

According to *The Lancet*, between 2008-2016, incidences of dementia increased by 25.2% (Chen et al, 2023). It was predicted that if the current trend continued, there would be 1.7 million people living with a form of dementia in England and Wales by 2040, which would be 70% more than originally calculated (Chen et al, 2023, p.859). Of those people living with dementia, AD is the most diagnosed condition, accounting for approximately two-thirds of all dementia diagnoses (Rasmussen and Langerman, 2019, p.123). Concurrently, with the rise in dementia cases over the previous two decades, contemporary theatre makers have increasingly produced plays that focus on the detrimental impact of AD on employment, family, love and social life.[1] Concerningly, however, these productions reinforced the idea that AD is predominantly a story of linear decline involving memory loss and, by association, a loss of identity and agency.

These kinds of narratives have been critiqued as problematic in academic literature. For example, Anne Basting (2009) and Janet Gibson (2020) stressed that increasingly empathetic understandings of AD are often hindered by the oversimplified introduction of biomedical research in a story. Biomedicine is frequently used as an authoritative framing device that supports the medical model of disability, as opposed to social or radical understandings.[2] Basting (2009) highlighted that dementia narratives often

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[1] As noted in the Introduction, between 2004-2022, main stage productions which have focused on AD include: Ayub Khan Din, *Notes on Falling Leaves* (2004); Deirdre Kinahan, *Halcyon Days* (2012); Nicola Wilson, *Plaques and Tangles* (2015); Florian Zeller, *The Father* (2015); Christine Mary Dunford's adaptation of Lisa Genova's novel, *Still Alice* (2018); Matthew Seager, *In Other Words* (2019); Mark Ravenhill biographical drama, *The Window* (2021); and Francis Poet, *Maggie May* (2022).

[2] Disability has been understood through medical, social, and radical models. The medical model is grounded in the belief that a problem resides within the person and, because of a defect or failure of a bodily system, that person is abnormal (Olkin, 1999, p.26). The social model pushes against the medical model, maintaining that it is society itself that disables people. Any solution to resolve discrimination must therefore include a societal change (Barnes, Mercer & Shakespeare, 2010, p.1630). Finally, the radical model, the development of which is ongoing, argues that disability is structurally imposed on people to benefit those

seen in popular culture are frequently problematic because they cast people with the disease as victims to be saved – emphasising the disease over the person's own identity. Further, Gibson argued that the 'right kind' of dementia story in theatre is predominantly biomedical and frames bodies with AD in a dichotomic 'able'/'disabled' model (2020, pp.38-41). As this thesis will demonstrate, both academic literature and, by association, rehearsal and performance processes must evolve beyond theoretical, dialogic surveys of biomedical research, to examine how biomedicine can further shape creative practice. There is an urgent need for deeper exploration into ways of showcasing the complexity of different variants and presentations of AD that are evidenced in burgeoning scientific and social scientific studies.

1.1 What is Alzheimer's disease?

The exact cause of AD development is not fully understood. Research suggests it is associated with the excess build-up of beta-amyloid protein (amyloid b) and phosphorylated tau (Scheltens et al, 2021, p.1580). Beta-amyloid protein is a chemically 'sticky' substance, which in AD builds up and forms what are called 'plaques' that surround the outside of neurons in the brain (Alzheimer's Association, 2024). The plaque deposits that surround the neurons then disrupt synaptic (or electrical signal) communications across the brain. Phosphorylated tau, a tubular structured protein, has a similar impact on neurological deterioration in AD. In brains with AD, these tubular structures break apart into smaller pieces and the detached smaller filaments group to form tangled tau structures inside the brain cell, and like the plaques, disrupt the functionality of the brain's synaptic messages (Medeiros, Baglietto and LaFerla, 2011, p.514). The increasing presence of beta-amyloid and tau ultimately causes neurons to die off and, as a result, the brain to shrink (see *Figure 1* for visualised details). As more of the brain structure dies

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in power, it is intersectionally enforced, and therefore needs to be intersectionally dismantled as part of initiatives to decolonise society, requiring the direct input and recognition of non-homogenous disabled people (Withers, 2024, pp.18-19).

off, a person can lose function and skills associated with the affected part of the brain, such as memory, speech, cognition, movement and motor skills, and emotional management and identification.

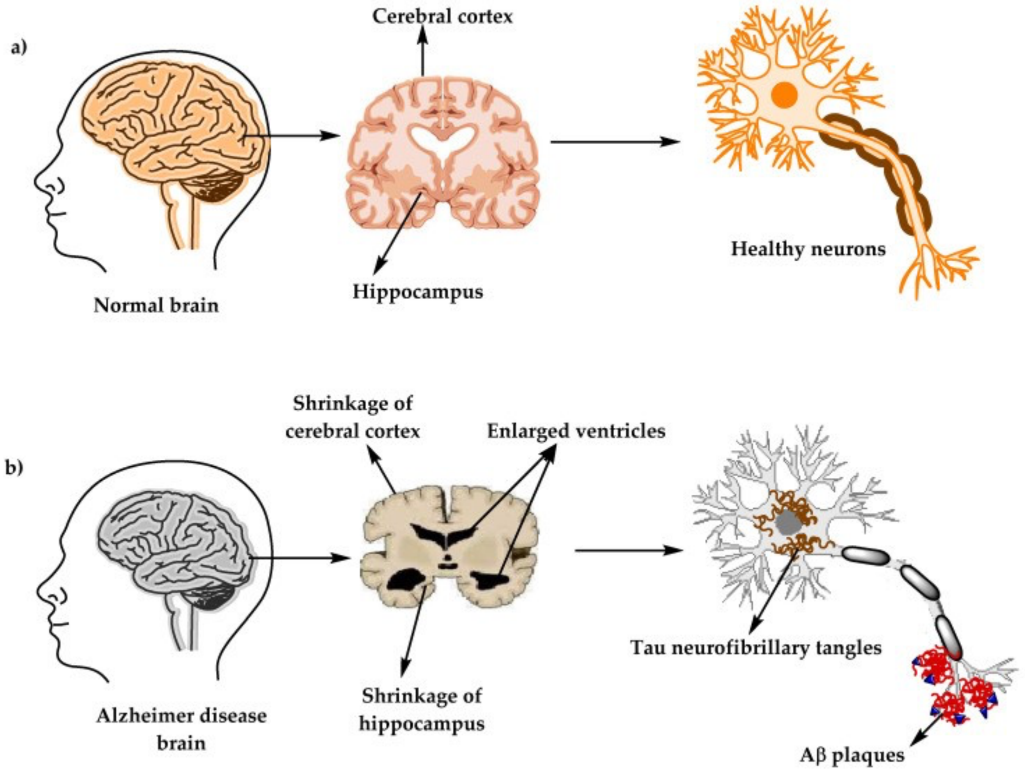

Figure 1: The pathological structure of the brain and neurons in (a) healthy brain and (b) Alzheimer’s disease (AD) brain (Brejyeh and Karaman, 2020, p.2).

1.1.1 Categories of AD variants

AD is a progressive disease with no cure, but the exact progression of AD and how long a person can live with the disease varies case by case. According to a European research study, the median survival time for patients diagnosed with AD was six years (Rhodius-Meester et al, 2019, p.727). This duration, is, however, impacted by factors like the age of onset, sex and ethnicity (Mayeda et al, 2017). Further, it is entirely possible for a person to live with AD for more than 10 years, and preserve some quality of life, although this depends upon the rate of cognitive decline and what treatments, interventions they receive (e.g. drug therapies and clinical trials) and a person’s unique level of cognitive reserve (usually this is a factor measurable by total years of education) (Komarova and Thalhauser, 2011). AD is subcategorised into different forms and frequently presents differently, depending on the age of diagnosis or the inclusion and consideration of genetic factors.

As discussed, the three main categories used to identify AD are EOAD, LOAD and FAD. Instances of EOAD within the UK account for roughly 1 in 13 cases of dementia (NHS, 2024). EOAD has been documented as having more severe neuropsychiatric symptoms than in instances of LOAD, such as increased feelings of anxiety, sleep disturbances and problems with movement (Falgàs et al, 2021, p.962). Given the UK has an ageing population, increasing instances of LOAD account for most AD diagnoses. For a person over the age of 65, their risk of developing AD doubles every five years (Alzheimer’s Society, 2024). However, age alone is not the only risk factor in developing LOAD. Biological sex also plays a factor in prevalence rates. Alzheimer’s Society UK recognised that twice as many women than men over the age of 65 have the condition, largely because women tend to live longer than men (2024). Other risk factors for developing LOAD include heart disease and diabetes, as well as lifestyle factors such as exercise, alcohol and smoking. FAD is considerably rarer than EOAD and LOAD, with less than 1% of all cases of AD attributed to it (Weston, 2018, p.50). It typically occurs when one or both parents have the defective inheritable PSEN1 gene that is passed onto their children.

EOAD and LOAD are distinguished by their presentation and diagnosis.[3] People diagnosed before the age of 65 are classified as having EOAD, whereas LOAD is diagnosed at or over the age of 65. Often there are a different set of symptoms for each AD classification. This was shown in a study by Sheltens et al (2021, p.1578), in patient case reports for three

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[3] Diagnosing AD is not a straightforward process, because it is increasingly being recognised as a non-homogenous disease, differential diagnosis alongside brain tissue scans including MRI’s, CT san’s, blood tests and psychological evaluation and testing are all needed to confirm a diagnosis.

people of different ages, sexes and with varying symptoms at the point of diagnosis with AD. Mrs A, aged 42, recognised and complained of apparent memory loss and an inability to multitask, and was found to be a carrier of the PSEN1 mutation (a common cause of FAD). Mr B, aged 62, presented with progressive language difficulties, such as sentence comprehension, which is typical of EOAD. Finally, Mrs C, aged 78 and diagnosed with AD at the Alzheimer Centre Amsterdam, was unaware of changes to her memory, with only her family noticing any distinct change. Mrs C’s symptomatic development placed her in the LOAD category. This study is just one example within the wider biomedical research field demonstrating the significant heterogeneity of AD onset, symptomatic presentation, and patient self-awareness of experiencing the disease and its effects.[4]

1.1.2 Principal effects of AD

The effects of AD are largely the result of what parts of the brain are most affected by the beta-amyloid plaques and tau tangles. For example, memory functions, which are commonly associated with AD presentations (more often LOAD), are predominantly managed by the hippocampus (an almond-shaped area situated deep in the temporal lobe).[5] Rao et al (2022) found that tissue loss in the hippocampus, because of AD, can be rapid and causes ‘functional disconnection with other parts of the brain’ (p.55). Given that cases of AD frequently attack the hippocampus first, many of the initial warning signs of a potential diagnosis *do* include memory problems. However, while memory problems are often the most identified side effect of AD, biomedical research examining AD at the point of diagnosis has increasingly identified presentations beyond memory loss. The category of AD (EOAD, LOAD, FAD) will also impact what parts of the brain are affected, leading to different

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[4] Other examples of studies on different AD presentations and symptoms, dependent on age of onset, include: Tellechea et al, 2018; Mendez, 2012; and Baillon et al, 2019.

[5] The temporal lobe is situated lower in the cortex below the Parietal lobes (top of the brain) and behind the Frontal lobes (front of the brain) sitting on top of the brain stem. See Cleveland Clinic Online (2023) for a helpful diagram.

symptomatic presentations. For example, Graff-Radford et al (2021) found that ‘visual, language, executive, behavioural, or motor dysfunction’ (p.222) are predominantly developed by people with EOAD. This could include Posterior Cortical Atrophy (PCA), a rare variant of AD, which affects areas like the occipital lobe at the back of the brain, meaning a person then experiences difficulties with their vision without first presenting with memory problems.

While there are symptomatic commonalities, people experience, present with and react to the symptoms differently. Robins and Byrne (2011) found that, despite predictable neuropathological deterioration, patients retained their individuality, and dementia did not lead them to ‘converge in a unified personality’ (p.1027). This is also complicated by AD progression rates. One person with AD may experience an acute and sustained loss in mental functions, while another may experience slight, gradual loss. What AD *looks like* and how it can be portrayed on stage is therefore problematised by the different ways it affects each person, and the type of diagnoses received. Consequently, when designing a director’s workshop guide to enhance the process of embodying AD, careful consideration must be given to the types of exercises it contains, and thorough explanations provided on how the selected exercise categories reflect the heterogeneity of AD.

1.2 Public perceptions of AD

With rising instances of dementia in the UK, the disease has become increasingly featured in the mainstream media narrative, including film, television, radio, theatre and art. Celebrity entertainment news also feeds into the narrative on dementia, which provides insights into who can be affected by the disease and how they are affected.[6] Frequently, the underlying tone of

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[6] For example, actor Bruce Willis was first diagnosed with aphasia, in 2022 and later Frontotemporal dementia, in 2023. Much of the media content broadcast about him now relates to the ‘tragedy’ of his condition. See, for example, BBC News (2023).

these narratives is characterised by a sense of fear and heartbreak. The 2023 ‘Dementia Attitudes Monitor Wave 3’ survey of members of the British public found that 49% of respondents ‘agree that dementia is the health condition they fear most’ (Alzheimer’s Society, 2023, p.21). These responses correlate with cultural representations of AD in theatre and film, with fear of memory and identity loss dominating the perception of a life with dementia. For example, in an interview for *The Guardian*, the playwright of *Plaques and Tangles* (2015), Nicola Wilson, stated that ‘writers often say they’re drawn to subjects that frighten them, and for me dementia is the worst thing I can imagine’ (Bromwich and Fox, 2015).

Wilson’s play raises questions about the implications of whether it is best to know if you have the disease, Wilson’s approach to writing *Plaques and Tangles* was informed by large amounts of research into the biomedical understanding of AD. This research was used to incite fear, by portraying the disease from a biomedical perspective to render it deliberately complex and confusing. For example, in the scene below (2015, p.53), Ned, Gwen and Lila (family members of Megan who is diagnosed with EOAD) surround her and begin lecturing and testing Megan’s knowledge on the biochemistry of AD:

> **Lila:** You can see here how the fibrils have somehow become hyperphosphorylated…
>
> **Megan:** Could you spell / that please?
>
> **Lila:** (*fast, phonetic*) H.Y. / P.E.R.P.H.O.S.P.H.O.R.Y.L. A.T.E.D.
>
> **Megan:** (struggles to write it down).
>
> **Ned:** In an Alzheimer’s brain these tangles grow grotesquely out of proportion, strangling everything in their reach.
>
> **Gwen:** Until they finally reach the frontal lobes, gatekeepers of our formed memories…
>
> **Megan:** And selfhood itself is obliterated.
>
> **Lila:** Boom!

The scene depicts a nightmarish hallucination for Megan, bedbound by dementia, where her family transform into scientists to deliver her poor prognosis of the disease. Here, Alzheimer's becomes a monstrous figure that destroys her memory and selfhood. Additionally, in Christine Mary Dunford's stage play adaptation of *Still Alice* (2018), Alice, who is diagnosed with EOAD, says, 'I wish I had cancer. I'd have something I could fight [….] If I died from it, I'd be able to look people in the eye – know who they were – and say good-bye before I left' (p.42). Here, cancer is portrayed as a *preferable,* if challenging and prevalent disease compared to AD, as something that someone could fight and potentially win against compared with dementia, which instead consumes all memory and recognition suggesting this were the most dreaded conclusion to a person's life.

Though fear is a justified response to serious illness, this does not always correlate with all experiences of people with AD. For example, Wendy Mitchell, who wrote three books about her experience of EOAD, was asked whether she ever felt scared: 'No… Not ever. I used to be afraid of lots of things – of dogs and cats; of the dark. Now I'm not afraid of anything' (Gerrard, 2018). Mitchell is not alone in her attitude towards living with AD. Innovations in Dementia – an organisation run by three experts in the field of dementia care – works with people living with the disease, to champion their voices in the management of public perception and engagement. In a video interview entitled 'A good life with dementia', Steve, a course tutor working with Innovations in Dementia for the Minds and Voices programme, reflected on his own diagnosis: 'it wasn't the end of things – there was a life ahead and depression and loneliness shouldn't take any part in their life' (Dementia Diaries, 2018). Therefore, fear, though a necessary and natural part of living with AD, should not be perpetuated as the default emotional backdrop for all cultural representations of the disease. As this thesis will demonstrate, a greater understanding of the value of biomedical research, combined with a shift in narrative tone away from fear, could positively impact and enhance creative frameworks for exploring and disseminating different processes of embodying and illustrating the effects of AD.

1.3 Performance as agency

People living with dementia have been both active contributors to and consumers of narratives about their experiences of the disease. They are involved in producing literature, public speaking, appearing in documentaries and acting as creative consultants in the entertainment industry. Wendy Mitchell, for example, frequently spoke in public about the misconceptions of dementia and served as a creative consultant to theatre and television productions.[7] Dementia-friendly theatre performances have also become increasingly commonplace, where productions are designed for people with the disease to more effectively understand and follow the narrative. More than merely consumers, people with dementia are also performing in creative projects, using exercises and workshops, and engaging in co-creative interventions that facilitate greater agency over their lives and narratives of AD. Academic literature looking at this intersection of dementia and performance has examined both actors performances of people with dementia and how people with dementia should, could or do contribute to narratives depicting their experience of the disease.

Anne Basting's *Time Slips* (which began in 1998) is a seminal example of how people with dementia can contribute to and feature in more complex storytelling projects. As explained in her book, *Forget Memory* (2009), the *Time Slips* project was born out of her unsuccessful facilitated theatre workshops with residents at a nursing home in Milwaukee, USA, originally designed to stimulate the memory of people with AD through reminiscence-based activities. Realising these activities yielded little to no result, she changed her approach, and instead used a picture of the *Marlboro Man* torn from a magazine to encourage the residents to construct an identity

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[7] Further examples of people with dementia who have maintained public profiles in various industries include: M. J. Saints and B. De Frene, *Welcome to Our World* (2014); Agnes Houston and Julie Christie, *Talking sense: Living with sensory changes in dementia* (2018), a guide to how dementia changes sensory experiences; and Terry Pratchett's BBC Documentary, *Terry Pratchett – Living with Alzheimer's* (2009).

and detailed story for the man, by asking questions like ‘what should we call this guy? Where does he live?’.[8] For the remainder of the sessions in the care home, Basting used the format of this new activity to encourage the residents to craft stories inspired by different photographs and images. Rather than relying on recollections of personal past experiences to express themselves, the residents found value in storytelling fictional scenarios that were more representative of who they were at the time. In her reflective article on the experience, ‘God is a Talking Horse’ (2001), Basting observed that ‘the stories provided a rare window into the world of dementia’ (p.88) and allowed residents’ families to understand their ‘loss’ and ‘recognise [their] creativity and humanity’ (pp.88-89). Basting’s work gave agency to a group of otherwise marginalised members of society, by using storytelling and performance, in ways that did not require a reliance on memory work alone.

Memory and reminiscence-based activities have been used successfully in applied theatre contexts working with people with dementia. In the context of dementia care, Age Exchange (2024) define these activities as:

> explored organically through a wide range of stimuli as [a professional workshop facilitator] reaches to find the trigger that enables the participant to engage, communicate, and create. This may be through encouraging sense memory, smell, touch, taste, or use of music, or most effective where language and formal memory may appear lost – through embodied memory.

Reminiscence arts continue to be used to train care staff (in the UK) to enable them to use the life story of care home residents, to provide ‘meaningful activity that is person centred’ (Age Exchange, 2024).

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[8] The Marlboro Man was a marketing device invented by the Philip Morris Tobacco company to promote sales of their Marlboro cigarette brand. The adverts typically featured a cowboy (ranch owner) with rugged features who smokes said brand. The result of the advertising campaign saw the Marlboro Man become synonymous with themes of freedom and independence and remained a significant if divisive, cultural figure. An example can be found in Shirk (2015).

Contributors to Sheila McCormick's edited collection, *Applied Theatre: Creative Aging* (2017), explored how applied theatre can be used to meet the needs of geriatric members of society using these techniques. In the first part of the book, McCormick found that the exclusion of older people is both reflected in and perpetuated by cultural attitudes towards them. In her discussion of the history of applied theatre and the elderly, McCormick argued for the significance of 'reminiscence' used in care facilities and the wider arts, citing the efforts of Age Exchange and their 'Reminiscence Arts and Dementia Impact on Quality of Life' (RADIQL) project. Specifically, McCormick argued that reminiscence-based programmes, like Age Exchange, foster moments of 'communal remembrance, which have the potential to engender a sense of community and belonging' (p.46). In this regard, reminiscence arts are significant in providing agency and meaning to the lives of people with dementia through performance.

More recently, McCormick's research has focused on the role of play in dementia care facilities, specifically creative uses of imagination and 'playing along' to support the needs of people with dementia. In McCormick's article 'What can we learn from play?' (2023), older people and those living with dementia are seen as active agents rather than passive spectators in the creation of stories. Analysing the work of 'The Playful Engagement and Dementia Project' (2012-2016), which used relational clowning, McCormick argued that playfully engaging with people with dementia (using careful signalling to identify *how* play is initiated) can provide an enriching care experience.[9] The project used the clowns to initiate an activity inviting a 'yes and' response from the people in care.[10] These situations, where people with dementia offered stimuli for the clowns to respond to, maintained clear boundaries that acknowledged the activity as *play*. McCormick concluded

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[9] McCormick distinguishes this from typical clowning where a person might wear face paint and a distinctive costume. Relational clowning does not use traditional clowning methods save the use of a red nose to signal that play has begun (2023, p.108).

[10] 'Yes, and' asks performers to focus on listening to their scene partners, and to accept their suggestions rather than blocking them. See Digital Theatre+ (2023).

that play used in care settings undeniably improves not only the quality of care but also the ability to develop meaningful relationships (p.113). McCormick's findings further demonstrate that performance in the context of dementia care can elevate people with the disease to become active agents in performance and support self-development.

Performance spaces can be powerful tools for fostering empathy, self-identity building and creative expression for people with AD. Hannah Zeilig and Lucy Burke's 'Privileging the Play', in *Social Research Methods in Dementia Studies* (2018), analysed two case studies of theatre companies Co-creating with communities of people with dementia. The first of which, Small Things' *The Island*, aimed to encourage creativity outside of the traditional theatre space. The facilitators used Shakespeare's *The Tempest* as the basis for a co-produced piece of theatre, by and for residents of Shore Green Care Home in Wythenshawe, Manchester. Through a series of workshops, the participants transformed the care home into a version of Prospero's Island, as a backdrop for sharing the residents' co-created artworks, sounds, songs, poems, and puppetry. The intervention used the 'imaginative and symbolic potential of Shakespeare's play' (p.210) to give space for the participants to express the identity of who they are, rather than focusing on the memory of who they used to be. The intervention has important methodological parallels with this research. Small Things' participants were given space to discover through 'expressive and embodied' activity (p.218) that moved beyond scripted representations of the disease and emphasised the qualitative experience of the process rather than the product.

While such theatrical interventions encourage greater agency for people with AD, they need to be part of a more holistic approach to shaping perceptions of the disease. Batch's *The Loss of Small White Clouds* (2023) provides a valuable analysis of 11 case study productions staged between 2010-2013. To demonstrate the positive ways theatre can highlight instances of 'dementia that exists outside of stereotyped constructions' (p.9), she examined works that showcased different performance styles that 'deviate in some way from dramatic tradition' (p.12). Through a thematic progression –

from scripted interior experiences of dementia to physical dramaturgy, to postdramatic placelessness – Batch surveyed the 'possibilities' within these performances that foregrounded dementia (p.13). She advocated for performances that capture the individuality and selfhood of people living with the disease. In particular, in her conclusion, she praised *Clock for No Time* (2021) as a production 'led *by* a disabled person, and accessible *for* audiences with dementia', as a performance that was 'more than merely *about* dementia' (pp.210-11). As identified in Batch's work, this thesis aims to be part of a more radical shift to provide greater possibilities for how dementia is portrayed in performance. Ultimately, however, as part of creating a broader spectrum of theatrical interventions that better portray AD, more work needs to be done to develop practical tools that go beyond individual, autobiographical representations of the disease.

1.4 Biomedicine in theatre

As works that specifically examine the role of biomedical research in performances related to dementia, Anne Basting (2009) and Janet Gibson (2020) were particularly influential in the development of this research project. Both examined the use and implications of using biomedical models to frame people with dementia in the arts. Most notably, this includes Basting's theory on the 'tightly told tragedies of dementia with science as hero' in *Forget Memory* (2009), and Gibson's (predominantly biomedical) 'right kind' of dementia story, in *Dementia, Narrative and Performance* (2020). These theories problematised depictions of AD in performance, by illustrating how biomedical research, and more specifically the ableist medicalised language they use, have shaped the ability to understand dementia as more than simply tragic. Both theories were instrumental in helping to develop an alternative view of how biomedical science might inform and enhance the actors embodied knowledge of people with AD.

In Basting's examination of cultural representations of dementia, she proposed that stories about dementia in popular culture can be categorised and identified as serving specific agendas, based on their narrative structure. Basting identified five main narrative tropes (2009, pp.35-66):

1. Tightly told tragedies of dementia with science as hero
2. Tightly told tragedies of dementia: then versus now
3. Not so tightly tragic: stories that imagine something more
4. Not tragic at all: stories about memory loss without the old
5. All of the above: Denny Crane as the clown of dementia

Of these narratives, ‘tightly told tragedies of dementia with science as hero’ is a particularly pertinent narrative structure that this thesis will examine, before considering how reframing the view of biomedicine can positively shape embodied knowledge. Basting argued that, while biomedical research is significant in the context of dementia care, and an essential component for designing more compassionate care for people with the disease, she also found that scientific narratives problematically fixate on memory loss. She argued that such narratives must be balanced to allow for more diverse understandings of how a person’s life is affected by AD, beyond memory loss.

This is most apparent in her analysis of a documentary film, *The Forgetting*, directed by Elizabeth Arledge (2004), based on David Shenk’s book of the same name (2001). Her analysis revealed a dichotomy between scientists’ heroic mission to cure the disease, and those they try to save from the tragic lived experience of dementia. Shenk’s book framed scientific fact and evidence-based medicine as a part of the more positive ‘hopes and feelings of people with dementia’ (Basting, 2009, p.35). Arledge’s documentary, however, framed ‘Alzheimer’s in purely tragic terms’ (Basting, 2009, p.35). It showed only late-stage AD patients, with advanced symptoms (many of whom were unable to speak), framing people with AD as vulnerable and visibly depleted by the disease. This was heavily contrasted against the image of science (and the efforts of scientists) as a hero fighting against the effects of the illness. The film foregrounded a battle between the *concepts* of science versus disease, with the scientists as representatives of science and people with dementia as vessels of the disease. This narrative framework therefore took away the agency and motivations of the *people* at the centre of the story, and in doing so, undermined the complexity of both the science and the impact of the disease.

Motivationally, the film was created to encourage viewers, in the North American context, to lobby senators to increase federal funding into AD cure research (Basting, 2009, p.37). In doing so, it oversimplified an otherwise complex story. For example, Basting argued that while this motivation to raise awareness was important, the framing meant that viewers did not see 'what gets left on the cutting room floor during the making of such tragic stories' (p.39). In her concluding response to this shallow storytelling genre, typical of many mediums that aim to portray dementia, Basting called for a more detailed investigation into how performance shapes the narratives of the disease:

> We need to tell and ought to expect to hear more complicated stories of memory loss than we are commonly fed in mainstream media. Stories of loss and emotional pain are part of the dementia experience. […] But the experience of dementia is more than the stories of loss and pain – it is bigger than a tightly told tragedy can capture (p.155).

Responding to this call for more complex stories of AD to be told, this thesis demonstrates the benefit of drawing together the scientific and the lived experience. Together, they must be considered and used as inseparable components to shape embodied knowledge of what the disease is and the impact it has. Here, using the biomedical data is therefore viewed as a necessary gateway to practically exploring people with complex illnesses shaped by scientific, embodied knowledge and understandings.

Examining thematic aspects of narratives of dementia in performance and culture, Gibson (2020) set out to challenge the concept of the 'right kind of dementia story' (pp.38-41) in Western 'theatre of the real' (p.5). Situated in her personal experience of caring for her mother with AD, she analysed performing dementia in three ways: 'identity and narrative', 'in performance' and 'as performance' (2020). Her focus on identity and narrative was used to examine the implications of forcing the reality of dementia into simplistic and linear tragedies, to sensationalise the disease as a crisis drama. Gibson argued that biomedical language is used as an authority to suggest a ‘right kind’ of dementia story, developed from a fear of divergent narratives being construed as misrepresentative of the disease. The ‘right kind’ of dementia story was adapted from Alison Jeffers’ ‘right kind of refugee story’ (2012). Jeffers defined the ‘right kind of refugee story’ as a narrative device ‘in which complexities are smoothed out to create a simple linear narrative of individual crisis and flight’, despite the reality of the situation often being far more complex (p.46). This method of storytelling seeks to avoid controversy, by selectively editing and curating the image of all those seeking refuge as victims. Gibson’s model framed AD in a similar narrative structure, as one which uses select biomedical findings to define and maintain a predictably progressive story of having dementia. The ‘right kind’ of dementia story is characterised by failure – of someone’s mind, body and identity – and situates bodies in an ableist dichotic framework of normal/abnormal and functioning/broken. This limits the possibility of more empathetic and embodied understanding of difference, divergence and degeneration, and as argued by Gibson, creates an ‘incontestable and hegemonic’ version of dementia (p.39).

In the second part, she investigated the staging of dementia in verbatim theatre and theatre of the real. As with the findings of Basting, Gibson noticed that staging the private lived experiences of people with a complex disease was primarily undertaken uncritically, while only ever upholding ‘master narratives (of tragedy, crisis, and so on)’ (p.39). In doing so, these performances did not challenge stereotypical depictions of dementia and continued to cling to the ‘right kind’ of dementia story. Gibson further argued that the ‘stories’ performed by people with dementia are ‘troubling, troubled and troublesome’ (p.39): troubling because they may be ‘hard to hear’, as a result of their ‘chaotic structure or content’; troubled, as they may be ‘hard to tell’, due to the storyteller’s ‘cognitive rupture and disorientation’; and troublesome as they are based on ‘“real” personhood’, the sharing of which could impact someone’s ‘privileges and rights as citizens', should these stories not be told 'in the "right" way' (p.39). Just as the stories performed by people with dementia are 'troubling, troubled and troublesome', so too must the stories told *about* the people living with the disease. An integral part of these stories is the biomedical research that underpins one method of understanding how dementia impacts a person, situated alongside the voices of people with AD and their own reflections. The workshop guide created for this research project contests the previously established definitions of dementia and aims to dismantle ingrained perceptions of AD in performance. It achieved this by using a plethora of biomedical research that demonstrates the individualised, non-homogenous nature of dementia (e.g. Stopford et al, 2008; Robins and Byrne, 2011).

In her final section, Gibson examined the concept of people with dementia as performers of their own life stories, comparable to that of an actor on stage, with their carers and loved ones serving as audiences. This chapter is a purposefully open, unfinished theory on how the actions of people with dementia (such as wandering, often repeated as a means of comfort and soothing) might be viewed, not as failings resulting from disease, but rather a series of repeated rehearsals of behaviours connected to their dementia. Gibson's approach to understanding the effects of AD on a person, through the lens of an actor rehearsing actions, is particularly useful for this research. Rather than viewing the actions of people with AD as abnormal or broken, as in a 'right kind' of dementia model, her approach encourages a methodology of noticing, specifically the form and function of the repetitive actions of those adapting to a new reality. By engaging with the embodiment of the symptoms, in the case of this research by using biomedical records and data, these observations can be used to develop practical tools for performed storytelling.

While both Basting and Gibson analysed how biomedicine has been used to frame people with dementia in the final *product*, neither fully examine how the science can be harnessed to frame the *process* of actors' character development of people with AD. When examined collectively, biomedical research, particularly patient case reports, can detail an expanse of experiences and symptoms of people with dementia. This information has been used to shape exercises that allow the actor to experience, first hand, what the implications of AD mean for them, in place of rigid and ableist language. It is crucial to remember that the language in biomedical research, used to describe dementia, is only one aspect of an otherwise insightful guide on the effects of a complex illness. Reading biomedical research as a theoretical exercise is very different to then applying this information to shape creative practice. Rather, using biomedical research to develop an embodied knowledge of AD can highlight the nuances of physiological experiences in considerable detail, which is well suited to creative practice. This research diversifies understandings of AD by using biomedical data as the basis to explore the symptomatic effects of dementia on the functionality of the body and brain, understandings of the self, navigating the environment and interacting with others.

Chapter 2 Methodology

This thesis examines the extent to which biomedical research can enhance an actor's ability to embody symptoms of AD as part of a wider rehearsal process. Testing this comprised developing, critiquing and refining a series of practical workshop exercises for directors to facilitate actor explorations of different symptomatic aspects of the disease. The core objectives of this research were therefore to:

1. construct a workshop guide of exercises, which interpret the broader biomedical data into an improvisation or scenario, and can support actors to experience and reflect on the emotional and social consequences of symptoms of AD;
2. thoroughly test the workshop guide, through practical experiments with actors, to both refine and critique the application and effectiveness of the exercises for achieving the aims of the guide.

This chapter will set out the interdisciplinary, mixed-methodological framework used to support these research aims and objectives. It begins by addressing the definition of 'practice-led' research, and why it was required as the base methodology for the efficacy of constructing this thesis. It then moves into setting out methods used by other practitioners to explore biomedical research, to demonstrate both how it shaped their practice and how it influenced the structure and delivery of this research. It then details the methods employed to select and interpret the biomedical research used to support embodiment of symptoms of AD by actors. This includes medical data extracted from the research materials used to shape the workshop guide, and highlighting the significance of audio technologies used in specific exercises. Finally, it provides an explanation of how the workshop exercises were tested and the data interpreted for analysis in the critical reflection.

2.1 Practice-led research

There have been (and still are) many debates regarding the exact wording used for different types of research at PhD level, with each signifying distinct methods of working. Relative to PhDs which involve creative practice, some examples of different terms include ‘practice as research’, ‘practice-based research’, ‘practice-led research’ and ‘artistic research’ (typically used in visual arts).[11] Specifically for this research, the term ‘practice-led’ is the most applicable, because its definition most accurately captures the methods used to construct this thesis and meet the demands of the research questions. Carole Gray’s *Inquiry through Practice* (1996) traces the origins of this specific term back to the 1970s and early 1980s, when the ‘“first generation” of pioneering artists and designers saw the potential for exploring and developing practice through the process and framework of higher degrees’ (p.1). Gray defined practice-led research as:

> research which is initiated in practice, where questions, problems, challenges are identified and formed by the needs of practice and practitioners; and secondly, that the research strategy is carried out through practice […] using specific methods familiar to us as practitioners in the visual arts (1996, p.3).

This definition of practice-led research, specifically the idea that challenges and problems are identified by the requirements of professional practitioners, effectively frames the design of this research. This thesis argues that exploration of the central research question demands a practice-led approach because the questions cannot be answered by any other means. Understanding and critiquing the efficacy of the proposed biomedical research-shaped theatre exercises as a practical tool requires practical investigation. As set out in *Chapter 1*, practice-led research into the central

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[11] Each of these terms is explored in detail in: Robin Nelson (2013, pp.11-17).

questions of this thesis, more specifically research that sits at the intersection of academia and professional practice, has not yet been undertaken.

Creating guidance tools, developed from research-led practical explorations, are important for supporting both the development of professional practice and frameworks to academically explore further lines of enquiry. As practice-led research, the testing of the exercises allowed for thorough critical reflections of the effectiveness of the guide, and exercises therein, for embodying diverse AD symptoms and the extent to which these enhance actors' evocation of the social and emotional challenges of AD by providing useful instruction for theatre directors. This is important because, though the (mis)uses of biomedical research in existing performances and cultural representations have been examined at length, no investigations have used practice-led approaches to academically create, test and (perhaps most importantly) refine how biomedical research can inform cultural representations of AD.[12] Because the workshop guide focuses on the role of biomedical research in a workshop setting, it is designed to become part of a repertoire of directorial techniques, that collectively support detailed and considered approaches to creating performance. This could include, for example, both biomedicine and the voices of those living with AD acting as creative consultants. Led by practical investigation, this research and the workshop guide aim to demonstrate the resourcefulness of biomedical interventions for embodying AD as a complex disease, and to dismantle the stereotypical image of dementia as merely a loss of identity and memory.

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[12] While practitioners such as Ivonoffski (2006) have worked with nursing academics including Mitchell and Jonas-Simpson, the focus of that project was to consider how effective theatre was, as a medium for sharing and communicating biomedical research findings with a wider audience. From the perspective of theatre and main stage productions; using biomedical research to *enhance* the abilities of actors to sensitively embody the effects of living with AD, I have found no documented research exploring this.

2.2 Biomedical research in theatre

As the workshop guide is primarily for use by directors, the biomedical research included in the exercises needed to be reconfigured for comprehension by theatre professionals. Concurrently, it needed to convey the complexities of AD as more than a list of symptoms, and instead as a set of social and personal consequences of living with the disease. To achieve this, both ethnographic accounts from people living with dementia and biomedical data (patient case reports, systematic and non-systematic reviews, clinical guidelines, and surveys) on the symptomatic and psychological impacts of dementia were used. While several research studies explore the intersection of theatre and science (e.g. McCormick, 2023; Shapiro and Hunt, 2003; Stuttaford et al, 2006), two works were critical for designing and testing a biomedically-informed guide for use in a theatre workshop space.

First, the work of nursing academics, Gail Mitchell and Christine Jonas-Simpson, in collaboration with director and playwright, Verina Ivonoffski, was central to crafting the methodological framework for the practical aspects of this research. In their paper, ‘Research Based Theatre’ (2006), Mitchell and Jonas-Simpson analysed how theatre performance can be used to communicate biomedical research to a wider audience, using research-based drama. Partnering with Ivonoffski, they provided case study reports of four patients with AD, combined with their expertise in AD research, to support Ivonoffski’s development of a play script called, *I’m Still Here.*[13] Mitchell and Jonas-Simpson provided the actors with clinical data on specific patients’ experiences of dementia to explore in the rehearsal room. Ivonoffski then led discussions with her actors concerning their own

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[13] Ivonoffski conducted further performance practice in this area working with Ross Gray et al to produce the play *Handle with Care? Women Living with Metastatic Breast Cancer* (2000), first produced in Ontario Canada, 1998. The methods for this production are similar to those used in the development of *I’m Still Here* (2006).

experiences of dementia relative to those contained in the medical case notes. The medical data was thematically analysed by Ivonoffski and consequentially, eight 'themes' of dementia were highlighted, these included: 'self-hood, identity, quality of life, control, loss, joy, disregard, and changing life rhythms' (p.200). Using these themes of identity and narrative in the rehearsal room allowed the actors to encounter the more complex biomedical material through improvisational practice. The actors' improvisations later served as the basis for Ivonoffski to develop a written script which was further developed for public performance. This process, of thematic analysis and improvisation was instrumental to the methodological framework of *I'm Still Here*. Similar methodologies were employed to approach the biomedical data used for this research project. They were read through a thematic lens, to balance the authoritative nature of biomedical research and interpret the data as guidelines for suggesting what dementia *could* be like, as opposed to what it *should* look like. Using this method allowed actors the freedom to explore and embody elements of dementia without having to prescribe themselves to a set agenda.

Second, the work of theatre director Jeff Teare, playwright Simon Turley, and biomedical scientist/clinician Anthony Pinching, from the production company, Theatrescience. Teare et al's chapter *Dramatic Clinical Spaces,* appears in the book *Creative Encounters: new conversations in science, education and the arts,* edited by Ralph Levinson, Helen Nicholson and Simon Parry (2008). Several significant aspects of Teare et al have informed my research, this includes, envisaging the rehearsal space as more of a discursive space, where debate and failure were not only welcomed but encouraged. Teare advocated that the rehearsal room be viewed and operated as a space for 'honest debate and potential movement', allowing for uninhibited 'expression without immediate embarrassment or guilt', relative to this research project, this is a vital point to encourage actors to explore and embody symptoms of AD freely relative (p.100).

Below is a table/flowchart detailing how Teare et al envisaged the scientific method of research into one adapted to the performance-making process (*Table 1*):

Process	**Scientific method**	**Performance making**
↓	Idea	Idea
	Theory	Script
	Test	Rehearse
	Confirm or change idea/theory	Confirm or change idea/script
	Test again	Rehearse again
	Publish	Perform

Table 1: Comparative table of scientific method and performance making (Teare et al 2008).

Teare et al's table outlines a step-by-step process of conducting scientific research, drawing a comparison with the performance-making process, with the ultimate aim of combining medical research with creative performance practice. Teare et al's model provided a helpful framework from which I could then begin to construct a similar method for this research project, observing one key difference. Rather than focusing on performance or portrayals of AD through public sharing as the ultimate goal, the framework devised for this project is designed to facilitate the creation of a practical guide to exploring and embodying AD symptoms in a theatre workshop setting.

Table 2, below highlights this research project's adaptation and reframing of Teare et al's research methods, focusing on constructing, testing and refining the workshop guide for this thesis (*Table 2*).

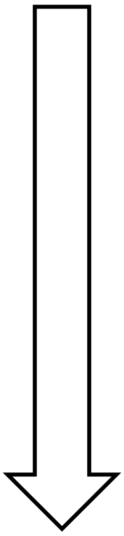
Process	**Practical method of performance making**
	Research (on symptomatic presentations of AD)
	Idea (how to practically recreate the symptoms in the research)
	Construct workshop guide exercise
	Test/Rehearse
	Confirm or change idea/theory
	Test/Rehearse again
	Final workshop guide

Table 2: Practical method of performance making used for this research project.[14]

The table above represents the generative process of translating biomedical research into a suite of exercises while facilitating the actors' ability to embody symptoms of AD.

2.2.1 Adapting Teare et al's framework

To give context to my adaptation of Teare et al's methodological framework, below I discuss the crucial steps of developing ideas from biomedical research, how these were then translated into practice and further outline the significance of confirming or changing ideas and theories based on practical experiments.

My research into AD symptoms gathered from biomedical data inspired an 'idea', by posing questions of the research from an embodied perspective. For example, in *Exercise 2, Pure Word Deafness*, biomedical researchers (Kim et al, 2011) reported a 59-year-old Korean woman who heard normal speech as 'sounding like a noise and sometimes buzzing'

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[14] A blended methodology of scientific method and performance making adapted from Teare et al (2008) in (ed) Levinson, Nicholson and Parry (2008).

(p.227). Questioning this, this research project asks what does that *feel like* to experience from an embodied perspective? What physical and emotional responses stem from this experience and how would I respond to this? To achieve this and move beyond a theoretical exercise into a practice-led approach, I then had to devise a method by which I could recreate a similar experience to then be able to observe and record these experiences.

Using *Exercise 2 (PWD),* the described symptoms are noise, sometimes like static or buzzing, which disruption and interferes with everyday communication and crucially, cannot be controlled by the patient. The 'idea' first developed to try and replicate this was based around wearable technology (headphones), which played an overlayed audio track of static noise, like the experience described in Kim et al (2011). The first iteration and testing of the I first 'tested and rehearsed' this idea on myself with a pair of headphones while listening to a constant loop of static sound, while simultaneously trying to conduct normal conversations with people in my everyday life. The result was that I could hear almost nothing of my conversations with others, which is not the same as the patient experience detailed in Kim et al (2011). The 'idea' was then adapted. Static sounds would instead play randomly and intermittently, thus more accurately recreating the circumstances described in the research. This allowed me to hear elements of what others said to me in normal conversation, although the effect was sufficiently disruptive. The experience gleaned from this solo exercise then led to the construction of the workshop exercise and its introduction and first attempt at 'testing/rehearsing' with actors using headphones.[15]

The process of 'confirming or changing an idea/theory' was a vital step within the process of creating the workshop guide. For exercises to be considered successful, they must deliver a proof of concept, which allows the actor to embody the described symptoms of AD featured in the biomedical

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[15] This is explored in detail in *Chapter 4 Critical reflections*.

research. Where an exercise did not yield tangible results for an actor(s), several aspects of the idea were re-examined before being tested a second time. This relied on a detailed discussion with the actors, analysing and critically reflecting on their experiences, while comparing these with the documented symptoms in biomedical research. In this regard, the actors deemed essential to the testing of workshop exercises and valued as experts in their field, drawing on their embodied, physical and psychological observations to evaluate how an idea might be adapted. *Exercise 8, Capgras syndrome* serves as a prime example of this process and a detailed account of this process is given in Chapter 4 (pp.151-159)

2.3 Navigating research on AD

The study of Alzheimer's disease crosses several important academic and clinical boundaries including neuroscience, biology, chemistry, pharmacology as well as psychology, sociology and ethnography. To ensure a clear base understanding of how to engage with and comprehend different kinds of biomedical research, the author undertook training modules on dementia and AD, 'Brain and Behaviour 1 and 2' and watched a series of lectures by Professor Beth Jefferies, at the University of York. This training provided a strong foundational understanding of AD neurology and psychology. These materials were used in combination with Trisha Greenhalgh's book on how to read evidence-based medicine (2014). This was an important starting point for identifying the types of biomedical research data best suited to the demands of developing a workshop guide for theatre makers. The book explores the fundamentals of biomedical research, including the different kinds of research outputs and information they contain, as well as how to read and comprehend the data from a lay perspective. These resources were crucial elements of the research design to develop a specific skillset, as a theatre academic and professional, to most effectively source, comprehend, apply and communicate biomedical information on AD for a useable workshop guide for other theatre practitioners. The following sections set out the sources that were compiled and used for the development of the workshop guide.

2.3.1 Sourcing biomedical research

Criteria for using biomedical research for a theatre workshop guide included ensuring that research came from trusted and traceable sources, meaning that anyone who then wanted to conduct their own additional research could do so using appropriate source materials. Using trusted sources required me to search and navigate several medical databases, which are outlined below.

Source	Description	Uses
PubMed Central and MEDLINE	Online (since 1996), open access and peer-reviewed biomedical research. Part of U.S. National Library of Medicine (NLM), located at the National Institutes of Health.	Both databases were used to source reliable clinical research and ensure that open access, peer reviewed research was used as the basis for a usable workshop guide.
EMBASE (Excerpta Medical Database)	Established in 1947ongoing. A biomedical and pharmaceutical bibliographic databased with over 8500 peer reviewed journals with an additional 2900 journals not covered in MEDLINE.	Used to further source reliable clinical peer-reviewed data. This database was used in conjunction with PubMed Central and MEDLINE to ensure resources were published and cited across multiple platforms and to further capture data that was published outside of the first two.

National Health Service (NHS England, Wales, and Scotland)	Online content of regularly reviewed/edited and accessible information on symptomatic effects, treatments and patient guidelines for medical care.	Used as a first step to identify general effects of AD before examining more in-depth resources obtained from biomedical databases.
The Alzheimer's Society UK	The Society's website is a useful repository of AD specific advice, research and first-hand account articles and videos.	Used for broad, accessible resources on AD. The site's articles and videos also provided useful testimonials and first-hand accounts of the impact of AD and the perspective of carers and loved ones supporting people with dementia.
Alzheimer's Research UK	Registered charity founded in 1992 as the Alzheimer's Research Trust. The website provides advocacy for research into AD cures and treatments.	Used to verify facts on the effects of AD and develop insight into how the condition affects a person's quality of life. Specifically, accessing online information relating to diagnosing, treating and the effects of AD.

Table 3: Biomedical databases and healthcare organisation resources used to develop the workshop guide.

Biomedical research, and the vast body of data it produces collectively aim to better contribute towards the care and treatment of people with AD. The workshop guide, on a smaller scale, mirrors this by utilising a combination of data types to improve the awareness of the complexity of AD in performance, rather than relying on isolated source materials. Biomedical research falls into two categories: primary and secondary data. Primary data includes laboratory experiments, clinical trials, surveys, and organisational case studies. Secondary data includes overviews, systematic and non-systematic reviews, meta-analyses, recommendations for health guidelines, and decision analyses. Both types of data were important for the construction of the workshop guide, of which, the following subsets of data were used.

2.3.1.1 Primary data

Patient case reports are an important source for making sense of biomedical research and its shaping of theatre exercises for actors. They humanise clinical research by evidencing the feelings and experiences of a patient. This is significant as, contrary to the ‘right kind’ of dementia story (which emphasises an ableist perspective of bodies according to ability), they allow for more detailed explorations of individual experiences. Greenhalgh found that, while patient case reports are sometimes viewed as biomedically ‘relatively weak scientific evidence’ (p.40), the types of information they do provide can be of considerable benefit:

> there are certainly good theoretical grounds for the reinstatement of the humble case report as a useful and valid contribution to medical science, not least because the story is one of the best vehicles for making sense of a complex clinical situation (p.41).

While many kinds of scientific research may focus on chemical test data, such as treatment and drug efficacy, case reports convey research findings through the medium of stories of experience. These therefore provided important information on patients’ experiences of AD and revealed themes such as feelings of control, agency, sensory perceptions, emotional experience and senses of identity. These themes, as with Ivonoffski’s work, were important for identifying and providing evidence for interpreting and communicating complex medical symptoms in the workshop guide.

To ensure that the biomedical research used to define the nature and parameters of each exercise was transparent and replicable by other theatre makers, any papers used were directly referenced in the guide, alongside additional biomedical research evidencing instances of that symptom. Additionally, the exercises often cited more than one example of a biomedical research finding, such as *Exercise 2: Pure word deafness*, which featured two case studies, from Kim et al (2011) and Buciuc et al (2021). This was a deliberate action to mitigate the possibility of claiming one unique presentation of illness as a characteristic of all people with AD. Additionally, the inclusion of two or more case studies helped to show a symptom as traceable and present within different people with AD, as well as the individuality of the experience, as one symptom may not always present in the same manner in all groups.

In certain instances, where medical databases retrieved no further results or the article was inaccessible behind a paywall, it was not always possible to obtain patient case reports that detailed a specific symptom. In these cases, the workshop guide used data that evidenced a specific symptom as being present either in part or a majority of a community of people with AD. For example, *Exercise 1: Hearing Distortions*, used data from Taiwo (2022), who found that 8 of 42 surveyed patients experienced hyperacusis. This data was then supported by ethnographic evidence from Wendy Mitchell’s personal experience of hyperacusis, described in her online blog entry (2019). Survey data was also used to illustrate the significance of a given symptom. For instance, *Exercise 6: Singing in place of spoken word language*, used patient case reports with additional patient observational survey data collected by the patient’s husband (Baird and Thompson, 2019). In this respect, the exercise included not only the observations of clinicians but also those of the primary carer of the patient. The combination of two data types provided a detailed and considered insight into a particular aspect of living with AD, which might not otherwise have been evidenced using a clinician’s observation alone.

2.3.1.2 Secondary data

The primary data was supported by secondary data, namely using either systematic and/or non-systematic reviews and healthcare guidelines. Non-systematic reviews summarise primary studies of a specific subject. Systematic reviews do the same as non-systematic reviews, but they do this ‘using a rigorous, transparent and auditable method’ (Greenhalgh, 2014, p.32). These reviews informed certain exercises, including *Exercise 4: Aphasia affecting speech*, and *Exercise 5: Aphasia affecting language skills*, which both cite the Dickerson et al (2017) review of multiple case reports. These provided investigations and analyses into the results of multiple case reports, medical trials, studies, or therapeutic interventions. Additionally, healthcare guidelines, or documents that assist practitioners in providing appropriate decisions regarding healthcare for patients (Greenhalgh, 2014, p.135), were used. This included those drawn up by Sabat and Warren (2023), which provided outlines of the challenges surrounding the term ‘memory loss’ for *Exercise 9: Memory*. Examining healthcare guidelines was also important as a discovery tool for the incorporation of further clinical discussion and theory on the subject, such as Sabat’s book, *Alzheimer’s disease and dementia* (2018).

2.3.2 Ethnographic accounts of dementia

While biomedical data served as the predominant body of research to inform the workshop guide, some exercises (*Exercise 1: Hearing distortions* and *Exercise 3: Auditory hallucinations*) include ethnographic accounts of experienced symptoms of AD. Though these accounts are not the focus of the research project, they were included to remind the guide user to approach the exploration of dementia through embodied, person-first experiences of the symptoms. In this way, the ethnographic sources provided important insights into a particular aspect of a condition, particularly where no other biomedical research has documented it. The sources used to shape this research and to construct the workshop guide are detailed below in *Table 4*. The overarching criteria for the ethnographic accounts used from these sources was to demonstrate the lived experience of the symptomatic data recorded in the biomedical research. These accounts provided voices of real people with dementia, as experts on the perception and impact of the disease, which should be an important aspect of performing any lived experiences of illness and disability.

Source	Description	Uses
Dementia Diaries	Online video and voice sharing platform. Features people living with dementia detailing their experiences of living with the disease.	Dementia Diaries was used to provide personalised accounts of experiencing a particular symptom, in the context of a given exercise. See for example *Exercise 1: Hearing distortions*, using Wendy Mitchell's account of hyperacusis.
Wendy Mitchell, (2022), What I wish people knew about dementia: from someone who knows.	A biography that includes, in part, 'how-to' guides for caring and supporting people with dementia. Mitchell cites multiple biomedical research studies support better awareness and treatment of people with the disease.	Mitchell's personal reflections were analysed and compared to the findings of the same symptoms, described in biomedical research papers, to better understand the lived impact of AD.
Agnes Houston and Julie Christie, (2018), Talking Sense: Living with sensory changes and dementia.	An online guide to living with sensory perception changes caused by dementia. Developed with support from people living with the illness.	Used to better understand and relay the sensory effects of dementia, predominantly on hearing, for the construction of the workshop guide.

Table 4: Ethnographic and non-biomedical sources on the impact of dementia used to develop the workshop guide.

2.4 Constructing the workshop guide

The workshop guide is intended for use by a theatre director as part of a workshop process. Importantly, the director is central to the delivery and facilitation of these explorations of AD in the rehearsal room. The guide is therefore designed so that directors can adapt their working methods to ‘create an atmosphere in which other people can create’ (Rea, 1989, p.19). They would therefore work with this guide to shape an experience for the actor, by using biomedical research-informed exercises that facilitate the actor to explore and create for themselves. Additionally, the guide is designed to function similarly to existing rehearsal guides. This includes Bella Merlin’s *The Complete Stanislavsky Toolkit* (2014) or Katie Mitchell’s guide for directors working in the rehearsal room (2009), which support directors to examine how actors think about the world their character is contained within and how they exist within it. It is therefore envisaged that the director would use the guide to support actors’ exploration of characters’ emotional, social and behavioural responses to the symptomatic effects of AD. To support this, the guide is designed so that the exercises allow the actors to embody the symptomatic effects of AD, not as a list of disabilities, but as a set of variable challenges. The director would then guide the actors’ experience by providing step-by-step instructions, before encouraging them to reflect on their experiences during and following the exercise. A series of practice-led research components, which will be expanded on below, therefore needed to converge to create and refine the final workshop guide:

- selecting relevant and clearly communicated biomedical research;
- defining a set of parameters of the role and functions of the guide;
- deciding on and implementing the use of audio technologies;
- thoroughly testing the exercises with actors;
- critically reflecting on and refining the guide.

2.4.1 Using biomedical research

The biomedical research used in the exercises needed to avoid any suggestion that there were exact models of AD that an actor could simply like-for-like replicate in performance. Instead, the workshop guide aimed to encourage an exploratory rather than prescriptive approach to embodying symptoms of AD. This required the biomedical research used for the construction of and evidence for the exercises to respond to the following questions:

1. What function does each exercise serve that is relevant to the actors' process of enhancing embodied understandings of AD?
2. What biomedical research and symptomatic data best facilitate this?
3. Does the selected data support the exercise in serving the actors' potential to rehearse a characterisation of a person with AD using an embodied approach to symptoms?

Each exercise therefore needed to serve a specific function in supporting the actor to create a character, which were tailored to a symptomatic aspect of AD. For example, analysis of biomedical research noted significant cases of speech disturbances and hearing differences. As set out so far, these needed to be grounded in biomedical research and lived experiences of the disease. This required a cyclical process of finding evidence of symptoms of AD from the biomedical research and then surveying more to find a body of biomedical research that evidenced the experiences of these symptoms. In doing so, this provided a selection of evidence that could best serve the exercise aims and shape the actors' experience of embodying AD symptoms. Working with the biomedical research in this way was critical for deciding what symptoms to explore and to ensure that they could support actors to develop nuanced characters.

Subsequently, a thematic analysis of the symptoms and related research data was conducted. The most recurrent themes in biomedical and ethnographic research were agency, control, emotional response, social implications, quality of life, cognition and memory. Additionally, following a broader examination of the primary data and academic literature on AD, identity, adaptation, experience of the symptomatic and environmental perception were also identified as important themes to draw out in the exercises. This combined data was then used to design and create exercises and scenarios that an actor could explore to experience people's symptomatic experiences of AD. To avoid them being assumed to be purely negative effects of the disease, the workshop guide aimed to encourage investigation of the selected medical symptoms through practical physical, social and personal interactions.

2.4.2 Defining the workshop parameters

The workshop guide was designed for actors to explore three fundamental aspects of the process of creating character, and more specifically to portray people with AD. These were: how AD impacts a person's sensory perception of their environment, relative to hearing; how a person communicates and interacts socially with other characters when speech and language are affected; and how a person emotionally responds to their symptoms and perception of AD, and how this changes the behaviour and attitudes of others. The structure of the guide categories and related exercises is as follows:

Hearing and social interactions

1. Hearing distortions
2. Pure word deafness
3. Auditory hallucinations

Spoken and written language perception

4. Aphasia affecting speech
5. Aphasia affecting language skills
6. Singing in place of spoken word language

Emotion and memory

7. Emotions and cognitive empathy
8. Capgras syndrome
9. Memory

The selected categories were chosen as they align with findings from biomedical research and showcase the variation in symptomatic expressions of AD. They serve to shape more diverse, empathetic understandings of AD for performance by exploring emotional, sensory and behavioural experiences. Additionally, by focusing on hearing and social interactions, language perception and communication, as well as emotion and memory perceptions, these categories serve to illustrate how AD is a non-homogeneous disease, affecting a wide range of cognitive and sensory functions. Further, they, collectively, allow directors and actors to explore the themes of agency, control, emotional response, social implications, quality of life, cognition, memory, identity, adaptation, experience of the symptomatic, and environmental perception. This, however, is not an exhaustive list, and the exercises still give space for the actors to consider multiple elements of a character’s makeup, including given circumstances, time, space, movement, voice and relationships. This guide is therefore not considered to be the ultimate rehearsal resource for actors exploring the effects of AD, but rather a substantial contribution towards shaping more empathetic and enhanced evocations that need to be used in tandem with other directorial and performative tools.

The intention of each exercise is to create a scenario for the actor to explore the effects of AD as though they were happening to them. The effects of the symptoms were designed to challenge the actors and make certain functions, such as speech, hearing and or memory, more difficult to carry out, experience or interpret. While difficult, no exercise was designed to be impossible, as this would only serve to reinforce the concept of AD as completely debilitating, which is arguably only the case in its very late stages. Instead, each exercise explored a symptom as a scaled challenge. For instance, in *Exercise 2: Pure word deafness*, the actor attempting to embody PWD would still understand certain words of a conversation, rather than hearing everything as nonsensical language. In this respect, the actors are never fully disabled but are instead challenged to consider the implications of the symptom. This, in turn, aimed to facilitate and encourage both actors playing characters with AD and their scene partners, to practically explore how AD impacted their social, emotional and behavioural responses to others in different environments.

2.4.3 Functions of audio technologies

Certain exercises within the guide (*Exercises 1*, *3*, *7*, *8* and *9*) incorporate simple audio technologies, including headphones, radio transmitters and radio receivers. These technologies were utilised where the biomedical research presented findings that AD directly impacts a particular sensory condition. For example, *Exercise 3: Auditory hallucinations*, uses all three audio technologies, to simulate this type of unstimulated perception of sound. Headphones and radios are useful for facilitating an actor to hear something which can only be perceived by them. Because this workshop guide is intended to be usable for as many theatre makers as possible, the use of technology is minimal and those that do use it have been designed to use commonly accessible devices (headphones, radios and mobile phones), to further explore and consider new methods of embodying AD symptoms. Additionally, and where possible, two approaches to working with an exercise in the rehearsal room have been included, which involve different levels of audio-technology interventions. For instance, *Exercise 2: Pure word deafness* has been designed to be explored with or without headphones. While certain exercises can be performed without audio technology, the testing (as will be explored in *Chapter 4*) demonstrated that its use prompted interesting and significant responses in light of the central research questions. It is therefore important that such possibilities remain open to any potential users of the workshop guide beyond this thesis.

2.4.4 Format of the exercises

The workshop guide opens with a broader context about the guide and a brief explanation of the science of AD, to demonstrate the purpose and composition of the guide. As the exercises could potentially cause (re)traumatisation and emotional distress, the opening section also contains information on how to ensure the safety of everyone involved, and a set of details on support resources that can be accessed if required. The nine exercises are separated into the three categories identified in *Section 2.4.2*.

Each workshop exercise then opens with a section detailing a summary of the findings made by biomedical researchers on a specific symptom.

This deliberately short section describes patients' symptoms and their effects, how they presented according to the medical report, and the likely causes of their symptoms. Complex medical terminology has been stripped back, and, where this is deemed essential, a simplified explanation has been offered. The report of each symptom is followed by a section that outlines what specific elements of biomedical research have been used and the aims and objectives of the exercise. Following the contextual information, the guides detail:

- exercise preparation, including any required materials, how to organise actors, and any relevant preparation, such as using code words or how to generate a script;
- running the exercise, which may include step-by-step instructions, (edited) scripts and variations to develop or explore the exercises further;
- and finally, a series of questions to be asked during a discussion with the actors, following the exercise.

2.4.5 Testing the workshop guide

All the exercises (except *Exercise 9: Memory*) incorporate more than one actor, one of whom is always intended to explore a specific impact of AD. Additional actors are used to facilitate that actors' experience of AD, as well as to discover from a shared perspective how AD impacts social dynamics and relationships. Each of the exercises were tested, more than once, by the researcher and paid professional actors, all of whom were asked to read and agree to an ethics agreement in advance of their participation. The workshops typically lasted between 2-5 hours each, and the testing was documented using a film camera, comprising a total amount of raw footage time that exceeded 50 hours. This was edited down to under 5 hours, to support critical reflections of the workshop guide, which are shared in *Chapter 4*.

The sessions ran according to a set agenda, that had been drawn up and reviewed ahead of the workshop, which included:

- a warmup;
- an explanation of the exercise inclusive of the biomedical research;[16]
- the practical 'rehearsal' of the exercise;
- a question-and-answer session held between the actors and the director;
- a de-rolling/relaxation exercise.

During the question-and-answer portion of the session, actors were asked a series of open-ended questions, such as, 'to what extent did the exercise affect your sense of agency?'.[17] Actors did not have access to the questions in advance of the exercise and were always asked to reflect on their process directly following the exercise's completion. Using open-ended questions meant that actors were encouraged to discover and reflect on what AD might look, sound and feel like to them and, significantly, how they responded to the simulated effects. The types of data collected included capturing film and audio of the actors performing the exercise, their responses to questions, and any written materials they created during the exercises (see for example: *Section 4.2.2*). All film and audio data were captured using a dedicated film camera, the data from which was then transferred to an encrypted external solid-state drive. Other forms of data obtained in the workshops include handwritten notes and observations captured by the researcher as director. These materials were used to inform the critical reflection element of the thesis.

Following the complete testing phase of all nine workshop exercises and editing of all the recorded film footage, critical reflections were conducted

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[16] Conversations that included a discussion of biomedical research were deliberately kept brief to avoid the potential of the actor performing a prescriptive representation of AD. Instead, they were told what a specific symptom was and how it could impact a person, although patient testimonies and ethnographic accounts were omitted.

[17] These can be found in the workshop guide (*Chapter 3* and *Appendix*).

to assess the extent to which the research project had fulfilled the central research questions. The critical reflections set out the original aims and objectives of each exercise, analyse the actors' actions and responses, critique the testing and the workshop guide, highlight the successes of the design and testing, and reflect on edits and amendments that were or could be made to the exercises. These critiques allowed for space to reflect on the invaluable insights the testing provided to refine the guide through self-reflection and facilitated observations by the actors. Ultimately, this allowed for greater understanding and development of the efficacy of the workshop guide, to more effectively support the creative investigation of AD.

2.4.6 Using play texts and improvisation

The research output of this project – the workshop guide – enables theatre makers to work with both existing play texts about dementia and to establish improvised scenarios through which actors can embody and explore symptoms of AD as part of wider R&D sessions.[18] While this remains the aim of the workshop guide, creating dual-functioning exercises for both text and improvisation, exposed different challenges when working with play texts, compared with improvised scenarios. As discussed in the literature review, the purpose of the guide is not to 'correct' existing play texts. This alone would not offer a substantive contribution to knowledge, as it remains focused on critiquing rather than evolving the process of how actors work to embody complex characters. In addition, where symptoms and/or illnesses are not explicitly stated in the text, theatre makers must consider the implications of superimposing conditions on a characterisation, save the risk of creating further stereotypes or distracting from the subtext of a play. Similar challenges were identified while developing *Exercises 1, Hearing distortions,* and *Exercise 4, Aphasia affecting speech* (*Method 1*) for this research project. Encouraging actors to embody language difficulties

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[18] Which could be utilised by a creative ensemble to generate new material for performance.

associated with aphasia by reading from a script proved to limit their ability to focus on the exercise’s aim over that of the text in hand.

While Exercises 1 and 4’s use of text arguably conflicted with the aim of the workshop guide, there are instances when working with an existing play text about dementia would arguably benefit from using this workshop guide for further character development. Ayub Khan-Din’s play *Notes on Falling Leaves* (2004). Khan-Din’s play portrays an elderly woman living with language difficulties, resulting from dementia. The dialogue is written as a broken, frenetic collection of thoughts and consequently presents a challenge for an actor to embody and characterise sensitively. Below is an example taken from Khan-Din’s play:

> **Woman,** I'd say I hate … this dress. Hate the colour. It looks like a sack. Trim the collar. Peter Pan collar … Gyave … Iyave … seven and counting. Seven for the seven days. Yes. Seven and counting seven. For senniven … finseev … sauurrvev … fannar … fanssrarven. (p.13)

Khan-Din uses dialogue to explore language difficulties related to dementia without directly referencing how to approach this. Arguably, *Exercises 2, 4, and 5* would provide the actor with a means to begin embodying the effects of aphasia through improvised scenarios, which could then be used to complement the actor’s work with the text and further characterisation.

Chapter 3 Workshop Guide

3.1 About this workshop guide

This guide is intended for use by a theatre director, providing a user-friendly explanation of a set of symptomatic effects of Alzheimer's disease (AD). It provides information on related biomedical research and methods for practically exploring the symptoms with actors. It is designed to be used at the beginning of a creative project, such as working with actors and a playwright, to generate ideas and material, or as a part of a larger rehearsal process when working on published plays.

This is not a 'how-to perform AD' guide and does not suggest what AD should or should not look, feel or sound like. The biomedical research used to shape the exercises is therefore not intended to be used prescriptively. Instead, the workshop guide should encourage actors to practically investigate and explore the embodied effects of AD. The results of one exercise used by one director will therefore likely be different to those of another director.

AD presents differently for every person who is diagnosed and lives with the disease. Two people can have similar symptoms but not necessarily experience them in the same way. As a result, the exercises in this workshop guide are meant to encourage new and enhanced methods of exploring the effects of AD, so a director, together with an actor(s), can shape a considered, embodied understanding of the condition.

When this workshop guide was created in 2024, it used the most currently available and accessible biomedical research to shape practical exercises. Just as AD is never a constant or permanent 'state', biomedical research continues to advance. When this guide no longer reflects important new or amended understandings of AD, it may need to be updated, to best reflect current trends both in science and culture. Importantly, as a theatre director using this guide, please use it as both a workshop aid and a resource to advance approaches to rehearsal and to find new ways to introduce research from different disciplines to your creative process.

3.2 What is Alzheimer’s disease?

Alzheimer’s disease (AD) is a neurodegenerative disease categorised under the umbrella term ‘dementia’. The exact cause of the disease has not yet been agreed by biomedical scientists, but prominent theories suggest that the excessive build-up of proteins (beta-amyloid and tau) in the brain, which cannot be cleared by the body’s immune system cause brain cell death by blocking and disrupting normal cell functions. It is a progressive disease that can include a diverse set of symptoms, meaning that no two people will likely experience the disease in the same way. Symptoms can include sensory issues, like the presence of visual, auditory and olfactory hallucinations, language and speech disturbances, movement and motor skill deterioration, and memory impairments.

3.3 Safety and support

AD can be a difficult, challenging and distressing disease. The people you work with may have experience of it. Bear this in mind when working with this subject, as some of the exercises contained within this guide may produce unpleasant effects, distress and upset. Together, you (as the director) and your actors may feel uncomfortable and challenged in situations where all the necessary information is not necessarily shared with actors before working with an exercise. Because the health and safety of you and your actors remains paramount, please stop if, at any point, someone identifies that they feel unsafe or uncomfortable beyond what is expected of the exercise.

Supporting actors and the director at the end of a workshop is critical. It is therefore encouraged that the director runs a relaxation exercise class at the end of the workshop, involving supportive discussion and breath work.

3.3.1 Resources

You may find the following resources useful if you or your actors require further support.

Alzheimer’s Society (dementia support)
Tele: 0333 150 3456
Website: www.alzheimers.org.uk/about-us/contact-us

Mind
Tele: 0208 215 2243
Website: www.mind.org.uk/about-us/contact-us

Samaritans
Tele: 116 123 (from any telephone to speak directly to a Samaritan)
Website: www.samaritans.org/how-we-can-help/contact-samaritan

3.4 Hearing and social interactions: Exercises 1 – 3

3.4.1 Exercise 1: Hearing distortions

Several links have been identified between AD and hearing deficits and complications. One such complication is hyperacusis, a condition that makes the perception of sound painful and overwhelming. Increasingly, auditory disturbances are being recognised and reported in association with a diagnosis of AD. They are known, however, largely unrecognised in common understandings of illness.

Biomedical examples

Bature et al (2018) found that auditory disturbances could help to identify people with undiagnosed AD, especially among female patients (p.12). Additionally, Taiwo (2022) reported that hyperacusis was present in 19% of their research patients with ‘frontal variant AD’ (p.1). This symptom was also associated with:

- Restlessness
- Agitation
- Poor mental function
- Prominent language disturbances

These effects cause distress and further complications to daily life for people with the condition. For example, in the online blog Dementia Diaries (2019),[19] Wendy Mitchell described how she was affected by hearing issues (later diagnosed as hyperacusis), as one of the first symptoms she experienced because of AD:

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[19] Dementia Diaries is an online blogging and sharing platform that encourages people living with AD and other forms of dementia to share their personal accounts of living with the disease. More information can be found at Dementia Diaries (2024).

I’m not going deaf, it’s just that certain tones of noise physically hurt my ears. Now audiologists are recognising it’s affecting many people with dementia and diagnosing them with hyperacusis.

For Mitchell, AD affected her ability to navigate an environment, as distinguishing sounds and sound amplification became increasingly difficult.

Aims and objectives

This exercise aims to replicate the experience of sounds heard by someone with hyperacusis. Two actors work together, to consider how one of them responds to changes in their auditory environment and note how this affects their relationship.

To simulate the effects of pain caused by hyperacusis, one actor must wear a set of headphones, which is playing audio that they cannot control. Where possible, it is useful to have an operator to oversee the audio, to ensure the director remains free to observe the exercise.

Preparation

Materials

- Two actors.
- An audio operator.
- One set of headphones (over- or in-ear design).

NB The headphones must have the functionality to connect to a computer via Bluetooth for this exercise to operate as intended – this avoids tripping hazards caused by trailing long cables.

- A computer or similar device (e.g. mobile phone) connected to the headphones, which can play a high-pitched tone and be independently volume controlled.
- A high-pitched sound (use for example: https://www.youtube.com/watch?v=AzOsKZ-9LTo).

Organising your actors

- Label one actor ‘**Actor A**’ and the other ‘**Actor B**’.
- Your **audio operator** is responsible for playing the audio and controlling the volume level.

Safety notice

The hyperacusis effect requires the actor to listen to high-pitch tones played through headphones. Be aware that excessive exposure to these sounds can cause hearing damage. Therefore, before beginning the exercise, test the sounds with **Actor A** to find an agreed point where the sound is uncomfortable, but not likely to cause damage. **Actor A** should remove the headphones immediately in any event that the sound becomes unbearable or unsafe.

Before you begin, test the sound with the **audio operator** and **Actor A**.

- Ensure **Actor A** is wearing the headphones and that the headphones are connected to the transmitting device (computer or mobile phone).
- Ensure the volume is set low before first testing.
- Incrementally raise the volume (e.g. 10% of maximum, 25% of maximum)
- For each increment, play the sound to **Actor A**, to determine:
    1. A comfortable and audible level.
    2. At what point the sound is uncomfortable but not unsafe.
- Make note of this volume, and **do not exceed this point.**

Once you have tested the equipment, introduce an improvisational scenario to the actors. For example:

- Friends gathered for a surprise party.
- A night out in a busy pub or bar.
- Speed dating.
- Sat in a taxi in heavy traffic.

Running the exercise

1. Decide on the improvisation you want to explore.
2. Time the exercise to last no longer than 5 minutes.
3. As the exercise progresses, periodically play (or cue the **audio operator** to play) varying intensities of the sound for short intervals, by gradually adjusting the volume levels.
4. Do not begin playing the sound at the loudest setting, as this is likely to startle **Actor A**. Begin at 25% of the maximum volume.
5. Play (or have the **audio operator** play) the sound in short bursts at random intervals rather than as one continuous noise.
6. At the end of the exercise, ask **Actor A** to remove the headphones before addressing the discussion questions.

Questions following the exercise

Questions for **Actor A**:

- When you heard the noise at different intensities, can you tell us what that felt like? How did your relationship to the sound change?
- Did you begin to associate any emotions or sensations to the sound you heard?
- How (if at all) did the sound affect your relationship with **Actor B** in the scene?

Questions for **Actor B**:

- Describe what you thought **Actor A** was experiencing.
- How did you perceive **Actor A's** behaviour towards you during the improvisation, while wearing the headphones?
- During the exercise, did you observe any significant shifts in **Actor A's** behaviour or attitude towards you? If so, explain what these were.

3.4.2 Exercise 2: Pure word deafness

Pure word deafness (PWD) is a complex condition that affects the ability to perceive spoken words as they are intended to be heard. Being able to understand and communicate with other people is an integral part of the human experience. PWD, a rare yet recognised symptom associated predominantly with early-onset AD (before the age of 65), can profoundly impact someone's ability to communicate and share with others. More specifically, PWD causes the person to hear random words as either sounds or noises in place of recognisable words.

Biomedical examples

PWD is often not considered a key diagnostic symptom of AD. In two recorded instances (Kim et al, 2011; Buciuc et al, 2021), patients with PWD caused by AD experienced difficulties with familiar tasks and social activities, while otherwise noticing no discernible differences to other aspects of their everyday lives. For example, in Kim et al (2011), a 59-year-old Korean woman visited clinicians, following complaints of difficulties in comprehending spoken word language for over two years. The patient was reported as hearing:

> spoken conversation sounding like a noise, and sometimes buzzing, which was worse in crowded public areas. [The patient was] unable to understand spoken questions when interviewed, but was able to comprehend and give correct answers by lip reading or responding to gestural cues (p.227).

The report also noted that, while she had 'deficiencies in verbal comprehension', she could still 'express her own thoughts, recall events, get directions, or use public transportation' (p.227). This type of scenario was also identified in a report by Buciuc et al (2021), where a 70-year-old Canadian woman 'reported 2-3 years of wordfinding difficulties, impaired verbal comprehension, and unimpaired hearing' (p.908).[20] Therefore, though these women did not present with the 'typical' AD symptoms, like memory problems, a diagnosis could have been made sooner, based on their inability to audibly recognise words and language.

Aims and objectives

This exercise explores the effects of PWD, by distorting and confusing language comprehension for **Actor B**, to make them feel socially distant from **Actor A**. It uses a secret code (designed to simulate PWD) to affect the actors' relationship and ability to understand one another. To achieve this, **Actor A** will use a secret code language and/or foreign language words.[21]

Preparation

Materials

- Two actors.
- **Either**: edited copies of the scripts you are using, with different edits for each actor (example below).

  The altered script for **Actor A** will have certain words replaced with coded words.

  The redacted script for **Actor B** needs to provide cue lines and their lines, to prevent them from pre-empting or rehearsing any potential responses to the exercise. All stage directions also need to be removed.

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[20] In this instance, unimpaired hearing refers to the patient's physical ear health, which was deemed unaffected. Despite this, the patient was confirmed as experiencing difficulty with spoken word communication indicating PWD.

[21] Foreign language word use in this exercise is intended to explore how language comprehension is compromised by PWD in AD. Biomedical research has shown instances of PWD as sounding like either garbled speech or a foreign language (Mendez & Rosenberg, 1991).

- **Or** a copy of the agreed code words for **Actor A** only to use in an improvisation (example below).

Organising your actors

- Label one actor ‘**Actor A**’ and the other ‘**Actor B**’.
- **Actor A** will use the code, exchanging random words for either nonsensical noises or foreign language words, while **Actor B** will be using the edited script (containing only their lines). This is to mitigate the possibility of **Actor B** preparing and rehearsing their responses.
- **Actor B** must not know about the code’s existence until the exercise is completed.
- **Actor A** should incorporate the code as though they were speaking normally.
- **Actor B** should experience a dissociative effect through not expecting or understanding what **Actor A** is communicating.

Using coded words

Use a code that changes both non-specific words and significant nouns. These can be built into a script or linked to an improvisation topic. For example, if the improvisation setting was **Actor A** (a taxi driver) driving **Actor B** somewhere, **Actor A’s** dialogue might be made up of the following coded words:

Non-specific words:

- You = Shhhppp
- That = Fffrrrr
- How = Buuuzzz
- The = Tttttttttt

Significant nouns:

- Fare = Prrriiinnnggg
- York (as a location that **Actor B** is trying to get to) = Zzziiippp

- Meter = Fffrrrssshhh
- Car = Rrrrrrr

The words you choose to code will likely differ, depending on the script or improvisational setting you use. These examples can be used as a starting point, before adding in examples of your own, as you begin to experiment more with the exercise.

Running the exercises

1. Provide **Actor A** with a copy of a script with the coded words added in, 5-10 minutes ahead of the exercise beginning, to give them enough time to memorise the code and the script.
2. If no script is being used, provide **Actor A** with a list of coded words that they can refer to during the exercise, 5 minutes ahead of the exercise beginning.
3. Where a script is being used, give **Actor B** their redacted script, just before they begin the scene.

It is not necessary to redact or change the cue words in **Actor B's** script (which should have been done for **Actor A's** script), as a certain level of expectation of what they will hear will add to the effectiveness of the code.

Developing the exercise further

As the actors become increasingly confident with the code, you could incorporate multiple actors into a scene and involve more people using the code while one person is left unaware until the end of the exercise.

Questions following the exercise

Questions for **Actor A**:

- How did you feel about speaking in a nonsensical way to **Actor B**?
- Can you recall any specific moments in your interaction with **Actor B**? Did they behave in a certain way towards you?

- Describe how this exercise affected your ability to communicate and understand one another?

Questions for **Actor B**:

- Describe how you initially felt when you heard sounds or noises in place of recognisable words?
- How did this exercise affect your perception of **Actor A** and their behaviour and intentions towards you?
- Can you describe any emotions or sensations you felt during the exercise?

Below is an example of edited scripts (which you can use in your own exercise) using Matthew Seager, *In Other Words* (2019, pp.17-18).

Actor A plays **Jane** and **Actor B** plays **Arthur**.

Altered script for Actor A

Jane: Have you checked the pot by the front door?

Arthur: Of course I have!

Jane: How about the drawer in your bedside table?

Arthur: They are *not* there!

Jane: Look, ***buzz!*** You had them last, I know you did!

Arthur: I can't have. You can't be sure. Let's just think, shall we?

Jane: I am sure! Can you just think? You went to the ***shhhh,*** you had lost them, again, so I lent you mine, (*looks at her watch*) and now we're late, and it's ***tttttttt***–

Arthur: Again? What do you mean again? How is that helping? That's not going to help is it?

Jane: Alright ok. Ok, ok. Will you just try to ***shhhh*** and think?

Arthur: Oh, try and think. Oh, see, I wasn't thinking, and now you've told me to think, we'll be able to find them much more easily.

Jane: **Fzzzzz**! **Bello**! Great work!

Arthur: Well, thank you very much, Jane because everything else is my fucking fault.

Jane: What do you mean, ***vrrreeettt, pppppring?*** I'm not talking about ***ttttttttt*** – I'm talking about this –

Arthur: You're not even going to entertain the possibility, for a second, that you could have lost the keys?

Jane: ***Rrrrrrrr!*** I'm not ***Bfffffff!*** You know it was you and you know that I am not being unreasonable!

When did you last have them?

Arthur: What?

Have what?

Jane: Ci sono vrrat?

Frrritt bbbbb!

Arthur: Yes… yes… I know that. Last time I had them I … Well, I got home and… they were… umm… they were…

Jane: *Shhhivvvv*?

Arthur: On the… they were on the…

Jane: *Frisshhh*?

Arthur: Table! They were on the kitchen table!

Jane: (Looking at the table) Lovely! Well they're ***tttttttt bbbbbb*** now are / they

Arthur: Well I'm just saying that they *were* on the / table

Jane: And now we've missed it.

Arthur: GOOD! I DIDN'T WANT TO FUCKING GO ANYWAY!

Redacted script for Actor B:

Jane: … by the front door?

Arthur: Of course I have!

Jane: … your bedside table?

Arthur: They are *not* there!

Jane: … I know you did!

Arthur: I can’t have. You can’t be sure. Let’s just think, shall we?

Jane: … we’re late, and it’s important –

Arthur: Again? What do you mean again? How is that helping? That’s not going to help is it?

Jane: … and think?

Arthur: Oh, try and think. Oh, see, I wasn’t thinking, and now you’ve told me to think, we’ll be able to find them much more easily.

Jane: … Great work!

Arthur: Well, thank you very much, Jane because everything else is my fucking fault.

Jane: … I’m talking about this –

Arthur: You’re not even going to entertain the possibility, for a second, that

Jane: … last have them?

Arthur: What?

Have what?

Jane: … keys!

Arthur: Yes … yes … I know that. Last time I had them I … Well, I got home and… they were… umm… they were….

Arthur: On the… they were on the…

Arthur: Table! They were on the kitchen table!

Jane: … not there now are / they

Arthur: Well I'm just saying that they *were* on the / table

Jane: ... we've missed it.

Arthur: GOOD! I DIDN'T WANT TO FUCKING GO ANYWAY!

3.4.3 Exercise 3: Auditory hallucinations

Auditory hallucinations can include imaginary stimuli, such as hearing voices and noises like explosions, bangs and music. Although these stimuli are the result of neurodegeneration in AD, auditory hallucinations present as part of the real world for the person experiencing them. As part of a broader set of symptoms, both visual and auditory hallucinations can take place simultaneously or separately.

Biomedical examples

Hallucinations are a recognised and prevalent symptom amongst communities of people with AD, and present in a median of 23% of cases (Bassiony and Lyketsos, 2003, p.390). Hallucinations are typically associated with increasing neurodegenerative decline and cause additional care requirements to manage challenging symptoms, such as behavioural and mood changes.

Auditory hallucinations that are the result of AD can significantly impact a person’s quality of life (Choi et al, 2021). This can include having adverse effects on their social life and mental health, as well as making a person feel distressed and confused. According to El Haj et al (2015), the phenomenological aspects of hallucinations can cause people to experience altered judgement and perception, leading to ‘confusion, inconsistency, anger and aggression’ (p.282).

Wendy Mitchell described the lived experience of auditory hallucinations, in her book, *What I Wish People Knew About Dementia* (2022):

> Dementia distorts your reality on a daily basis. That bang you heard outside that sent a chill all the way up your spine, it didn’t exist. A firecracker, the sound of a mad gunman on the loose, these are all our hallucinations that leave you pinned to your armchair, heart racing, too terrified to look outside. […] Yet one brave look out of the window, proves there is no one rampaging

> the street with a sawn-off shotgun. […] All these are tricks of a diseased brain, but ones that no one warns you about (pp.26-27).

In theatre performance, auditory hallucinations are an important aspect of AD that a director can use to explore how the unseen effects of the disease can affect behaviour, mood and attitudes towards other people.

Aims and objectives

This exercise explores how auditory hallucinations might impact feelings and behaviours in people with AD. Producing a real auditory hallucination is not practical or safe. Instead, it involves withholding certain information about the purpose of the exercise from certain actors, until the discussion at the end of the exercise. Overall, it aims to simulate an experience of how auditory hallucinations can affect behaviour, mood and emotions for the actors.

The exercise uses improvisation, where **Actor A** is guided by **Actor B** (using a mobile phone) to find them outside of the rehearsal space, much like in a game of hide and seek. **Actor B** must remain hidden throughout the exercise, guiding **Actor A** towards discovering **Actor C**. When **Actor A** and **Actor C** meet, both **Actor B** and **Actor C** must try to deliberately mislead **Actor A** into thinking that **Actor B** is present and can be seen. The director must not reveal the intentions of the exercise to **Actor A** until the end of the experiment.

Preparation

Materials

- Three actors.
- A set of Bluetooth headphones (over- or in-ear design).
- Two mobile phones.

Organising your actors

- Label each actor as ‘**Actor A**’, ‘**Actor B**’ or ‘**Actor C**’.

- Label the mobile phones ‘**Mobile A**’ and ‘**Mobile B**’.
- Assign Mobile A to Actor A.
- Assign Mobile B to Actor B.

Before beginning the exercise

- Check that both mobile phones can make and receive calls.
- Start a call between **Mobile A** and **Mobile B**.

For **Actor A**

- Pair the Bluetooth headphones with **Mobile A**.
- Give the headphones to **Actor A**, but not the mobile phone.
- Mute **Mobile A’s** call function so that only **Mobile B** can be heard – this is to encourage **Actor A** to focus only on **Actor B’s** voice and instructions.

For **Actor B**

- Give **Actor B** their **Mobile B** and ask them to leave the room to hide somewhere outside of the rehearsal space.

For **Actor C**

- Ask **Actor C** to leave the room and wait in a specific location.

Running the exercise

Time the exercise to last for no more than 10 minutes.

1. Ensure that **Actor B** knows the location of **Actor C**.
2. **Actor A** must remain unaware of what is taking place between **Actor B** and **Actor C**.
3. Once all actors are ready and in position, **Actor B** can begin speaking into **Mobile B**, to guide **Actor A** to the location of **Actor C**, under the assumption that **Actor A** needs to then locate **Actor B**.
4. **Actor B** needs to convince **Actor A** that they are searching for them and no one else.

5. When **Actor A** finds **Actor C** in place of **Actor B**, **Actor B** must try to convince **Actor A** that **Actor B** is present and can be seen by **Actor A**.
6. Towards the end of the exercise, let **Actor B** physically reveal themselves to the other actors.

Developing the exercise further

If attempting the exercise a second time, allow **Actor A** and **B** to speak and hear one another, and consider how this interaction may change the subsequent interaction with **Actor C.**

Additionally, you could assemble all the actors in a room and use a speaker to play a noise or sound, such as a pre-recorded voice or footsteps, which **Actor A** and **Actor B** deny they can hear.

Questions following the exercise

Questions for **Actor A**:

- What were your expectations of the exercise?
- Describe your initial reaction to following the instructions you heard to guide you to find that person.
- How did your attitude change towards **Actor B** (the voice you heard), when you met **Actor C** in place of **Actor B**?
- What was your interaction like with **Actor C**, when you met them in place of **Actor B**?
- What did it feel like to have **Actor B** continually try to reassure you that they were present in the same space as you?

Questions for **Actor B**:

- Can you describe any significant moments in your interaction with **Actor A**?
- When **Actor A** met **Actor C** instead of you, what did you do to try and convince **Actor A** that you were also present?

- Describe how **Actor A** responded to your attempts to convince them that you were present in the space with **Actor C** and could see them.

Questions for **Actor C**:

- Can you describe any feelings or emotions you observed in **Actor A's** behaviour, when they first approached you (expecting **Actor B**)?
- Given the limited information you were provided with at the beginning of the exercise, how did you feel when **Actor A** approached you?
- How did your relationship change as you learned more about the situation, simulated for the exercise?

3.5 Language perception: Exercises 4 – 6

3.5.1 Exercise 4: Aphasia affecting speech

Aphasia is a condition that causes someone to have difficulty with their speech and language. This can present in multiple forms, and can affect speech and reading, and word comprehension, recognition and delivery. It is common for people with dementia (inclusive of AD) to have at least a mild form of aphasia.

Biomedical examples

In a review of major subtypes of AD in patient case reports, Dickerson et al (2017) found that spoken word language, word pronunciation and recognition were commonly affected in people with AD. Aphasia can be identified in patients with AD, using a 'verbal fluency test', which asks a person to name as many words as possible from a specific category within a given time. For example, 'how many animals can you name that begin with the letter *A*?'.

An example of this symptom can be found in a case report, detailing a 65-year-old woman, with a two-year history of progressive 'difficulty finding words in conversation, increasing mispronunciation of words, and new difficulty spelling' (Dickerson et al, 2017, p.443). Relatedly, the woman also found difficulty in phrasing sentences, having developed a condition called Phonemic Paraphasia (PP). PP is described as 'when a sound substitution or rearrangement is made, but the stated word still resembles the intended word' (The Aphasia Community, 2024). For example:

> *A typical sentence*: Can you pass me my **hat**, it's cold outside.
>
> *A sentence using PP*: Can you pass me my **gnat**, it's **gold** outside.

Because, as Dickerson et al found, '25% of cases of AD do not conform to the stereotypical progression' (2017, p.446), more awareness is needed of the different presentations of AD in diagnostics, including language disturbances. Aphasia can cause challenges for engaging in social interactions. While over time a person may learn what a person with AD is trying to communicate, it is first important to consider how this condition initially impacts social interactions. This exercise therefore encourages an exploration of aphasia and PP and how they affect the ability to select and communicate specific words.

Aims and objectives

This exercise aims to explore compromised speech patterns for actors, similar to the effects of aphasia in AD. **Actor A** will read from their 'edited script', while **Actor B** is deliberately unaware of the purpose of the exercise, as they only have access to their lines and part of a cue line of their scene partner (see a similar format in **Exercise 2: Pure word deafness**). This ensures that **Actor B** does not have the opportunity to predict or rehearse their responses.

Preparation

Materials

- Two actors.
- Edited scripts **or** an improvisational scene (example included).

Organising your actors

- Label one actor '**Actor A**' and the other '**Actor B**'.

Running the exercise

In both the scripted and improvisational versions of the exercise, as the **director**, you need to observe how **Actor A's** delivery affects **Actor B's** ability to interact with them during the exercise. Note any shifts in their ability to comprehend one another, how their relationship is affected and develops, and ultimately to what extent the exercise affects the actors work together.

Time the exercise to last for no more than 10 minutes.

Using a script for PP and aphasia

1. **Actor A** will speak their lines as though they had aphasia. Give them a script which has been edited to contain PP words and only the cue line of their scene partner (see below). This will allow **Actor A** to focus on the PP.
2. **Actor B** should be given a redacted copy of the script, which does not include the PP text or any of the lines of **Actor A**, except the cue line (see below). **Actor B** must not be told, in advance, what will happen during the exercise.

Using the exercise in an improvisation

1. Choose an improvisation settings, which could include:

    - A person in a bank trying to withdraw money at the counter.
    - Two people in a supermarket, one is a sales assistant, and the other is trying to book a taxi.
    - Friends catching up after one has come back from a holiday.

2. Provide **Actor A** with a cue card containing words that are relevant to a specific situation, which they should avoid using in conversation (example included). For instance, the word *money* cannot be used while **Actor A** is trying to withdraw funds from the bank.

Examples of redacted words to remove from an improvised scene in a bank:

- Pounds
- Ten
- Money
- Change

Developing the improvisation

You could introduce specific tasks for actors to complete, to add to the complexity of the exercise. For example, in the bank scenario, **Actor A** needs to withdraw £350 in specific denominations.

Additionally, rather than using silence in place of ‘lost’ words, you could ask **Actor A** to enunciate using elongated sounds such as *ahhh, ghhh, nnnn…*

Questions following the exercise

Questions for **Actor A**:

- Did you find any specific elements or moments of this exercise challenging?
- How did the use of limited language make you feel, physically and emotionally?
- Did you feel that **Actor B’s** behaviour or attitude towards you shifted in any way, when you had difficulty with speaking?

Questions for **Actor B**:

- At what point did you first notice changes in your scene partner’s behaviour as they began speaking in unclear sentences?
- To what extent were you aware that you were exacerbating **Actor A’s** challenges with communication, and how did this change your approach to the situation?
- How did **Actor A’s** confusing dialogue make you feel, physically and emotionally?

Below is an example of an edited script (that you can use in your own exercise) using Craig Taylor, *One Million Tiny Plays about Britain* (Play no. 72, 2011, p.137).

Actor A plays **Pat** and **Actor B** plays **Viv**.

Edited PP and aphasia script for Actor A

Key:

- **…** = a missing word i.e., where aphasia has limited word access.
- *Italics* = a phonemic paraphasia, for example 'preening' has been substituted for *screening*.
- A dash (-) = a cue line.

(Two women stand at a lottery booth in a shopping precinct in Grimsby)

Viv: You finally got winning numbers for us?

Pat: I give you *price* numbers every time.

Viv: - not winning at all so far.

Pat: Should be … them for myself, then, shouldn't I?

Viv: - my pocket this time?

Pat: Listen to the peacock, *screening* before she's even won. It's only 3.2 this week, love.

Viv: - with a smile.

Pat: I wouldn't turn *clown* up 3.2, I'll tell you that much.

Viv: I'd spend all her inheritance.

Pat: How's the… been then? Is Jenny *thriving* back down tomorrow?

Viv: - what's always got the TV on.

Pat: Couple of students. She didn't really say that.

Viv: - who said that one.

Pat: Because I was... to say it *rounds* like the boyfriend the mouth on him.

Viv: - it's just a tax on the stupid.

Pat: Then he's calling you stupid to your face.

Viv: - I don't play every week.

Pat: I do. (pause) What a terrible thing to *pay*. I got close the other week, didn't I?

Viv: Which week?

Pat: The other… And I've just seen someone leave here with £35 today. That's not stupid.

Viv: - It's just the poor paying tax.

Pat: It's *cow* to become not poor.

Viv: - hardly speaks to me all weekend.

Pat: The *south*... *him*… *You want me to flick* your numbers, then?

Viv: I don't know, really. Think I'll have a lucky dip instead.

Edited script for Actor B:

(Two women stand at a lottery booth in a shopping precinct in Grimsby)

Viv: You finally got winning numbers for us?

Pat: - every time.

Viv: They're not winning at all so far.

Pat: - for myself then, shouldn't I?

Viv: How much'll be going into my pocket this time?

Pat: - it’s only 3.2 this week, love.

Viv: I’ll take it with a smile.

Pat: - I’ll tell you that much.

Viv: I’d spend all her inheritance.

Pat: - back down tomorrow?

Viv: Went today, didn’t she, because they say they can’t revise in a house what’s always got the TV on.

Pat: - She didn’t really say that.

Viv: To be fair, it was her boyfriend who said that one.

Pat: - the mouth on him.

Viv: He gives me a lift here and says the lottery, it’s just a tax on the stupid.

Pat: - calling you stupid to your face.

Viv: To be fair, I don’t play every week.

Pat: - I got close the other week, didn’t I?

Viv: Which week?

Pat: - £35 today. That’s not stupid.

Viv: He says it’s just the poor paying tax.

Pat: - become not-poor.

Viv: She likes his theories. She hardly speaks to me all weekend.

Pat: - You want me to pick your numbers, then?

Viv: I don’t know, really. Think I’ll have a lucky dip instead.

3.5.2 Exercise 5: Aphasia affecting language skills

Much like its effect on speech, aphasia (linked to AD) can affect a person’s language skills in different ways. Beyond difficulties with spoken words, this can include increasing challenges with language perception, including hearing, reading, writing and spelling.

Biomedical examples

Borges et al (2018) review of the case report of a 68-year-old man with AD found that he began showing signs of ‘hesitant speech’ (p.2). Further investigation revealed that the patient could not answer questions ‘because he could not understand what was being said’ (p.1). The patient, though able to recognise that someone was speaking to him, therefore could not comprehend what was said. They attributed these difficulties to receptive aphasia, meaning he had difficulty understanding what people were saying to him, while simultaneously having difficulty in communicating his needs.

Difficulties with written tasks are also linked to this type of aphasia. A study by Cathery et al (2005) revealed that AD can affect oral spelling, writing and reading skills, with decreasing oral spelling abilities associated with disease progression. Also cited in **Exercise 4: Aphasia affecting speech**, Dickerson et al (2017) documented a 65-year-old woman with a two-year history of increasing difficulty with word pronunciation and spelling (p.443). Dependent upon different factors, a person with AD may or may not be aware of their perceived difficulties with language affected by aphasia. This exercise looks specifically at the additional impact of AD on language skills, in relation to written and reading language comprehension.

Aims and objectives

This exercise is designed to explore two components of language comprehension affected by aphasia in AD. It encourages **Actor A** to experience receptive oral aphasia (having to listen to and copy out what they hear), while **Actor B** considers the impaired reading abilities related to aphasia in AD. To achieve this, two actors will work together to create an ‘aphasic script’.

- **Actor A** writes down a list of instructions containing words in two different languages – their primary language and a second language that is unfamiliar to both them and **Actor B**.
- This list of instructions is read aloud by the **director** or **an assistant**.
- Once this list is written, it is given to **Actor B**, who must attempt to carry out all steps on the list, as transcribed by **Actor A**, to the best of their abilities.

The use of two languages, including one that is known and the other unknown to all actors, is important for simulating the symptomatic effect through the ‘aphasic script’. This facilitates the receptive aphasia effect, by impacting the communication of the instructions by **Actor A** and the comprehension of the instructions by **Actor B**.

Preparation

Materials

- Two actors.
- A pen and paper (for **Actor B**).
- A translation tool (such as Google Translate).

Organising your actors

- Label one actor ‘**Actor A**’ and the other ‘**Actor B**’.

Generating the script

As the **director**, you will need to create and read a set of mixed language instructions to **Actor A**.

- First, decide which two languages you will use for the exercise (e.g. English and Welsh).

- Write out a list of 10 sequential instructions to perform a specific task (e.g. locating an item).
- Translate random words in the list to the secondary language.
- Have a copy of the modified instructions available to read the instructions aloud to **Actor A**.

The example below requires **Actor A** to write down your verbal instructions (read aloud only once), which are then given to **Actor B** to help direct them to leave the rehearsal room to locate a red jumper and return to give it to **Actor A**. The instructions given to **Actor A** are modified to include both English and Welsh words.

Original (English only) directions to find the red jumper.

1. Leave the room by the main exit.
2. Once you leave, turn left.
3. In front of you will be two green chairs.
4. Walk to these and turn left.
5. Go through the glass doors, be sure to press the button on the right first.
6. Walk past the bike store and turn right.
7. Head to the bus stop and pick up the red jumper.
8. Turn around and go back to the rehearsal room.
9. Make sure to give the red jumper to **Actor A**.

Modified (English and Welsh) directions to find the red jumper

Directions to find pêl siwmper.

1. Leave the room by the main exit.
2. Unwaith y byddwch yn gadael, trowch i’r chwith.
3. In front of you will be dwy gadair werdd.
4. Walk to these and turn chwith.
5. Go through the drysau gwydr, gofalwch eich bod yn pwoyso’r botwm ar y dde yn gyntaf.
6. Walk heibio’r storfa feiciau and turn right.
7. Head to the safle bws and pick up the goch siwmper.

8. Turn o gwmpas and mynd yn ôl I'r ystafell ymarfer.
9. Make sure to give the siwmper goch to **Actor A**.

Running the exercise

1. Read the modified script aloud to **Actor A**, ensuring they cannot see the script.
2. **Actor A** must write down what they hear, after only one reading of the instructions by the **director** or **assistant**.
3. Reassure **Actor A** that it does not matter if they cannot fully understand what is being said, and to make a best guess or write out what they hear phonetically.
4. Once **Actor A** has written out what they have heard, they must give their handwritten instructions to **Actor B**.
5. **Actor B** must read the instructions and attempt to carry out each of the steps.
6. If **Actor B** cannot complete the exercise after 5 minutes, bring them back into the rehearsal space and move on to the reflection stage of the exercise.

Developing the exercise further

Experiment with the level of difficulty. For instance, dependent upon the level of AD severity you want to explore, use more of the second language in your instructional list. Be mindful that the aphasic script should contain at least some comprehensible language, otherwise the task becomes impossible.

Questions following the exercise

Questions for **Actor A**:

- What did you feel when you were trying to copy out instructions that were unfamiliar to you?
- When you were writing out the instructions, how did you consider **Actor B** and how they might approach the material?

Questions for **Actor B**:

- How did you feel, physically and emotionally, when you first saw the instructions?
- How did this exercise make you feel towards the person who wrote out the instructions for you?
- What was the most challenging part of attempting to complete the task?
- What did you do to overcome any problems you faced in understanding the instructions?

3.5.3 Exercise 6: Singing in place of spoken word language

People with AD related aphasia can, over time, experience a complete loss of speech and language skills. While this can be distressing, research has shown that severely aphasic people can still communicate and share with others, either by singing or through song recognition.

Biomedical examples

Music plays an important role in the lives of people with AD. Biomedical research has documented that, when used in care, music can improve both memory and the fluency and content of speech (Basaglia-Pappas et al, 2013).

An example of this can be found in Baird and Thompson's (2019) case report of 'TC', a 77-year-old woman with AD. They observed that her aphasia was so severe that she produced only 'unintelligible sounds with an occasional word', as well as not having the capacity to understand or respond to questions (p.456). As her expressive language capability decreased, her husband increasingly introduced music and singing into their daily routine. This encouraged her to express herself and helped to 'modulate her mood or physical activity' (p.458). TC's ability to both recognise and continue to sing familiar songs, while being unable to speak or understand the speech of others, demonstrates that different parts of the brain can adapt even in challenging circumstances, and that such strategies can be found to mitigate the effects of AD.

Aims and objectives

This exercise will explore how the use of singing and song, in place of spoken word dialogue can shape actors' evocation and embodied understanding of AD, in relation to the challenges of aphasia.

It will examine what happens when actors sing to one another in place of using everyday speech when only recalling part of a song. To test this, **Actor**

A will memorise a portion of a song and must sing it, as their only means of communication with **Actor B** and **Actor C**.

The objective is that **Actor A** can only respond to **Actor B** and/or **Actor C** when the song they were told to remember matches that of their scene partner.

Love songs should be used for this exercise, because, as with TC and her husband, songs featuring the emotion of love provide an emotionally charged impact, which could encourage communication in a person with AD.

Severe aphasia can make social interactions very difficult. Observing the reactions and dynamics between actors in this exercise provides a practical method of exploring this aspect of AD and how people with the disease might overcome this challenge.

Preparation

Materials

- Three actors.
- A device that plays audio (such as a mobile phone).
- Two songs, similar in tone and style to one another (e.g. Nat King Cole's *When I Fall in Love* and *Unforgettable*).
- *Optional* set of headphones if required to hear the audio on the device (e.g. an MP3 player).

Organising your actors

- Label each actor as '**Actor A**', '**Actor B**' or '**Actor C**'.
- As the **director**, you will need to decide who hears what song. In the exercise below, **Actor A's** and **Actor B's** songs **match** (*When I Fall in Love*), and **Actor C's** song is **different** (*Unforgettable*).

Listening to the songs

The actors must listen to the songs before the exercise begins. Ensure that the actors do not discuss the pre-exercise task when they leave the room, and do not tell them that which song they have heard comparative to the other actors.

1. Ask **Actor B** and **Actor C** to leave the room.
2. Play **Actor A** 30 seconds of Nat King Cole's *When I Fall in Love*. Playing only 30-seconds of the song replicates difficulty with memory retrieval associated with aphasia in AD.
3. Once completed, ask **Actor A** to leave the room, and **Actor B** to come into the room.
4. Play **Actor B** the same song as **Actor A** (Nat King Cole's *When I Fall in Love*).
5. Once completed, ask **Actor B** to leave the room, and **Actor C** to come into the room.
6. Play **Actor C** a similar but different song to that of **Actor A** and **Actor B**. For this example, use Nat King Cole's *Unforgettable*.
7. Once all actors have heard their respective songs, bring everyone back into the room to begin the exercise.

Running the exercise

The exercise requires the actors to sing to one another, to try and match the song and, subsequently, to use the lyrics and music to establish connection and dialogue.

1. Ask **Actor A** to stand in one location, away from **Actor B** and **Actor C**.
2. In turn, ask **Actor B** and **Actor C** to approach **Actor A**, and instruct them to sing the song that they heard before the exercise began to **Actor A**.
3. If **Actor A** hears (and recognises) their corresponding song being sung by **Actor B** or **Actor C**, they should begin singing the matching song.

4. **Actor A** should aim to establish and maintain a dialogue with **Actor B**, once recognising that they share the same song, by continuing to sing together.

Developing the exercise further

To develop this further, one actor can sing to the other to encourage them to perform a certain set of actions or tasks. This might include, for example, asking **Actor B** singing to **Actor A**, to encourage them to dance together, move to a specific location or hold hands.

Questions following the exercise

Questions for **Actor A**:

- Can you describe any emotions or physical sensations you felt during the exercise?
- To what extent did the exercise alter your ability to recognise or relate to either **Actor B** or **Actor C**?
- To what extent did the exercise frame your perspective and emotional understanding of **Actor B** and **Actor C**?
- How was your own recollection of the song you originally heard affected by what you heard **Actor B** sing to you?

Questions for **Actor B**

- Can you describe any emotions or physical sensations you felt during the exercise?
- To what extent did you feel you had established a relationship with **Actor A** in the exercise?
- To what extent did the exercise frame your understanding of either **Actor A** or **Actor C**?

Questions for **Actor C**

- Can you describe any emotions or physical sensations you felt during the exercise?

- How did the exercise change your feelings towards either **Actor A** or **Actor B**?
- To what extent did the exercise frame your understanding of either **Actor A** or **Actor B**?
- Can you describe what you felt when you were unable to establish a shared dialogue with **Actor A** and **Actor B**?

3.6 Emotions and Memory: Exercises 7 – 9

3.6.1 Exercise 7: Emotions and cognitive empathy

While the most known side-effect of brain deterioration in AD is memory loss, people also experience difficulties with their emotions and the ability to empathise. At a cognitive level, AD can impede a person's ability to empathise with another, to such an extent that they struggle to build a complete mental picture of another person's situation and relate to their feelings.

Biomedical examples

AD attacks different parts of the brain, which causes various aspects of cognitive functioning to be at risk of deterioration. The implications of AD on cognitive empathy mean that a person can find it increasingly difficult to recognise or understand possible reasons for another person's behaviour or display of emotions, or to see the other person's perspective to better relate to their situation (Ávila-Villanueva et al, 2021, p.346). This can cause someone to feel increasingly distressed, depressed, and anxious, and lead them to socially withdraw. For example, Dickerson et al (2017) documented a 61-year-old man with AD who presented with cognitive and mood symptoms, including mild anxiety and depression, because of his condition (p.445). He was often distressed and unable to confidently comprehend the intentions of other people.

Changes to the brain caused by AD do not always equate to "decline". For example, research by Chow et al (2023), reported that AD can cause *changes* to cognitive empathy, as opposed to only a *decline* in this functionality. In these instances, where someone's emotional empathy increased in someone with AD, they became more concerned by others welfare (Chow et al, 2023, p.319). While increased emotional awareness is an important facet of this symptom of AD, this exercise looks specifically at the effects of AD and cognitive empathy *decline* (perspective taking) on a person living with the disease, and how an actor can advance their ability to sensitively portray the effects of emotional miscommunication and reception.

Aims and objectives

This exercise aims to make it increasingly difficult for **Actor A** to understand and relate to **Actor B's** behaviour. To achieve this, the exercise encourages **Actor A** to improvise a serious conversation (such as discussing a financial problem) with **Actor**

B, who begins to laugh uncontrollably. It aims is to make **Actor B's** response to **Actor A** appear inexplainable and confusing, and suggest a practical means of considering the effects of AD on cognitive empathy skills.

Laughter is a strong and clear emotion. It may confuse and anger **Actor A** as they try to explain something important and meaningful, while being met with laughter, especially if this is perceived as an attack and misread of the situation. Laughter is not the only emotion that can produce a confused reaction. It has, however, proven to be a highly usable emotion, to contrast to the more negative emotional tone of **Actor A's** situation, and to demonstrate the effects of discordant cognitive empathy.

Preparation

Materials

- Two actors.
- A set of headphones for **Actor B** (use in-ear Bluetooth headphones to better conceal the reason for their emotional reaction).
- A device to play audio, connected to the headphones via Bluetooth (which the **director** will control).
- A song or piece of music that is likely to cause **Actor B** to laugh when hearing it. For example:

Baby Elephant Walk: www.youtube.com/watch?v=9RPQKV6ijBY

The Gonk (music from “Seeing & Doing”):
www.youtube.com/watch?v=2RVM0uhjFlA

Titanic Bad Flute Cover: www.youtube.com/watch?v=BG6EtT-mReM

- You also need to select an improvisational scenario for the actors. For example:

Two housemates meeting to talk about **Actor A** being unable to pay rent for several months, getting into debt and facing eviction. **Actor A** approaches **Actor B** to try and resolve the situation.

A couple meeting to finalise arrangements of their divorce. **Actor A** approaches **Actor B** to arrange ownership of the family home, which they have a greater need for, to support their children.

A note on emotional responses

Humour is subjective and the suggestions above may not be right or cause the actor to laugh. The use of music and headphones in this respect is designed to induce a genuine emotional response for **Actor B**. Testing found it to be a reliable means of confusing **Actor A**, as **Actor B’s** laughter became uncontrollable, which further complicated **Actor A’s** ability to relate to their scene partner.

Below are two suggestions for how you might overcome this challenge, where this method may not work for the actors:

1. Speak to **Actor B** before you begin the scene and find out what makes them laugh, cry or even angry. The aim is for **Actor B** to reliably produce an emotional response that is incongruent with the mood of the conversation, and one which is likely to confuse their scene partner.
2. If **Actor B** does not find the suggested tracks amusing, remove the headphones and agree on a point at which **Actor B** begins to improvise spontaneous laughter, regardless of the situation. Use a subtle signal to indicate to **Actor B** when they should begin this (e.g.

when **Actor A** says a particular word or phrase that is likely to come up in conversation, such as ‘I feel’ or ‘I don’t know what to do’).

Organising your actors

- Label one actor ‘**Actor A**’ and the other ‘**Actor B**’.
- Instruct both actors on what the nature of the scene will be, using one of the examples above. In the scene, **Actor A** must share with **Actor B** that they are in financial difficulty and face eviction if they cannot get help. The stakes for **Actor A** need to be high enough so that **Actor B’s** reaction is assumed as lacking empathy and understanding. For **Actor A**, the scene is a high stakes situation, so they should try to share their situation and seek help.
- Discreetly give the headphones to **Actor B** (it may be better to do this outside of the rehearsal space). You can tell them that they will hear sound at a random point. Do not tell **Actor B** exactly what they will hear and when, as this will inhibit the potential for a spontaneous response to the sound, in the context of the situation. **Actor B** will need to keep one in-ear headphone in at all times, to hear the sound, and must leave the other ear free to ensure they can hear **Actor A**.
- The **director** should not start the audio until **Actor A** has had a chance to share the severity of their situation.

Running the exercise

1. Connect the headphones to a mobile phone via Bluetooth. The sound source (mobile phone) must be controlled by the **director**.
2. Allow the actors 3-4 minutes of dialogue before introducing the music heard by **Actor B**, and ensure the music volume is at a level where **Actor B** can still hear **Actor A**.
3. Assuming that **Actor B** is amused by the sound they hear, allow the scene to continue. Work up to a point until **Actor A** has demonstrated that they cannot relate to **Actor B’s** behaviour (approximately a further 5 minutes), before bringing the exercise to a close.

4. **Actor A’s** inability to relate to **Actor B’s** behaviour, and their subsequent responses, may vary. They may become irrational, irritated or angry at the situation, or even accuse **Actor B** of completely misunderstanding the point of the improvisation. Only end the exercise when you are confident that **Actor A** cannot demonstrate that they can empathise with **Actor B’s** behaviour.
5. By the end, both actors should recognise and correctly identify their scene partners’ emotions. The exercise should, however, prohibit **Actor A** from being able to rationally understand why **Actor B** is behaving in this way.

Developing the exercise further

Laughter is only one strategy for affecting the actors’ ability to cognitively empathise with one another. The exercise is founded on the idea of deliberately disrupting one person’s behaviour and emotional expectations of the other. When returning to this exercise, consider other emotions and who has access to all the information relevant to the exercise. Remember, you are not trying to get your actors to portray certain emotions, but rather to make it difficult for them to rationally comprehend the reasons for discordant displays of emotion.

Questions following the exercise

Questions for **Actor A**:

- Thinking back to the beginning of the exercise, to what extent did you expect that **Actor B’s** emotional behaviour would match your feelings?
- When **Actor B** began laughing during your improvisation, can describe how you felt about yourself, your situation and towards **Actor B** in this moment?
- To what extent were you able to relate to **Actor B’s** behaviour?

Questions for **Actor B**

- Given that you were aware before the exercise started that you would need to laugh when **Actor A** spoke, to what extent did your actions affect your ability to relate to **Actor A's** emotions?
- To what extent were you able to relate to **Actor A's** behaviour during and after you began laughing?

3.6.2 Exercise 8: Capgras syndrome

Delusional misidentification syndromes cause the brain to create untrue but very realistic scenarios, where something is misidentified as something else – like being convinced that you are surrounded by imposters who look exactly like people you know. A primary type of these syndromes, which affects people with AD, is known as Capgras syndrome.

Biomedical examples

Capgras syndrome, first identified and documented by Joseph Capgras, is recognised as one of four primary delusional misidentification syndromes (Harwood et al, 1999, p.415). Distinct from hallucinations, Capgras is a delusion that typically causes a person to completely believe something which is not true. These delusions severely impact a person's ability to both recognise others and feel safe within familiar environments.

People experiencing the syndrome may believe a loved one or family member has been replaced with an imposter, because they no longer associate the physical person with their perception of that person. Capgras is estimated to affect 10% of people with AD (Fischer et al, 2009, p.510). Baird and Thompson's (2019) case report of 'TC', a 77-year-old woman with AD, documented that she experienced Capgras delusions, resulting from complications with AD. For TC, these delusions came on suddenly and without warning, and meant that she could no longer identify her husband, instead seeing him as a stranger. The delusions were a significant challenge for the couple and caused her to undertake related behaviours. This included TC telling her husband to leave the family home, during which time he would leave the house and sit in the family car, until his wife recognised him again, which could take as long as three hours (p.456).

While Capgras syndrome typically affects recognition of familiar people, it can also affect the ability to identify and recognise personal belongings. In Fischer et al (2009), an 87-year-old woman, admitted to a local emergency care centre with cognitive and behavioural changes, had the 'distressing belief that a woman, whom she did not know or recognise, had been entering her apartment and stealing her belongings' (p.509). She complained that the mystery person was stealing expensive porcelain figures and replacing them with cheap, identical imitations.

Aims and objectives

The aim of this exercise is to create a scenario in which **Actor A** is unable to recognise **Actor B**. This is achieved by making **Actor B** behave in such a way as to cause **Actor A** to dissociate the behaviour they see with the person they know.

There are primarily two ways of achieving this in a workshop, both of which are detailed in this exercise guide:

1. **Switching voices** – requires three actors, one of whom must be concealed from view.
2. **Shifting attitudes** – requires two actors and distinct behavioural shifts from one of the actors.

Method 1: Switching voices

Preparation

Materials

- Three actors.
- A hiding spot for **Actor C**.
- Three copies of the same script (**Actor B** and **Actor C** will play the same part).
- A set of headphones.
- A clip-on microphone.
- A radio receiver (mobile phones will suffice if receivers are not available).
- A radio transmitter (mobile phones will suffice if transmitters are not available).

Organising your actors

- Label each actor as '**Actor A**', '**Actor B**' or '**Actor C**'.
- **Actor A**: Sara.
- **Actor B**: Richard (first half).
- **Actor C**: Richard (second half).

In preparation for the exercise:

- Give **Actor A** the headphones connected to a radio receiver and a copy of the play text.
- Ensure the radio transmitter and receiver are set to the same channels before running the scene.
- Ask **Actor C** to attach the microphone to their clothing, so that it can pick up their voice.
- Mute **Actor C's** microphone, until the switch occurs midway through the script.

- Once they have these items, ask **Actor A** to wait outside and to not enter until you collect them.

Running the exercise

Once **Actor A** has left the room, tell **Actor B** and **Actor C** the following:

1. **Actor B** and **Actor C** will play the same part – **Actor B** performing on stage, and **Actor C** concealed from view throughout the exercise.
2. The switch between **Actor B** and **Actor C** will happen at an agreed point, by marking the script in advance. Below is an example of a marked script.
3. When **Actor A** returns, they will read the script with **Actor B**.
4. Just ahead of the time where the switch between **Actor B** and **Actor C** takes place, **Actor C** unmutes their microphone, so that **Actor A** can hear them speaking over their headphones.
5. At the agreed point in the script, **Actor C** will take over the lines, and **Actor A** will hear **Actor C** speaking instead of **Actor B**.
6. **Actor B** will remain physically present and active throughout the rest of the scene by lip syncing the remainder of the script, to the best of their ability, alongside **Actor C**.
7. Ask **Actor A** to come back into the space, once all the instructions have been explained and understood by **Actor B** and **Actor C**, to commence the exercise.

Questions following Method 1: Switching voices

Questions for **Actor A**:

- How did you feel towards **Actor B** initially, and again when you heard a different voice?
- To what extent did you feel you were able to adapt to the situation once the change occurred?
- What physical sensations and emotions did you observe within yourself during this exercise?

Questions for **Actor B**:

- To what extent did you observe any noticeable shifts in **Actor A's** behaviour and attitude towards you, when they began hearing **Actor C's** voice?
- What physical sensations and emotions did you observe within yourself during this exercise?
- What was it like to continue the scene with **Actor A**, even though you were not the one speaking?

Questions for **Actor C:**

- Describe how you felt and what you noticed about the quality of the voices of **Actor A** and **Actor B** throughout the exercise?
- Were you able to discern any noticeable shifts in **Actor A's** voice and attitude towards you after the switch occurred?

Craig Taylor, *One Million Tiny Plays about Britain* (Play no. 19, 2011, p.38)

(A couple sits in a restaurant in west London)

Richard: I've got another tissue.

Sara: No thank you.

Richard: If you need it.

(He puts it down next to her knife)

Sara: I don't need it.

(She wipes her nose on the back of her hand)

(She dabs at her eyes with her finger)

So.

Richard: So. That's that, then.

Sara: I think I'm going to drink some more wine.

(He fills her glass)

Richard: Simon recommended this place.

Sara: It seems like a Simon type of place.

Richard: He says hello.

Sara: Does he?

Richard: He hopes this won't mean you'll disappear from his and Patricia's life.

Sara: Really? I'm sure that's what he said. This must be the greatest day of his year. He can finally have you to himself. He won't have to put up with my droning interruptions at dinner parties ever again.

Richard: He didn't say droning.

Sara: My 'interruptions' at dinner parties.

Richard: It was a joke and he didn't mean it. You know that. (pause)

Richard: He recommended the mussels.

Sara: I find they tend to drone.

(Pause)

NOTE: Switch from **Actor B** to **Actor C**. **Actor C** is hidden from sight, so that **Actor A** only hears their voice. **Actor B** lip syncs the remainder of the script alongside **Actor C**.

Richard: Well, I would just like to say that I would like to arrange a time to pick up my clothes and belongings.

Sara: Well, I would just like to say that I can have them sent to you.

Richard: I don't want to put you through that.

Sara: I can pack objects, Richard. All your clothes are out of the wardrobe anyway.

Richard: I don’t want you to.

Sara: Am I going to find something?

Richard: You’re not going to find anything.

Sara: Did you burn your receipts? Did you tear up all her letters?

Richard: There are no letters.

Sara: No, sorry, of course. I must be droning on.

Method 2: Shifting attitudes

Preparation

Materials

- Two actors.
- An improvisation setting (examples provided).

Organising your actors

- Label one actor ‘**Actor A**’ and the other ‘**Actor B**’.

Running the exercise

- First, decide on an improvisation setting involving two people. For example:
- Friends sharing drinks and getting ready to go out for the evening.
- A partner returning to the shared home after a busy day at work.
- Friends bumping into one another while out shopping.

Begin by asking **Actor A** to leave the room so you can brief **Actor B** on what should happen during the improvisation. **Actor B** will be the person who abruptly shifts behaviour and attitude. The instructions below are tailored to the first suggested improvisation scenario (friends getting ready to go out for drinks).

1. Decide on the initial kind of character you want **Actor B** to create. For example, they are excited to go out with **Actor A** for the evening, chatting about all the places they want to go.
2. Choose an emotion for **Actor B** to shift to that contradicts the initial characterisation (e.g. anger or suspicion). This must be distinct enough from the previously established atmosphere and mood that **Actor A** struggles to identify **Actor B** as the same person they were previously interacting with.

3. To help **Actor B** with the transition, before beginning the improvisation, give them the instruction to go out of the room to ‘get another drink’, when they plan the shift and re-enter the space in their new character. Bring **Actor A** back into the room to commence the improvisation.
4. **Actor B** should first facilitate a secure emotional environment that allows **Actor A** to feel comfortable, and attribute *expected* behaviours from their scene partner (excitement and anticipation). To achieve this, allow the actors time to settle into the improvisation, for around 5 minutes, before **Actor B** shifts their emotional frequency.
5. Let exercise run for another 5 minutes after the emotional shift of **Actor B**.

Developing the exercise further

Experiment with aspects of **Actor B’s** character change. For example, **Actor B** enters as though they were disgusted by **Actor A**. Alternatively, try adding in a theme, like making **Actor B** appear as though they were plotting to harm **Actor A**. Below are some examples of how **Actor B** can re-enter the scene introducing a distinct mindset and energy to their role:

- **Actor B** wants to hurt or harm **Actor A** subtly.
- **Actor B** enters as though **Actor A** were a violent criminal.
- **Actor B** returns and tries to steal something from **Actor A**.

Questions following Method 2: Shifting attitudes

Questions for **Actor A**:

- What was noticeable about **Actor B’s** behaviour, before and after the shift?
- How did you feel emotionally and physically before the shift in **Actor B’s** attitude and behaviour?
- To what extent did you feel secure in the space both prior to and after the shift?

Questions for **Actor B**:

- How did you feel emotionally and physically in the scene, both before and after your character change?
- To what extent did you observe any noticeable shifts in **Actor A's** behaviour and attitude towards you when you re-entered the scene?

3.6.3 Exercise 9: Memory

Human memory is not a static, linear store of knowledge, like pages in a book of fiction. It is an adaptive tool serving multiple functions in a person's daily life. AD can impact memory functions in several ways, not all of which can be compared to an irretrievable loss of information.

Biomedical examples

The most attributed symptoms of AD associated with memory are 'memory loss' and 'forgetfulness' (Alzheimer's Research UK, 2023, p.13). While it is true that AD does affect memory, the term 'memory loss', as a catch-all for people living with the disease, is misleading. Specifically, the word 'loss', used in conjunction with memory, suggests a store of information that is depleted by the effects of AD and becomes irretrievable. This oversimplifies a complex area of biomedical research into these symptoms and further restricts the view of how people are affected by AD (Sabat and Warren, 2023, p.1820).

Two key types of memory function are '**explicit**' and '**implicit**' memory.

- **Explicit memory** is the active, conscious recall of information (like remembering the name of the orange juice brand you prefer). This type of memory recall is more typically affected by AD.
- **Implicit memory** is the unconscious recall of information and is used when performing a learned skill (such as riding a bike, writing or cooking a favourite meal). This type of memory recall remains relatively well preserved in people with AD (Sabat and Warren, 2023, p.1823).

Importantly, the symptomatic effects of AD on memory do not mean a complete loss of memory recall. For example, regarding implicit memory, a person with AD may not recall having performed a certain action in the past, but their approach to performing it again often shows that they have some memory of having done it before (Sabat and Warren, 2023, pp.1821-1822). Additionally, difficulties with explicit memory recall do not always mean that correct information is unrecognisable. For example, one of Sabat's patients, 'Dr M', whose explicit memory was impaired by AD, explained that she experienced temporary difficulty in locating the word 'physician', rather than losing it (and its definition) from her lexicon (Sabat, 1991, p.174).

This exercise explores the effects of AD that cause a person to appear forgetful and miss specific steps in a routine. For example, in a video interview produced by the Social Care Institute for Excellence (2014), Barry, who had lived with dementia for over 15 years, found difficulty locating items in his kitchen that he needed to make a cup of tea:

I couldn't remember which cupboard was which, couldn't remember where the jam goes, where the sugar goes, where's the milk, where's that. And I was like this for a minute or two, [while thinking] this is my kitchen. Here I am and I can't make a cup of tea.

Beyond a simple 'loss' of memory, Barry's recall affected his ability to both locate items and recognise the sequence they should be used in.

Aims and objectives

This exercise aims to make the experience of completing a familiar activity difficult, by affecting the actor's ability to apply a correct sequence to the task. This is achieved by asking the actor to search for numbered cue cards that the director has placed around a space. Each card describes a step in the process of a task, the corresponding instruction for which the actor must carry out when they find them, regardless of whether (or more likely when) they must be done out of sequential order. The use of cue cards means that the actor is free to select them in any order, suggesting a level of control over the outcomes of the exercise.

Inevitably this will lead to confusion, frustration and, in most cases, an inability to successfully complete the task. The objective is to allow the actor to consider how AD disrupts a person's memory and ability to complete everyday jobs. Rather than deliberately performing an activity incorrectly, which gives them too much agency, actors can discover how the disordering of this multistep task can produce feelings and emotions like those expressed by people with AD.

Preparation

Materials

- One actor.
- A step-by-step guide for a task (example below).
- Numbered cue cards, totalling the number of steps in the task sequence, placed around the space.
- A relevant space to undertake the chosen exercise (a kitchen in the example below), rather than in the workshop space.

Preparing the space

- Before your actor enters the space, ensure you have set up all the necessary equipment needed (e.g. tea bags, milk, kettle, spoons).
- Randomly place the numbered cue cards around the space.
- Avoid placing the cards in any particular order, as this will encourage your actor to explore the space more fully and increase the likelihood of them selecting a random sequence.

The Tea Making List

This example requires 15 cue cards to be placed around a kitchen. The corresponding sequential steps are as follows:

1. First, gather your materials including tea bags, a teapot, a cup, two spoons, sugar and milk.
2. Now fill the kettle with cold water and press the switch on to boil it.
3. Place 2-3 tea bags in the teapot.
4. Allow time for the kettle to boil and wait for the click before pouring the water into the teapot.
5. Give your tea the time it needs to brew in the pot (2 minutes).

6. While you are waiting for the tea to brew, put your cup out ready and place the spoon in the cup ready to stir in milk and sugar.
7. Now that the tea has brewed, fill the cup with tea to three-quarters of the way up the side of the cup.
8. Now you can pour in the amount of milk you would like.
9. Be sure to stir the milk into the tea well so the two don't separate.
10. Using a separate teaspoon, measure out how much sugar you would like to add to your cup and stir this in well.
11. Now lift the cup and sip carefully to check the temperature is right for drinking.
12. If the tea is too hot you can gently blow on the top of the cup to cool it down before drinking.
13. Find a comfortable spot to sit and savour the flavour of the tea.
14. Once you have finished, place your cup in the sink, ready to be washed.
15. Wash your cup, spoons and the teapot once it is empty.

Running the exercise

Begin the exercise by instructing your actor on how the exercise will work.

1. They should stand in the space and be prepared to make a pot of tea.
2. To do this, the actor will need to look for numbered cue cards within the space and read out the number to the **director** when they find one.
3. The **director** will then provide the corresponding instruction, and the actor should complete that task before moving on to search for the next card.
4. No matter what number card the actor picks up first, they should try to complete the corresponding action, as best they can.
5. The chances of the actor selecting all 15 cards in the correct order are small but not impossible.
6. The actor may pick up several cards in the correct sequence. Do not stop them if this happens, as it is likely they will select a non-sequential number at some point during the exercise.

Give the actor **15 minutes** to work on this exercise, before you stop them and move onto the discussion.

Questions following the exercise

- Describe how you felt emotionally and physically when carrying out instructions in a different sequence to one you might have expected.
- To what extent did the exercise make you feel like you had control over the situation?
- Describe how you felt at the beginning of the exercise and how this may have changed by the end.

Chapter 4 Critical reflections

This chapter provides critical self-reflections of the research process undertaken to develop and refine the workshop guide. It will set out the process of, and analyse key moments from, the practical testing of the guide. The critical reflections will address each category and exercises therein, in order. The actors' reflections are of particular significance, as their approach to exercises was informed by an embodied understanding of AD symptoms. Their reflections will be used to unpick the opportunities and limitations of the guide and highlight where their unique insight contributed to new knowledge. Each reflection should be read alongside the video footage of the corresponding workshop exercise. Time stamps are provided for relevant moments of discussion, using the format hh:mm: ss (e.g. 01:02:58).

These critical reflections will assess the extent to which the biomedical research-informed workshop guide impacted the actors' ability to embody specific symptoms of AD. More specifically, it examines the guide's potential to dismantle stereotypical representations and understandings of dementia, to instead sensitively and empathetically explore the complex and unique reality of living with AD. Notably, the guide does not aim to support a 'how-to' enact someone with AD approach. Rather, the guide looks to illustrate the idea that, using biomedical research to shape the creative process can reflect the diverse nature of AD in an enhanced light. Ultimately, because AD symptoms are not strictly homogeneous, the final iteration of the workshop guide aims to provide directors (working together with the actors) with exercises that they can use to embody elements of AD and therefore *enhance* socio-cultural knowledge of those living with the disease, on stage.

4.1 The significance of embodied practice

This research uses the terms embodied, embodiment, embodied practice and knowledge, relative to the functions of the actor working with biomedical research in the form of workshop exercises throughout the thesis. Specifically, the exercises contained in the workshop guide encourage the actor to situate themselves in invented scenarios and/or circumstances and directly encourage the actor to create and embody a person living with specific symptoms of AD. This thesis leverages the understanding of embodied practice from Ben Spatz's book *What a body can do: technique as knowledge, practice as research* (2015). For Spatz, embodiment encompasses a holistic blend of mind and body, including 'thought, mind, brain, intellect, rationality, speech, and language … [and] everything that bodies can do.' (p.11). The actors work specifically on this research project aimed to capture, record and critically reflect on moments where their experiences of embodying a role with AD symptoms contributed to new knowledge and ways of empathetically understanding the impacts of dementia. To date, there has been scant investigation (and analysis of) the extent to which biomedical research facilitates the actors' ability to embody symptoms of AD. The actor's contribution to the collaboration between biomedicine and performance research, approached from an embodied knowledge perspective, can therefore not be underestimated. Where the actors involved in this research project have therefore made a substantive contribution to new knowledge will be discussed in detail throughout this chapter.

4.2 Hearing and social interactions: Exercises 1 – 3

4.2.1 Exercise 1: Hearing distortions

See video 'Exercise 1'

The aim of *Exercise 1* was to replicate the effects of hyperacusis, as might be experienced by someone with AD, where the actor experienced loud, distorted and painful sounds. Actors Reefeh Sumaili (Actor A) and Eva Ulrich Oltean (Actor B) tested the exercise. Reefeh (Actor A) wore headphones for the exercise to simulate the effect of hyperacusis. Both actors read a scene from Florian Zeller's, *The Father* (2015, pp.110-117). To simulate the effects of hyperacusis, Reefeh heard both Eva's amplified voice and high-pitched tones through a set of headphones. Once completed, both actors were asked a set of questions intended to help them reflect on their experiences of the exercise and how it affected their interactions with one another.

As will be discussed, the exercise demonstrated that the curated sounds negatively affected social interaction, comprehension and behaviour for both actors. A notable limitation of this exercise, which is discussed below, was the cold reading of *The Father,* which appeared to divide Reefeh's attention when trying to read and respond to his scene partner, Eva, alongside hearing the different sounds. This partially detracted from the central purpose of the exercise (to respond to atypical sounds) by causing Reefeh to slur his speech and become confused. Despite this limitation, the testing of this exercise demonstrated that this exercise could support actors' exploration of how hearing distortions related to AD can affect social relationships, behaviour and mood. Furthermore, the workshop exercise was refined post-exercise to simplify the use of technology to only include high-pitched tones to allow the actor to concentrate more on their scene partner's voice.

4.2.1.1 Actor reflections

Turning first to Actor B, Eva was aware of Reefeh's inability to focus during their dialogue. This awareness led Eva to change her approach to the scene. Importantly, Eva could not hear what Reefeh heard through the headphones, and was therefore not aware of how her voice was amplified and distorted. She explained:

> There was a sense that you were really trying to engage but [this required] a conscious effort. There were different things that were pulling your focus, whether it was the watch, whether it was something that you were hearing or not understanding – so it felt like your attention was very much divided. (00:04:05 – 00:04:29)

The 'watch' that Eva refers to is a stage direction in Zeller's text, where the character André (Reefeh), who has a form of dementia, wrongly believes that Pierre (Eva) has stolen his watch and attempts to get it back. From Eva's perspective, the unknown use of distorted sound through Reefeh's headphones impacted their relationship enough to question which element of the exercise was the intended distraction. Eva also changed her approach to the interaction to account for Reefeh's distracted nature. For example, during the experiment, Eva can be seen to speak increasingly louder and slower to compensate for Reefeh's reduced awareness (see: 00:00:28 – 00:03:40). When viewed from the director's perspective, Eva's attempt at compensating for Reefeh's apparent lack of engagement and awareness, illuminated the fact that when embodying aspects of dementia, unseen symptoms often negatively impact relationships with others and can exacerbate underlying symptoms. This not only reflects real-life challenges associated with dementia and communication, but it also demonstrates that a lack of awareness of circumstances further negatively impacts a person with the disease.[22]

Reefeh's response to the exercise revealed that he was unsure of exactly what he was experiencing. Further, he did not respond to increased volume and high-pitched tones as planned or anticipated (as too loud and painful). Reefeh explained that the manipulation of sound benefitted him, by forcing him to focus on the character objective (to grab the watch), particularly when the sounds made elements of the communication more challenging. This included moments where Eva's voice was amplified over the headphones, to the point that it became inaudible:

> In a way, it allowed me to stick to the objective more, while trying to respond at the same time. At points, she was getting muffled out so I could just focus on the watch, rather than responding. It shifted my focus a lot, definitely. (00:04:44 – 00:05:13)

Therefore, while he could not hear what was being said, he could use the watch as a prop to focus his attention and actions, rather than engaging in dialogue with his scene partner. Arguably, the physical watch (or the use of any prop) served to undermine the aims of the exercise, as Reefeh was able to use the distraction to move past his scene partner's inaudible dialogue *and* the disruptive and painful intent of the sounds.

Reflecting further on Reefeh's split focus, his enunciation and the overall clarity of his delivery were compromised, due to the use of headphones and the introduction of the distorted sound. His actions reveal useful conclusions about the use of headphone technology in this exercise. Reefeh's diction became more difficult to follow, as he slurred his words and reduced his speaking volume (see: 00:00:30 – 00:01:00), both at points

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[22] This is a common challenge associated with dementia as evidenced in carers guidelines provided by Dementia UK, see: https://www.dementiauk.org/information-and-support/living-with-dementia/tips-for-communication/

where there was shared dialogue and when speaking alone. Reefeh's speech became significantly compromised when delivering longer sections of solo dialogue. This was most pronounced at the beginning of the exercise, despite having the text to hand. This is significant, as the only sound played during these moments were the high-pitched tones in place of Eva's distorted voice. Therefore, while the effect of the sound was not exactly as anticipated, it did cause Reefeh to experience significant difficulty in concentrating and delivering dialogue.

Although the delivery of his speech was impacted throughout the exercise, in moments where Reefeh and Eva spoke in quick succession of one another, he became more clear, coherent and precise. This is partly explained by his reading from the script text, but does not account for him also hearing Eva's distorted voice and the high-pitched tones, either simultaneously or in quick succession. It is possible that, as the exercise went on, Reefeh became increasingly accustomed to the sound. Further, as mentioned above, he was able to mitigate the effects by focusing on his character's objective with the watch, which the script guided him to do. However, it is clear from the video footage that Reefeh's actions successfully reflect the findings of Taiwo (2022), where patients with hyperacusis in AD were shown to have prominent language disturbances.

4.2.1.2 Conclusions

The exercise is a useful methodology for actors to explore and consequently portray the effects of hyperacusis for people with AD. As found in biomedical research, the exercise disrupted social relationships and significantly affected speech patterns. For example, the high-pitched tones layered over Eva's distorted voice produced significantly more pronounced speech disturbances in Reefeh. Reefeh's response to the embodied challenges of hyperacusis (manifested using headphones) evidence that it is possible to not only recreate communication and language disturbances, further that these difficulties are tangible in terms of affecting behaviour. The limitations of the exercise predominantly relate to using the script and a prop, which gave reason for the actor to disassociate from the task. Overall, this exercise provided interesting and unique insights into the relationship between hearing differences, social relationships and interactions, both for people with AD and those who interact with them.

Future developments of this exercise could mitigate these limitations in two ways. First, both actors could have a full, unredacted script. While the redacted scripts were used so neither actor could predict the response of their scene partner, it also meant they could, as in Reefeh's case, continue with the 'task' without feeling the need to concentrate on the delivery of the scene. Second, having a script in hand meant the actors could still deliver the lines, do the tasks and complete the scene, with potentially less thought to the social cues of the interaction. Future exploration of the exercise could therefore make use of improvisational, non-scripted tasks, to better support the intended effects of the exercise. This would allow the actors to consider their embodied responses to a greater extent than compared to working with a text.

4.2.2 Exercise 2: Pure word deafness

See video 'Exercise 2: Pure word deafness'

The aim of *Exercise 2* was to replicate the effects of PWD. It was therefore important to observe how this affected the actors' ability to empathise and socially interact with one another and to assess its ability to facilitate an embodied approach to experiencing PWD. The exercise was based on the research findings of Kim et al (2011) and Buciuc et al (2021), where patients were reported as having difficulty with word and sentence formation.

Actors Claire Morley (Actor A) and Reefeh Sumaili (Actor B) were partnered to test two different approaches the effects of this symptom, both of which used a scene from Matthew Seager's play, *In Other Words* (2019, pp.17-19). *Method 1* (using headphones) required Reefeh to wear a set of headphones, through which random words were overlayed with either a buzzing or hissing sound. *Method 2* (without headphones) required Claire to speak in code (e.g. buzzing, hissing sounds), as well as to use German and French language words, both of which Claire spoke fluently. Reefeh spoke neither French or German and had no prior knowledge or warning that the code would be used in this exercise. These two methods were used to test different ways to simulate PWD – one using headphones to create a personally curated auditory experience for Actor B, the other affecting perception of language and hearing more openly and directly without technological interventions.

As will be discussed, both methods were very effective in demonstrating how the exercise can enhance the actor's awareness and empathetic responses to PWD. However, *Method 1* may require more expensive software (e.g. Pro Tools) and audio editing skills, to effectively manipulate and distort the audio.[23] *Method 2* was therefore devised to combat the potentially inaccessible nature of *Method 1*. *Method 1*, though restrictive due to the technological barriers, does provide useful different responses to simulating PWD and created a valuable environment for exploring the actors' approach to embodying this symptom.

4.2.2.1 Actor reflections – Method 1: Using headphones

In *Method 1*, Reefeh's reaction to hearing sound through headphones prompted significant amounts of apathy and introversion. Whereas, in *Exercise 1,* he reported that the sound allowed him to focus on the task, the effect encouraged him to withdraw considerably more in *Exercise 2*. In particular, he reported struggling to focus on what Claire said and found that this technique impacted his ability to understand the situation. He explained:

> It's quite disorientating because I'm trying to focus but the sound is just coming in and out, and her [Claire's] voice is changing – so it's hard to react to it. […] It takes me back a bit, to try and figure out

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[23] Pro Tools software is a Digital Audio Workstation (DAW), a professional audio editing suite run through a computer which allows a user to manipulate sound in significant ways beyond what a person speaking alone could do.

> what's going on and then responding to what I'm hearing.
> (00:02:47 – 00:03:15)

Observations of the scene highlighted that Reefeh became increasingly withdrawn from the conversation with Claire, and his body language suggested he was impassive, distracted and disorientated by the effects of the sound. As with the previous exercise, there was also evidence to suggest that wearing the headphones and hearing distorted sound affected Reefeh's speech delivery. In the video footage (00:01:38 – 00:02:05), he became quieter and passive towards Claire's advances, as he found the audio technique distracting. While Reefeh was still noticeably distracted, his externalised emotional responses were subtle and hard to detect.

While a potential barrier to the efficacy of *Exercise 1*, headphones facilitated important reflections on less visible, more interoceptive emotional responses to this symptom. The headphones provided a sense of privacy and concealment for Reefeh, and acted as a semi-permeable barrier to the auditory reality he was experiencing from Claire, who could not directly empathise with his experience of the distorted audible environment (Hosokawa, 1984, p.177). The environment the headphones created for Reefeh therefore provided an intervention that could not easily be replicated through voice alone. The physical nature of the headphones meant that the listener could be excluded from hearing any noises of the outside environment. As with PWD in AD, headphones can replicate the isolation an individual experiences from certain, particularly social, spaces. Concurrently, the headphones simulated a synthetised, altered and internalised 'space' for the wearer to inhabit, from which others were excluded. The same is true for PWD, as elements of social interaction are reduced, altered or even removed, as others cannot find ways to communicate with or relate to the person experiencing the symptoms.

As the person interacting with Reefeh directly, Claire described his behaviour as 'distant' and, importantly, added that she could see how mentally taxing the technique was for him:

> I could kind of tell that he was engaged but it was like, yeah slightly more distant… distant than maybe the other times […] In that, like, I don't know, I think even when we were doing the scene when it was confusing and there were lots of different words it was quite like […] there was more energy and we were more snappy with each other. Whereas with that [version] it was like [watching] the cogs turn a bit more. I still felt like he was going to reply, I still felt like my scene partner was with me, but he was more in his head that time from what I could see. (00:03:26 – 00:04:13)

Therefore, while the emotional and embodied responses to the exercise were less high-energy and animated (which will be explored in *Method 2*), Reefeh's behaviour and limited interactions with Claire emphasise how unseen symptoms of AD, like PWD, can manifest as invisible barriers between those living with the disease and those who care for them.

4.2.2.2 Actor reflections – Method 2: Without headphones

In *Method 2*, Claire and Reefeh memorised scripted dialogue, to explore the effects of PWD, by Claire using coded language. Claire's substitution of English language words with either non-sensical sounds or German language words was far more pronounced and exaggerated than *Method 1*. Initially, due to the lack of warning, Reefeh, was unsure of what Claire was saying, and appeared vulnerable and uncomfortable during the scene. His confusion, which increasingly turned into frustration, was exacerbated by Claire's direct, confident and forceful delivery of the code. The exercise encouraged confrontation between the actors, with Reefeh describing feelings of embarrassment and distress:

> Sort of feeling a bit embarrassed, sort of like facially, I feel a bit flustered, I think, because I'm trying to make sense of what is going on. […] Am I the one that's not making sense here? (00:08:28 – 00:08:41)

Reefeh's reflection that he felt 'flustered' are supported by his increasingly animated and exasperated actions and responses (see: 00:06:25 –

00:06:45), as he was further aggravated by Claire's confident and unexplained use of the code. For instance, he began to break away from the script and shout, 'what, what's that?', as he tried, unsuccessfully, to establish common linguistic understanding. It is clear from the video that the exercise did profoundly affect his understanding of and ability to communicate with Claire. Importantly, the exercise was also difficult and uncomfortable for Claire. In particular, she described the interaction with Reefeh as 'disarming' and 'exposing':

> It was quite disarming for me as well, because I wasn't getting back the same lines or the same cues as I was getting before [in *Method 1*]. So then I was like do I push ahead with my next line, if he's not understanding? And how, how far do I repeat what I want, even though it's gibberish?
>
> [*Addressed to Reefeh*] It was more exposing, wasn't it? Because it was like, it was like when you are on stage and you forget your line, and you look at the other actor and think […] you've got to help me here. (00:09:17 – 00:09:49)

Claire's response highlights the critical implications of PWD for people who care for or live with people affected by the disease. The interaction was not only difficult, but also revealed a sense of hopelessness and frustration at the inability to be understood.

4.2.2.3 Conclusions

While *Method 2* used an exaggerated form of PWD, it provided a valuable model for exploring the challenges of this symptom empathetically. It allowed both actors to comprehend the effects of PWD in AD, as the code prominently exposed the symptomatic experience of PWD for everyone involved. This method therefore demonstrated the impact of a breakdown of semantic knowledge (knowledge of words and language processing), which can place significant emotional strain on both the person with AD and those who verbally interact with them.

Collectively, both methods encouraged a fruitful exploration of PWD, with different results that reflect the non-homogenous nature and severity of the symptom. Though PWD is a rare condition, especially within groups living with AD, its effects are palpable for the person experiencing it, even if they cannot be seen or heard by others. Additionally, the Alzheimer's Society says that language problems can 'be frustrating, confusing and upsetting for the person, and for carers, especially if the person is experiencing a different reality to yours' (2024). Both methods allow actors to explore these feelings as either someone with AD or someone interacting with that person.

Method 1 (using headphones) provided the actor with a unique experience revealing the subtle and more internalised responses to the demands of AD on cognition and semantic knowledge found in the earlier stages of AD (seen in Kim et al, 2011). *Method 2* both rendered the invisible perception of PWD visible, by exposing what someone might hear, as well as the more high-energy negative responses from both actors exploring the symptom and their scene partner. *Exercise 2* therefore provides methods to manifest two quite different, but equally valid, emotional and embodied responses to PWD.

4.2.3 Exercise 3: Auditory hallucinations

See video 'Exercise 3'

Important note on the video footage: unfortunately, during the testing process, part of the video file was corrupted, meaning that no audio was obtained, and the footage appears in slow-motion. This could not be retroactively rectified. While video footage of the actors attempting the exercise was corrupted, their responses to the questions remain unaffected, and I have used these to analyse the exercise.

The aim of *Exercise 3* was to create a method of exploring the effects of auditory hallucinations caused by AD, to consider how this symptom impacted social and environmental perceptions in people with the disease. Claire Morley (Actor A), Anne Rose James (Actor B), and Jacob Ward (Actor

C) tested this exercise. In the first iteration of the plan, Claire was required to wear a set of headphones, linked to a radio receiving live messages from Anna, who instructed Claire to come to her location. Throughout the exercise, neither actor could see the other and Claire could not be heard by Anna. Anna's objective was to convince Claire that she was lost in another part of the building and that she could not get out of said location without Claire's help. Jacob (Actor C) was deliberately placed at the location that Anna would lead Claire to. His objective was to subvert Claire's supposition that she was going to find Anna at the end of the instructions. He was also there to comfort and support Claire during the exercise, partly to mitigate the possibility of the exercise causing undue distress for Claire when she could not find Anna.

The key to this exercise's success was the withholding of critical information from Claire and Jacob. Jacob was not aware that Claire was listening to Anna through the headphones or that she would eventually finish her search at his location. Concurrently, Claire did not know that Jacob was intentionally placed at the final location or that he was part of the exercise. Crucially, this meant that, for Jacob, Claire's behaviour and actions appeared genuine and the result of a real need for support. As will be discussed, this exercise revealed how actors could experience similar feelings of conviction and belief that come with auditory hallucinations (from Choi et al, 2021 and Mitchell 2022). *Exercise 3* presented in *Chapter 3* is a refined version, which reflects the outcomes of the testing and provides a more usable method that best facilitates the exploration on auditory hallucinations.

4.2.3.1 Actor reflections

Despite knowing each other well, Claire did not associate Anna's voice with the one she heard through the headphones, and her initial emotional response to the exercise was one of threat, rather than acknowledging Anna's voice with familiarity:

> The first thing I actually heard was 'I'm stuck', and to start with I didn't relate [the voice] to Anna, I was like, something is happening in my head and this is my head speaking to me. That was like my initial thought this is my head, [However], as soon as I got an instruction which was get up and come

> and find me […] I was really worried for her [Anna]. The voice was really calm and measured, but quite ominous as well, and I was like, shit, I needed to go and actually help this person. (00:10:06 – 00:10:48)

Though she was told that this experiment was an exercise, Claire believed that Anna (the voice she heard over the radio) had actually become lost and needed support to get out a of room. Both the exercise to find her friend, and Anna's 'calm', 'measured' and 'ominous' tone of voice contributed to Claire's visible fear and concern as she undertook the task. Further, while Anna could talk to Claire, Claire was unable to respond to Anna. This meant she could not actively provide support or ask questions of Anna.

The sense of threat Claire felt was later directed at Jacob, when she unexpectedly met him instead of Anna in the foyer. Claire explained:

> I went down to where I thought [Anna] was, [...] and I saw Jacob sitting there and I thought, this isn't who I am meant to be looking for. He is where she [Anna] has mentioned but he doesn't match who I was expecting to find. I knew that you [Anna] couldn't hear me but when you were saying 'Can you not see me?' I [wanted] to talk to you and then obviously that just made me look like I was just speaking to myself. And when Jacob asked if he [could] help me, I honestly thought he was just this stranger. (00:11:00 – 00:11:40)

Claire's reaction to seeing Jacob in place of Anna exacerbated her fearful and cautious response to the situation. Anna knowingly gave directions that led Claire to Jacob and, despite not being in the same space, continued to convinced Claire that she could in fact see her. Anna's protestations that Claire should be able to see her then impacted Claire's interactions with Jacob. For Claire, his presence was confusing and suspicious, because Anna was still missing, though Anna maintained that she could see Claire. When asked to elaborate on her feelings towards Jacob, Claire noted:

> I know that you are Jacob, but you're not the person I'm needing and so you're not helpful to me. You're just sitting there, and

> you're... and I don't want you to come with me. I don't know it was so weird.
>
> [...]
>
> I think it was just that he wasn't who I wanted and therefore was an obstruction to me finding the voice. I don't know, I just didn't see him as a friend, I saw him, not as a foe, but like, as someone to be suspicious of. I don't even know that you were acting that suspiciously, you were just sitting down. I was just suspicious of him being in that place. (00:11:40 – 00:12:40)

Several significant conclusions can be drawn from Claire's reaction to the exercise here. First, she described Jacob as an obstruction and second, she refers to Anna as 'the voice', while pointing towards her head. Both these actions suggest that Claire became increasingly dismissive and mistrusting of others, from undertaking this exercise. The methods used in this exercise made Claire feel disorientated, which can be seen in her exasperated body language (see: 00:12:00 – 00:12:30).

Importantly, Claire's reaction to the exercise mirrors several key findings on the effects of hallucinations in AD. Hallucinations can cause a person to become distressed, confrontational and even suspicious of others (El Haj et al, 2020, p.456). Claire behaved in all three ways during her exchange with Jacob, as he was viewed as unhelpful (to the points of being a hindrance) and untrustworthy. Further, hallucinations cause a person to experience untrue thoughts, visions and sounds. Claire's feelings towards Jacob were directly impacted by Anna, as the voice that only she could hear, when Anna brought a sense of confusion and concern in Claire to a crescendo, as she repeatedly asked, 'can you not see me?'. Consequently, Jacob became a hindrance to the unknowingly impossible task of Claire having to find Anna, and Claire's suspicion only intensified towards him as her emotional responses to not seeing Anna grew.

Jacob's reaction to Claire was also significant, as a reflection of the impact auditory hallucinations can have on how carers interact with a person experiencing them, particularly on how to provide support during distressing experiences. For example, although Jacob described not initially being aware of his exact involvement in the exercise (as intended), when he was invited to engage (in the exercise), he highlighted:

> As it went on [Claire’s wandering in the area] and she came round and looked at me, I kept having a half impulse to talk to her, but it wasn’t a full impulse so I didn’t follow it. It wasn’t a ‘I need to jump in here’, and then, I suppose alongside that it seemed reasonably normal behaviour, as in she might have lost something, or she was looking for something, or she was on the phone to somebody. But then when, I don’t know at what point it was, I think it was when you [Claire] jumped and you went Oh! And I was like, okay that’s not a normal behaviour that I would expect from someone on a phone. So then my concern started kicking in that something more was going on. (00:16:48 – 00:17:34)

It is noteworthy that Jacob described Claire’s behaviour as being ‘abnormal’, despite his lack of awareness as to the exercise's aims. While not aware of having any particular function in the exercise, he deemed Claire’s behaviour to be strange enough that he should intervene. The impact of Claire’s behaviour on Jacob meant that he also felt unsure about how to respond to or support her. When invited to engage, he described how his approach was swiftly dismissed by Claire:

> You invited me to interact, which is when I simply said what I was feeling all along, which was, *do you want a hand, do you want help?* And it was so dismissed, or like she [Claire] was so, [...] there was something in the way so she didn’t really hear me and she wasn’t giving me her full attention, that then put me in an uneasy spot where I wasn’t invited to help, I wasn’t included in what was going on, yet I felt concern for what was going on in the situation, so I couldn’t just leave it. (00:17:35 – 00:18:08)

Jacob’s indecisiveness mirrors the challenges faced by caregivers trying to support people with AD. Experiences documented in biomedical research found that carers were unsure how to respond to hallucinations, as interventions with people hallucinating because of AD were not always welcome and could lead to confrontation (Renouf et al, 2018, p.1331). As a useful provocation earlier during the discussions, Jacob also asked Claire whether, at the time, she had thought about explaining how who she could hear. Responding to this, Claire said:

> I didn't ever think of saying *there's this voice in my head,* [although] I think I did say that I'm trying to find someone, that someone is stuck. I don't think it crossed my mind to elaborate on that because I was just focused on this person that I thought was in trouble. (00:12:50 – 00:13:16)

The need to find Anna, and her fearful responses to her confusion over not finding her, focused Claire's attention on that task and impacted any cogent social interaction with Jacob that would deviate from her goal.

4.2.3.2 Conclusions

This exercise was successful in providing a practical way to explore the effects of auditory hallucinations on people with AD, and those who interact with them. Notably, the exercise helps to demonstrate that auditory hallucinations are not just someone hearing sounds or voices that no one else can hear, but that they can also be so convincing that they change how someone perceives the intentions and actions of others. Additionally, it provided an opportunity to replicate the experience of caregivers during interactions with people who experience these hallucinations. This was notable with Jacob's response to Claire's behaviour and his observation and belief that her actions were 'abnormal'. While elements of the exercise were taxing on the actors, the significance of their findings served to shape more empathetic and considered approaches to staging this symptom.

4.3 Language perception: exercises 4 – 6

4.3.1 Exercise 4: Aphasia affecting speech

See video 'Exercise 4'

Exercise 4 is the first exercise that explores symptoms under the 'Spoken and written language perception' category. It examined how aphasia affects speech in people with AD. Tested by Claire Morley (Actor A) and Patricia Jones (Actor B), the experiment aimed to consider how the use of biomedical research data on aphasia (which impacts speech) might facilitate an embodied understanding of language difficulties associated with AD. The actors conducted two approaches to the same exercise. *Method 1* relied on an edited script to both deliberately affect written language by removing random words and further substituting others for similar but incorrect words (e.g. cat/pat) to explore phonemic paraphasia. *Method 2* employed a similar approach to the use of code in *Exercise 2*, by restricting Patricia from using certain words that were essential to the improvised conversation. As will be discussed, *Method 1* (scripted) demonstrated, as in *Exercise 1*, that having actors read from a script distracted the actors' ability to more fully embody and explore the exercise aims. Having discussed this with the actors during the workshop session, a second approach was developed, that being *Method 2.* As will be discussed, *Method 2* (rooted in improvisation) was therefore developed to facilitate the practical investigation of aphasia by embodying elements of aphasia expressed through limited language skills. This method proved more effective in achieving the exercise aims and was therefore included in the workshop guide, alongside *Method 1*.

4.3.1.1 Actor reflections – Method 1: Scripted

In *Method 1*, Claire and Patricia both worked with a complete script, but Claire's lines were edited to suggest an aphasic way of speaking. The results demonstrated that a scripted interaction did not provide enough context for how aphasia can affect speech, language and social relationships beyond a theoretical understanding. A central flaw in this design that was highlighted through testing was that, while Claire was delivering the intentionally confusing aphasic dialogue, Patricia's access to a complete, *unedited* script meant that she could read ahead and mentally correct what she heard from Claire. This was observed by both Claire and Patricia. Patricia explained: 'I was aware that what Claire said was different to what I had on the page – but I just went passed it'. (00:03:00 – 00:03:12). Additionally, Claire flagged that the edited script, without greater context of how aphasia works, distracted her from fully considering the aims of the exercise:

> It took me a while to process that the words I was saying didn't always make grammatical sense. In terms of my scene partner, I wasn't sure what I was going to be given back, or when to start my next line, because I wasn't ever sure that I'd been given the response that I was trying to get. […] So I was just like, okay, Patricia's stopped speaking now, I'll do my next line now. So I think I wasn't listening very much, I was just waiting for the space to move on with my bit. (00:03:20 - 00:04:16)

Claire and Patricia's identification of the flaws in the exercise design (both in terms of the lack of contextualisation of aphasia and the unintended benefit of Patricia's unedited script), resulted in Patricia disregarding Claire's errors and further meant that Clare did not actively listen to what was being said.

The central issue with the idea for this exercise was that script reading demanded a level of focus which inhibited the actors from then physically and mentally engaging with an embodied knowledge of the condition. The purpose of the exercise is to encourage the actor to situate themselves in an environment that demands an intuitive, embodied response, which reading from a script inhibited.

Further discussion with the actors revealed why working in this way hampered their ability to consider the physical and embodied consequences intended by the exercise. Clare described:

> I did feel that lack of connection with the scene partner (Patricia), probably because of the lack of eye contact, […] partly because we were reading. And so I did feel like I was trying to communicate

> with someone that wasn't necessarily trying to connect back to me. (00:07:12 – 00:07:38)

For Clare, reading the script while trying to decipher the meaning and subtext of her lines, prevented her ability to emotionally connect with Patricia and form a basis of mutual understanding. Patricia added to this point by reflecting on the functions and purpose of the actor in creating performance. As a result, she helped to generate a new method of exploring the exercise. Building on Claire's observations, she added:

> It's really connected to [Clare's point]. Because I can see what we have both done. I feel really ungenerous as a performer, because I turned my back on you, and I didn't give you that [connection]. Because what we know as actors is, it's about giving, it's about responding, it's about listening and I didn't do that. But it was a deliberate choice not to do that, because I was going for something different from there [indicating the script]. So what it's left me feeling is ungenerous and blocking. (00:08:25 – 00:08:55).

Patricia's insights on the functions of the actor both working with scripts and scene partners were particularly revealing in the context of the exercise's original purpose. In scenes involving more than one actor, scene partners must be able to establish a connection with one another to be able to observe and sense their own behaviour as much as their fellow actor. As noted by both actors, removing the script would allow them both to focus on each other's behaviour as well as observe how they felt individually when responding to the exercise. In this instance, both Patricia's and Clare's critical reflections of the script-based exercise helped to develop the improvisation, taking on roles which required them to actively seek a connection and understanding of one another's intentions as well as their own.

4.3.1.2 Actor reflections – Method 2: Improvisational

Following the discussion of *Method 1,* and having identified the challenges of working with text, *Method 2* sought to address these by encouraging the actors to explore aphasia through an improvisational scenario, in which

Patricia had to fulfil a specific need while working with a restrictive vocabulary. The improvisation setting sought to create real-world circumstances in which specific words were essential to complete the exchange. The setting was a bank, with an assistant behind the desk (Claire) and a customer (Patricia). Patricia's task was to withdraw £100 in cash from the bank, without using the words *cash, money, one, hundred,* or *take*.

To further recreate real-world circumstances, a time-sensitive factor was used in which Patricia had to complete the task. This was used to incite a further embodied sense of stress associated with aphasia. In *Method 1,* the actors were predominantly focused on the text and therefore discouraged from spontaneous, instinctive responses which they might otherwise have made in an unplanned situation. In *The Viewpoints Book* (Bogart and Landau, 2005), Anne Bogart encourages directors to limit the amount of time actors work on a specific exercise, to create 'exquisite pressure' and 'increase spontaneity' (p.128). This technique was used, based on the hypothesis that this would give the actors less time to prepare and rehearse what they assumed aphasia linked to AD would present like. While Patricia faced a time pressure, concurrently, Claire was instructed to provide support for Patricia's language needs during their interaction so as to not make the exercise feel impossible.

Reflecting on their interaction during the scene, and Patricia's language deficit, Claire observed:

> There were moments where Tricia used a way of getting around what she wanted to ask for – like with the ten situation. But I think I was just trying to not block that and just try and find a way of understanding what it was she was asking for so that we could move forward with the transaction. (00:17:40 – 00:18:10)

The 'ten situation' highlighted by Claire, referred to Patricia working to resolve the imposed language limitations – she asked to withdraw £100 in ten lots of ten. Significantly, this illustrated how an actor in the process of embodying a person with aphasia is forced to adapt to their limitations and is further evidenced in biomedical research. For example, Sabat (1991, p.170-

174) found that, while language loss can make social interactions more difficult, people with AD and semantic memory difficulties often find ways to mitigate forgetting specific words.[24] Examples include word priming and prompting, where a person with AD knows what they want to say and will use substitute words, while being unable to find the right word. This discovery would not have otherwise been possible without attempting the exercise through improvised means and further demonstrates the actor's ability to contribute to the research project through practice.

Method 2 was noteworthy in both demonstrating the findings of biomedical research more effectively and providing the actors with a method for better empathising with the effects of aphasia on speech. In addition, as with the findings of Sabat (1991), Patricia's attempts at speech were more hesitant and considered, which was not evident in *Method 1.* This is best captured in Claire's response to the exercise:

> I think if this was a real scenario, I would have felt some sympathy to her because I could see that, her brain wasn't necessarily firing on all cylinders, I know that's a bit crass, and I think I would have been more patient because I don't want her to leave the situation not having achieved her goal of what she came in for. (00:18:25 – 00:19:00)

Compared with *Method 1,* Claire was more actively engaged in the scene, as evidenced by her feelings of patience towards and sympathy for Patricia during the scenario. Further, Patricia remarked that Claire was 'patient, kind and took time… I felt no sense of urgency or rush, or pressure' (00:17:10 – 00:17:30). While Claire's instructions to support Patricia were a useful addition to the exercise design, the final version also provides opportunities for the director to work with different scenarios and varying degrees of

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[24] Semantic memory includes remembering details of language and words.

pressure (utilising Bogart's method), to explore a range of lived, and often difficult, experiences of these interactions.

4.3.1.3 Conclusions

Having explored both a scripted and improvised approach to *Exercise 4*, the findings illustrated two fundamental points. *Method 1* (scripted) highlighted the actors' tendency to ignore their scene partner and focus predominantly on reading the text. Having identified these limitations, the actors provided the means to generate an alternative and more effective means of embodying the effects of aphasia. In *Method 2* (using improvisation), removing the scripts and further limiting aspects of language encouraged the actors to physically and mentally observe one another more attentively, and, as a result, explore the aims of the exercise in greater detail. They more clearly noticed the difficulties and requirements of such interactions, and, in Patricia's case, how to potentially mitigate the effects of aphasia as evidenced in biomedical research from Sabat (1991). The actor's discussion led directly to a more practical, embodied knowledge of how aphasia impacts both the person with AD and those around them.

Considering the future of this research, *Method 1,* could be adapted to explore how together actors and directors work on texts that directly explore the impact of aphasic speech (e.g., Khan-Din, 2004) by first beginning their investigation with *Method 2,* which better facilitates the exploration of how AD forces adaptative techniques in conversation over merely a loss of capacity.

4.4 Exercise 5: Aphasia affecting language skills

See video 'Exercise 5'

Important note on the video footage: There was a moment within the recording where I unintentionally met Patricia outside of the rehearsal room, though the interaction was limited. At this moment, Patricia stopped speaking aloud to herself. When alone again, Patricia returned to reading the instructions aloud. As a result, the limited interaction was deemed negligible to the exercise outcome.

Exercise 5 was designed to facilitate an actor's exploration of aphasia that affects written and spoken word language comprehension. During testing, Claire Morley (Actor A) and Patricia Jones (Actor B) explored different aspects of the same symptom in the same exercise. Claire created an 'aphasic script' of instructions to find a red jumper. Claire heard the instructions, read by the director's assistant (Dr Sophie Vohra), which she had to write down for Patricia to follow. Only delivered once by the director's assistant, the instructions were given as a mixture of English and Welsh words, which Claire was required to interpret and write down. Patricia then had to follow the instructions, to the best of her ability, to simulate the effects of aphasia on reading comprehension. The aphasic script contained a mixture of two languages – one that both actors were fluent in, English, and the other, Welsh, completely unfamiliar with. While it would have been acceptable to use English and an invented language, the second language needed to have a form of linguistic and semantic structure, even if it was unknown to the listener or reader. This method was used because the biomedical research indicated that certain people with aphasia (in AD), while expressing difficulty in reading and writing, are aware of their problem. Therefore, despite not being able to accurately pronounce or spell, they continue to recognise words as a form of language rather than purely nonsensical sounds (Dickerson et al, 2017, p.443).

An example of the script read aloud for Claire can be found below (*Figure 2* and accompanying transcription) and in the workshop guide. It detailed nine steps to direct Patricia to the nearest bus stop to collect a red jumper and return to the rehearsal room with this.[25] The instructions transcribed by Claire were only read once by the director's assistant, who

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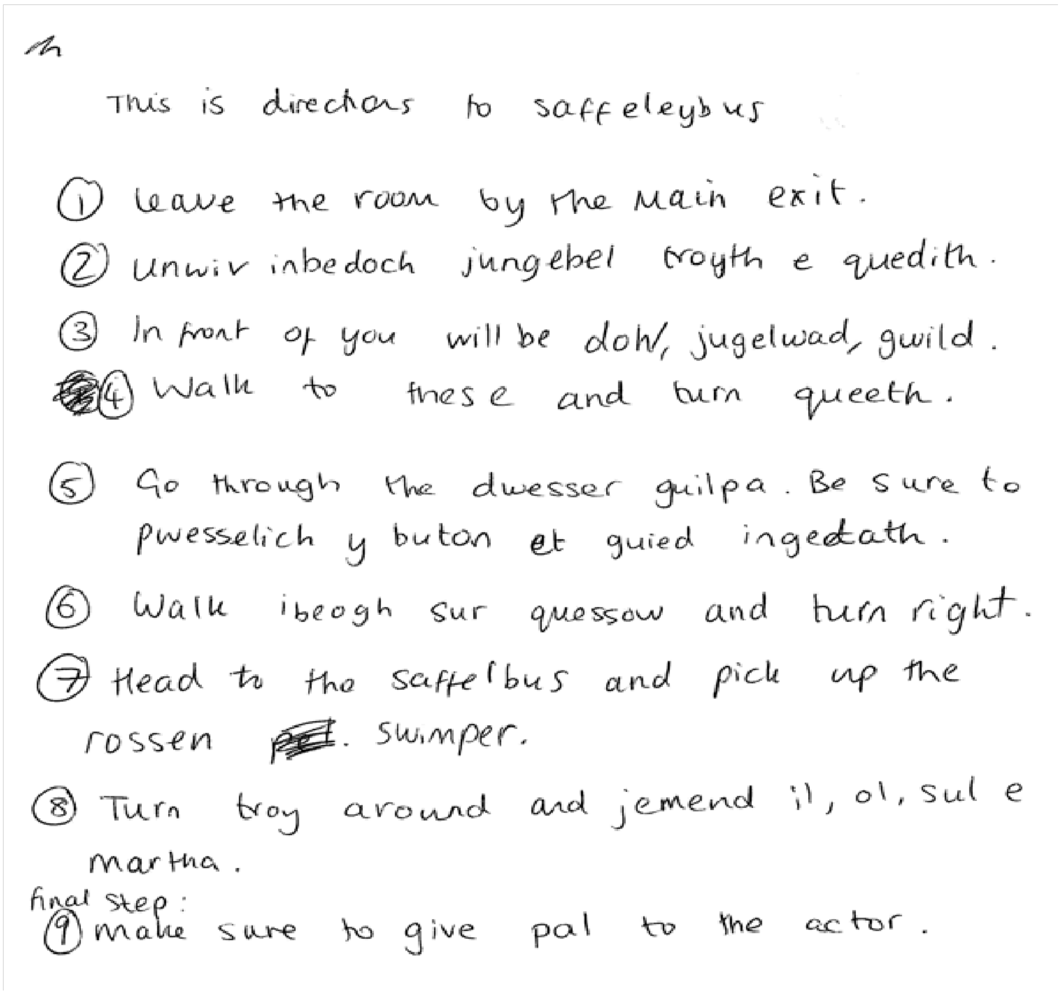
[25] The original method required a red ball, which was changed in the testing and final guide, as this item would have stood out too much in the space outside of the rehearsal room (a University of York building).

was told to not repeat any section. This was done to create a challenging situation, comparable with the lived experience of receptive aphasia when trying to follow a detailed conversation. In addition, the words in English or Welsh were assigned randomly, but moved progressively towards more Welsh than English by the end of the list. The randomisation technique was used because no biomedical literature has been found detailing whether *specific* word recall or recognition is affected. Once Claire had completed the script, it was given to Patricia to attempt to decipher and complete the corresponding actions. Patricia and Claire were deliberately not told what the second language would be. This was done to mitigate the potential for actors to become overly focused on correctly guessing the language over engaging with the aims of the exercise.



This is directions to saffeleybus

① leave the room by the Main exit.
② unwiv inbedoch jungebel troyth e quedith.
③ In front of you will be doh/, jugelwad, gwild.
④ Walk to these and turn queeth.
⑤ Go through the dwesser guilpa. Be sure to pwesselich y buton et guied ingedath.
⑥ Walk ibeogh sur quessow and turn right.
⑦ Head to the saffelbus and pick up the rossen [illegible]. swimper.
⑧ Turn troy around and jemend il, ol, sul e martha.
final step:
⑨ make sure to give pal to the actor.

Figure 2: Aphasic script written by Claire Morley.

Transcription of the Aphasic script written by Claire Morley.

This is directions to saffeleybus

1. leave the room by the main exit.
2. unwiv inbedoch jungebel troyth e quedith.
3. In front of you will be dow, jugelwad, gwild.
4. Walk to these and turn queeth.
5. Go through the dwesser guilpa. Be sure to Pwesselich y buton et guied ingedath.
6. Walk ibeogh sur quessow and turn right
7. Head to the saffelbus and pick up the rossen [~~pel~~]. swimper.
8. Turn troy around and jemend il, ol, su e martha.

final step:

9. Make sure to give pal to the actor.[26]

Patricia was given a video camera to carry with her, to visually document her attempt to complete the exercise. Other methods of video recording were also considered, including a body camera or the director or research assistant following her from a distance and recording.[27] These were not chosen as there was no access to a body camera and, more importantly, following Patricia may have heightened her sense of self-awareness, distracted her or provided her with another person she could seek guidance from to try and interpret the script. To mitigate the possibility of “performing for the camera”, Patricia was asked to merely hold the device and otherwise not be concerned with where it was focused (00:06:25 – 00:12:15). This method was extremely valuable, as the perspective view from the camera footage suggests that Patricia was less concerned with the idea of an ‘audience’, while it captured her verbally reflecting on the exercise, including reading the instructions aloud and making comments as to their possible

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[26] See *Section 3.5.2* (pp.83-84) for the original instructions that were delivered.

[27] A body camera was considered as it can be attached either to clothing or a special harness worn by a person, leaving their hands free.

meaning. While Patricia was unsuccessful in following all the steps, she did correctly decipher that the task was to locate a red item and give it to Claire.

4.4.1.1 Actor reflections

During the discussion at the end of the exercise, Claire explained her experience of forming the aphasic script:

> Yeah, it was difficult, because I was just copying [the words] phonetically really and then thinking oh my goodness, Tricia's not going to understand this because I don't understand this. And then there were other bits that I copied and I was like, okay there's maybe a way of interpreting this. But yeah, I just felt bad that someone was going to have to follow my poor instructions. (00:12:30 – 00:13:03)

Paired with the aphasic script (*Figure 2*), Claire's reflection demonstrates how important her (re)interpretation skills were for relaying what she heard to form the text. The script contains multiple errors and sections where she appears to have attempted to correct instructions, having assumed she misinterpreted or misheard specific words. Additionally, the reflection highlights that she was concerned about the associated implications for Patricia then trying to read the aphasic script. Claire further described her emotional response and noted:

> I think it was the fact that you could only say it once and not repeat […] I couldn't suddenly go *can you stop or slow down?* So, I was conscious that there might have been some words that I… I tried not to miss any words, but there were some words where they're probably not actually the sound that came out of your mouth, but it's what I wrote down […] so yeah it got a little bit frustrating on those moments. (00:13:29 – 00:13:58)

Importantly, this response demonstrates that the exercise, shaped using Borges et al, 2018, could facilitate similar feelings of 'agitation' in actors to those experienced by patients in the biomedical research (p.1). As Claire noted, this was exacerbated by the restriction on repeating instructions, which made the experience significantly more challenging. In addition, Claire added that, due to the pressure of the activity, she had to then invent what she heard to try to provide Patricia with as clear a script as possible. This had a knock-on effect for Patricia's ability to engage with the script and decipher its meaning.

When asked to describe how she physically felt when first beginning the exercise, Patricia explained:

> I looked at the first instruction, this is not how I felt this is what I did, but I think that's because I didn't know what to feel if that makes sense. So, I looked at the first instruction and that was fine and then after that I tried to do it step by step and realised that wasn't going to work, so I looked at the whole thing and realised that wasn't going to work either.
>
> [...] Then I guessed it might be Welsh, but thought well that's not really any help. [...] So how did I feel? I felt ... I felt lost, completely lost and I retraced my steps over and over again and I started to feel very aware that I wasn't going to reach a conclusion with it and I was making guesses. [...] But it was just guessing, really snatching at things and guessing. (00:14:30 – 00:16:40)

Patricia's detailed account of her experience reveals how the shift in recognisable language completely altered her ability to navigate her environment and approach to the task. Additionally, while Patricia did correctly identify the language, she deemed this to be an unimportant aspect for completing the task, as she still could not understand the instructions. Very quickly, this meant that Patricia felt lost. These feelings of being lost proved more significant when questioned further on the impact of the exercise. For Patricia, the act of working with unfamiliar language impacted her ability to recognise and relate to her familiar environment:

> It started off, there was a series really, it started off where I felt quite safe. And funny you should say that because when I was sat outside while you were this setting up, and I was sat in those

> comfy chairs looking down the corridor, and I was thinking, I've been in this building loads […], you know over the years that I have lived in York. This is a really familiar building to me. That was my thought before we started the exercise. And then I when I came out, I was like, I pressed [the door release button] and went to the right and still felt quite safe and then I started to feel, not unsafe, but definitely a bit discombobulated, because I was just going up and down, up and down [the corridor]. [...] I suppose it was just the sense of not moving. The sense of trying, really, really hard to get to somewhere but genuinely, genuinely not understanding where I needed to be. (00:20:00 – 00:21:06)

Patricia's sense of 'not moving' purposefully, compounded by her genuine inability to understand the instructions, affected her mood and orientation within the physical space. When encouraged to delve into these feelings further, Patricia shared a personal experience of an event that made her feel similarly to the events of this exercise. She added:

> Somewhere in my rational mind, I knew I was in a safe space. It started to piss me off a little bit, that I couldn't work out where I was. However, the other day I was in Aldi, and it was an Aldi I'd never been to before and I was looking for some coffee, and I could not find that coffee for love nor money. It was packed, it was Saturday and I'm very conscious that Covid is around again and I got really, I was really surprised because I got really quite anxious, I was cross, I was getting sweaty, and at one point, and I was only in Aldi looking for coffee in Whitney Bay, and at one point I literally went, *I don't know what to do* […] So broadening it out [the experience] being in a similar experience of not knowing and not being able to find what I was looking for, in a real situation was much more anxiety inducing than being here. Because the space here was familiar. (00:23:17 – 00:24:35)

The impact of the unfamiliar language on Patricia's memory functions and recall of her environment was twofold. First, the lack of understanding caused her to become emotionally irritable and agitated like her real-world experience. Second, the inability to decipher the instructions impacted her feelings and attitude towards her environment, which make feel ‘discombobulated’ and unsure as she tried to navigate the task. This correlated with research published by Resende et al (2020), which found that spatial navigation and language skill deterioration were linked, and could therefore worsen performance in navigating spatial environments in people with AD (p.1359).

4.4.1.2 Conclusions

Testing of *Exercise 5* proved it to be particularly successful in supporting the actors to embody symptomatic aspects of aphasia, and to explore the dual impact on writing and comprehension. It achieved this by simulating frustrating and disorientating symptoms that affect their ability to recognise and perceive both spoken and written language. The most prominent finding, for both Claire and Patricia in testing, was the exercise’s ability to reduce their sense of agency and comfortability. For Claire, this reduced her agency to seek clarification to aid understanding, and for Patricia, it manifested as a difficulty with spatial orientation and object location. The exercise therefore increased feelings of a diminished sense of control, further prompting emotions such as frustration and vulnerability. Alongside the exercise’s success in facilitating the primary aims of exploring aphasia on language perception, it also simulated the further dimension of how compromised linguistic ability could then impact spatial orientation in people with AD.

4.4.2 Exercise 6: Singing in place of spoken word language

See video ‘Exercise 6’

Exercise 6 aimed to test how actors would respond to one another when spoken word language was compromised, and communication was restricted to singing (in Baird and Thompson, 2019). Its objective was to examine the effects of singing to one another, to express emotion and establish feelings of belonging and identity where spoken word conversation was otherwise redundant. This exercise was tested by Anna Rose James (Actor A), Claire Morley (Actor B) and Lucy Simpson (Actor C). The exercise required Anna and Claire, individually, to memorise the same song, and Lucy to memorise a similar but different song. Anna (Actor A) and Claire (Actor B) had to memorise *When I Fall in Love* by Nat King Cole. Anna was permitted to hear a 30-second portion of the song only, while Claire listened to the whole song. This was done so that Anna could only recall part of the song, to impact her ability to easily differentiate between the two, when the exercise started, and to replicate the challenges imposed by severe aphasia. Lucy (Actor C) listened to the entirety of Nat King Cole's *Unforgettable*.

While the emotional theme of 'love' in both songs is similar, each has distinct aspects, like the key, rhythm and time signature, and tone. Nat King Cole was chosen based on an assumed wider familiarity with his work and a more consistent theme of 'love' in his songs. Love songs were used to correlated with Baird and Thompson's (2019) report on patient, 'TC' (who was unable to speak at all due to severe aphasia and AD). She was most responsive and receptive to her husband when he sang or played love songs to her. This allowed them to communicate and connect again (as 'TC' had extreme difficulty correctly identifying her husband) and combat the isolation her husband experienced.

To test the effects of both harmonious and discordant emotional responses, this exercise examined what happens when the songs matched (for Anna and Claire) and when they did not (for Lucy and Anna). As will be discussed, Lucy's desire to connect with Anna was rebuffed, as the songs did not match, and demonstrated the effects of emotional dissonance on inhibiting connections, where a common language cannot be established. Overall, the results of the testing show that *Exercise 5* can replicate similar circumstances to those documented by Baird and Thompson (2019), by demonstrating the emotional significance of song, and its ability to impact emotional recognition and connection between actors.

4.4.2.1 Actor reflections – Part 1: Anna and Lucy

Following the first part of the exercise, Anna and Lucy reflected on their exchange, where their songs did not match. Anna explained how this interaction with Lucy made her feel:

> [I was] eagerly anticipating that connection, of that recognition. Hoping for it. When Lucy was singing, I was desperately trying to find [if] that [is] another part of the song that I know? And trying to make my melody match that, and just not quite […] because there were bits that were similar. [I thought] please, please just match up, but it doesn't quite match. (00:02:20 – 00:02:55)

Anna's reflection reveals that she was searching for and desperately hoping to find a way to connect with Lucy, to overcome their inability to communicate with one another by speaking. This caused Anna to experience a degree of emotional pain as she saw Lucy try to establish a connection through song. Anna further described her experience, suggesting that she left feeling not only emotionally distant and but also physically disconnected from Lucy as her scene partner:

> I wanted to be able to respond and connect, and felt there was something […] not that there was something in the way, but there was something that I couldn't clutch. I couldn't latch on. It felt distancing, it felt like I was disappointing them and that I was leaving them in the lurch. (00:05:30 – 00:05:59)

The experience also had an observable physical consequence for Anna during the exercise, which she was conscious of:

> That first time [between Anna and Lucy] I guess there's a lot of anxious tension, so a sense of waiting in the body. Like indecisiveness, if that makes sense, of the muscles, like wanting but not knowing […] just uncertainty. (00:04:20 – 00:04:47)

The video footage (00:00:20 – 00:01:20) reveals that Anna expresses this anxious tension through her body movements, by adopting an inward, collapsed posture, and exacerbated by tension in her hands and a slight bodily rocking. The resulting tension, reflected as anxiety and awkwardness between the two actors, was an assumed response. Unexpectedly, however, when reflecting on how this scenario affected her internal responses, Anna added:

> When I heard the wrong song, I felt a sort of shrinking and instability physically. And emotionally there was that sense of disappointment, I felt I was disappointing and loneliness from that disconnect. (00:08:20 – 00:08:40)

While no biomedical research has been discovered which documents that a 'disappointment' as a typical emotional response to advanced communication restrictions, there is significant value in noticing this in relation to supporting an actor to empathise with the impact of the disease.

Lucy had a similarly negative response to the exercise as Anna, where her initial open, confident delivery of the song quickly dissipated upon realising the songs did not match:

> I think at first, I just kind of assumed it would be [the same song] so I kind of went in with confidence and then I retreated and felt, I guess embarrassed that [I] was singing something […] even the look in your [Anna's] eye, you were not on the same page. Yeah, I'd say an embarrassment. I started so strong and then you retreat. (00:03:20 – 00:03:48)

Whereas Anna expressed more desperation and anxiety at the inability to establish a connection, Lucy's embodied and emotional reactions were those of rejection and embarrassment. This was partly instigated by the expectation that the songs would match. While the individual emotions were different, the interaction made both actors' experiences comparable, as neither could communicate or establish an emotional connection beyond the negative responses to having different songs.

While the two internalised responses of Anna and Lucy differed, their descriptions of how this physically manifested as a feeling between them are strikingly similar. Lucy described how she wanted to connect with Anna:

> I think I just wanted her to sing back with me, and I wanted to have a moment of [...] a connection. But it did feel very disconnected it felt like I was on a totally different page. But yeah, I wanted us to sing together. (00:04:58 – 00:05:19)

Both actors described wanting a form of connection which, although not physical, would provide a feeling of mutual understanding and comfort. As this was denied, the actors began to express this tension emotionally and through their bodies (00:00:40 – 00:01:20). This part of the exercise therefore proved incredibly valuable for demonstrating how song can be used to simulate what happens when communication and a social connection cannot be established.

4.4.2.2 Actor reflections – Part 2: Lucy and Anna

In contrast to the first attempt between Lucy and Anna, the second part of the exercise, between Claire and Anna (where the songs matched) demonstrated the impact of recognition of music and song as communication, in the absence of spoken word language. Claire noted that:

> Very quickly after I started singing there was a look of recognition in Anna’s face and also she started to join in with the tune, which was really nice. It felt like there was a connection, [...] that we were on the same page. Even though neither of us knew all of the lyrics, we knew that we were kind of on side. [...] I felt uncomfortable that I didn’t know any more of the lyrics, that I didn’t know the full song, but I felt safe with Anna’s presence knowing that we were in it together. (00:06:00 – 00:07:00)

Claire’s reaction to her interaction with Anna is revealing, especially given the former interaction between Anna and Lucy. Their ‘connection’ demonstrates that when a common and recognisable language is established between the actors, it can provide a sense of comfort and safety. This is significant for countering the perception that AD merely inhibits social interaction and meaningful engagement. Claire's recognition that she felt 'safe' with Anna contrasts significantly to the distanced interaction between Lucy and Anna. The difference between the two interactions was also physically noticeable. For Claire, this part of the exercise made her appear and feel more relaxed in Anna's presence (00:01:36 – 00:02:10). These feelings of comfort and safety were also felt by Anna:

> When I heard the right song, my body relaxed, I guess you get a rush of endorphins when you find the right answer. Emotionally [I] felt connected, joyful really and safe, like dispelling any anxiety. (00:08:40 – 00:09:08)

Anna's physical relaxation is evident in the video footage – although both Claire and Anna have a level of discomfort from forgetting the lyrics to the song, this is superseded by their joy and movement closer to one another. This part of the exercise was important for demonstrating how music, where other common language communication is not possible, can be used to support better physical manifestations of connection. Correlating with the biomedical research, Baird and Thompson found that while TC rejected her husband, he grieved for their previous life and the two moved physically further apart. This is then contrasted to those moments when TC was able to reconcile with her husband and their emotional connection drew them physically closer together (2019, p.457).

Lucy, who watched Anna and Claire's interaction, provided valuable reflections on viewing this, comparing this to the very different effects that her interaction with Anna had:

> When I was singing on my own, I got really hot under my arms very suddenly. And you realise what you are doing, you are singing and someone's not connecting with you, like I say, just that embarrassment of 'oh, please save me'. And then just that very inward shrinking feeling. But when I sat down and watch you guys sing [Claire and Anna] I had this big smile on my face because it was so nice seeing two people connect. And obviously, you were

> both smiling and that energy is infectious. But I'd be lying if I didn't say I felt a bit left out. […] There was just a disconnect definitely. (00:09:10 – 00:09:52)

Lucy's revelations were important for demonstrating how she, emotionally and physically, indirectly benefitted from the happy environment Anna and Claire were creating. Additionally, it allowed her to reflect on how the negative experience she had previously affected her, and how disconnected she felt from this new, positive situation between Anna and Claire. This part of the exercise was incredibly valuable for invoking the complexity of holding all these emotions at once, as experienced by Lucy, in response to watching two people sing together. Further, Lucy's reflections demonstrate the importance of giving space for both parts of the exercise, to provide more nuanced responses to the juxtaposing interactions, where Anna and Claire's reconciliation and ability to connect are counterbalanced by the feelings of loss and disconnection between Anna and Lucy.

4.4.2.3 Conclusions

This exercise proved a reliable method for exploring how language loss can be compensated by singing, to help establish and build meaningful relationships for actors investigating the effects of AD. Specifically, both methods (failed and successful connection) used in tandem best evidence the impacts of language loss in AD. The first part replicated the effect of AD on creating emotional barriers to communication, similar to the rejection TC's husband felt when unable to speak with his wife (in Baird and Thompson, 2019). It demonstrated a practical means of realising and capturing elements of the emotional strain that AD places on relationships, when language is lost, and what the impact of this is as an externalised, physical response. The second part was then important for demonstrating the power of song as a means of communication, as well as a way for actors to sit with feelings of isolation distinct from positive communicative situations. Additionally, this exercise provides a useful means of exploring the physical embodied response to themes of rejection, loneliness, connection and mutual understanding through song. These exercises therefore provide valuable opportunities to explore emotional connections and social interactions for a person with AD and those who live with them, for actors in performance.

4.5 Emotions and memory: exercises 7 – 9

4.5.1 Exercise 7: Emotions and cognitive empathy

See video 'Exercise 7'

Exercise 7 examined how AD impacts a person's ability to comprehend and cognitively empathise with others. Cognitive empathy, as a brain function, refers to the extent to which someone can perceive other's emotional circumstances (*I can put myself in your shoes*). The lack of cognitive empathy is not the same as not being able to recognise an emotion at all (psychopathy) but rather a way to understand how a set of circumstances make another person feel a certain way. The development of this exercise used a combination of biomedical research studies on cognitive empathetic skills in people with AD, including Ávila-Villanueva et at (2021), Brandt et al (2024) and Dickerson et al (2017).

The objective of the exercise was to make Actor B behave in a way that emotionally conflicted with the situation they were in, to the extent that Actor A would find it increasingly difficult to relate to the other's circumstances. Actors Patricia Jones (Actor A) and Claire Morley (Actor B) were given an improvisational scenario and, as this exchange occurred, Claire was required to listen to an audio recording over headphones, while trying to have a serious improvised conversation with Patricia. The music Claire heard, Celine Dion's *My Heart Will Go On* (played badly), was selected to counter the seriousness of the conversation and, as much as possible, make her laugh.

The scene began with Patricia sat waiting for Claire to enter, before commencing the improvisation. The improvisation required Patricia to discuss her financial hardship with Claire and to seek help with her debt. This topic was chosen based on its serious tone and to make Claire's incongruent reaction even more difficult for Patricia to process. Claire did not hear the music straight away, as she needed time to develop an initially empathetic tone with Patricia, before then exploring the effects of the incongruent emotion. This meant that, when the music did start, any change in her emotional responses would be much more visible and pronounced, especially to Patricia.

As hoped, Claire uncontrollably laughed throughout the exercise. Despite Claire's attempts to dismiss the outbreak of laughter as a nervous affliction, Patricia quickly became irritated by this response, challenging her behaviour as she demanded to know why Claire was laughing. During the exercise, Patricia said to Claire, 'Is there something wrong with you? I mean actually is there something wrong with you?'. Patricia's direct confrontation was exacerbated by Claire's inability to stop laughing and provide a more empathetic reaction to Patricia's situation. The display of emotional responses by both actors was even more successful than anticipated. As will be discussed, the outcome was that, while both actors could identify the emotions the other was presenting, neither actor could fully cognitively empathise with the other.

4.5.1.1 Actor reflections

The actors' responses illuminated two things. First, that this technique, using headphones, meant that Claire was completely unable to change or control her emotional responses, even when Patricia became increasingly annoyed. Second, that the use of headphones, by their physical nature, can disrupt the ability to cognitively relate to another person's emotional experience. Claire found the exercise challenging and noted how she increasingly found it difficult to empathise with Patricia while hearing the sound:

> Well I genuinely wanted to help her but then obviously when she [Patricia] started questioning why I wasn't fully focused on her and [that I] had this inappropriate response, I did feel a bit embarrassed because I couldn't help it, and I didn't have an excuse, I tried coming up with an excuse, but it wasn't a very good one. And so, I felt a bit helpless because I couldn't really get through to her how I wanted to, I was surprised, if it was a real-life

> situation I wouldn’t have been surprised if she had just got up and walked away and never spoke to me again. So, it was a bit isolating in that sense, because I could feel that there was a sense of judgement coming from the character. (00:13:40 – 00:14:39)

For Claire, the headphones soon became an unwelcome distraction from her ability to relate to and empathise with Patricia’s situation, as her focus was increasingly dominated by the sound and her emotional response to it. Claire’s need to excuse her behaviour demonstrated both her embarrassment at her reaction and her lack of control to stop it. Although Claire could identify why Patricia was angry, her reflections reveal that she did not fully know how to rectify her situation.

Describing the difference between her own feelings and those of Patricia’s, Claire noted how she increasingly felt frustrated by the sound:

> It was hard because in that kind of situation, I think you do naturally try and mirror that person’s emotion or at least the tempo or something, so that you aren’t at odds with them, especially if they are your friend. I didn’t really have much choice in being able to do that all of the time, it was quite hard work to try and get on the same level as Tricia, and then it didn’t last very long once I found an even keel, it never lasted very long [...] because I got pulled back into the music because there was a key change or something happened that made it funny again. But I definitely got more frustrated by the music. At the start I was like, this is funny then I did get more frustrated by it because I wasn’t able to get through and also I don’t know if it was getting louder or more disturbed, but it felt like it was and so then it became like, get these headphones off me.[28] (00:14:50 – 00:16:05)

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[28] As noted in the video (00:16:10), Claire was reminded that she could have removed the headphones at any time during the exercise.

Claire's observations clearly identify that she struggled to outwardly relate to Patricia's situation, although she could understand the emotions she perceived in her scene partner. Directly relating to Patricia's situation became severely compromised as her attention was pulled towards new moments and changes in the music.

For Patricia, simulating a person interacting with someone with AD, she experienced the anger, frustration and upset of having someone not empathise with her emotionally charged situation. She described being 'caught off guard' by Claire's behaviour (00:07:13) and, despite being aware that the exercise would likely cause an unexpected response, she found Claire's reaction 'so authentic and so large, in a way, I didn't know how to respond' (00:07:57 – 00:08:06). As a result, Patricia described the exchange as 'much more unnerving, and there was much more the idea of I don't know how to get out of this situation' (00:08:21 – 00:08:31). Additionally, she described Claire's behaviour as a:

> huge obstacle, and so there was a lot of work to try and overcome that obstacle. The fact that it turned around and I started to question her behaviour rather than mine took me off course in my objective. But that was interesting because it meant that it was a more complex conversation. (00:19:12 – 00:19:44)

Claire's actions led to Patricia's self-analysis, presuming that she was the cause of Claire's behaviour. Patricia's reflections on her interaction with Claire reveal predominant emotions of confusion, disbelief and ultimately anger resulting from Claire's response to the situation. Additionally, while she acknowledged that she was aware of Claire's situation (hearing something which induced laughter through headphones), Patricia acknowledged that she could not move past her emotional responses to Claire's dismissive nature of the improvisational situation:

> Part of me knew that it wasn't real what she was doing. But another part [of me found it] offensive. It was quite offensive. And I think it's offensive because we've all been in situations like this, where we've got ourselves into a debt so to have somebody just

> like crack up laughing in your face and it happens, people do actually crack up inappropriately [...] So, yeah I think there was a sense of being offended. And I didn't know how to make her stop because I knew she wasn't going to stop. (00:09:45 – 00:10:34)

Patricia's partial dismissal of the headphones as the cause of Claire's behaviour is likely the result of the enormity of Claire's display of laughter, combined with the fact that she did not know exactly *what* Claire could hear. In the context of their scene together, Patricia's feeling offended and irritated further gave way to her own acknowledgement that she felt unable to stop Claire's reaction.

4.5.1.2 Conclusions

The testing of the exercise demonstrated how incredibly successful it is in replicating issues with cognitive empathy, as displayed in people with AD. Importantly, both actors found their ability to relate with the other's emotions was compromised. Following the testing of *Exercise 7*, an additional piece of biomedical research was sourced which revealed that, while perspective taking and cognitive empathy skills are compromised by AD, emotional empathy (the ability to feel what another person feels) skills can rise in people with the disease (Chow et al, 2023). Relating this to the findings of this research project, both Claire and Patricia were able to both recognise their scene partners emotion and empathise with one another to a greater extent, while simultaneously experiencing difficulty in understanding the others perspective. Patricia, commenting on Claire's response to the exercise added: 'When you started shouting at your own head [expressing frustration at what she heard], in my mind I was thought she's actually *unwell,* she's not just being unkind she's unwell. Which made me very empathetic as well' (00:20:19 – 00:20:35). Patricia successfully recognised her own emotional incongruence with her inability to see Claire's perspective.

It should also be noted that, as with the other exercises involving headphones (*Exercise 1, 2, 3, 7, 8* and *9*), because they are a device which can suggest different environments by transporting the sensorial experience of a user, without necessarily being seen or heard by others, it is possible to use this to explore the symptomatic implications of AD. Therefore, as shown through testing, the use of headphones in this exercise can successfully change a user's perception of reality, so much so that they inhabit a space and perform actions and behaviours that are perceived as different or incongruent to that of their scene partners. Importantly, an amendment was made to the final workshop guide regarding the type of headphones to use. Claire wore large, over ear headphones which could be seen by Patricia. While she was unable to hear what Claire heard, obviously wearing headphones could add a layer of empathy, knowing that they are being impacted by something, for the scene partner. The exercise in the workshop guide has therefore updated to reflect this and encourages the use either with in ear headphones or to ask the actor to improvise an emotionally incongruent behaviour.

4.5.2 Exercise 8: Capgras syndrome

See video 'Exercise 8'

Exercise 8, Capras syndrome, was the most challenging exercise to design and test, and arguably still has room for further development. The specific challenges with this exercise centred on how to embody a delusional belief that a familiar person, had suddenly been replaced by an impostor, in a way which did not cause excess emotional or psychological distress to the actor. This passage offers a detailed examination of the original idea for constructing a method of exploring this symptom and considers why it did not work as intended. It further discusses how the actors' insights led to the development of a new method for exploring Capgras syndrome through an embodied approach. This ultimately contributed towards new methods of considering the effects of Capgras and how an actor might explore this, by experimenting with subversion expected behaviours.

The original aim of *Exercise 8, Capgras syndrome*, was to conceive a reliable method of safely allowing actors to explore and embody the effects of Capgras during which a person holds the delusional belief that a person(s) close to them, or their belongings, have been replaced with imposters or replicas (Fischer et al 2009; Baird and Thompson, 2019). The original idea conceived for this exercise was to have three actors (A, B and C), two actors (A and B) would have a conversation, and at an agreed point (unknown to actor B), Actor A would switch out their voice for Actor C (who was concealed off stage). This would then attempt to misdirect Actor B and make them feel as though they no longer recognised the person stood in front of them.

Initially, this method was designed to use headphones to swap out the voice heard by one actor for that of another, in as seamless a manner as possible. Unfortunately, during the testing of this exercise, the technology required to make the exercise work (radio receivers and transmitters) failed and could not be fixed in time to support the desired aims of the work.[29] Despite the technological setbacks and given that the actor's time was a finite resource, the exercise was adapted to be tested without any technological input. Anna and Lucy would instead read a scene together and, at an agreed point during the exercise, Claire would (from a concealed location) switch as the voice of the same character (in place of Anna), without Lucy having any advanced notice of this. While the aim of the exercise remained the same as intended with the idea using headphones, as evidenced from the discussion below, this approach did not work. Both *Method 1* (with headphones as intended) and *Method 2*, are included in the workshop guide to allow directors and actors to experiment and conduct further research, and draw further conclusions.

4.5.2.1 Actor reflections – Method 1: Switching voices

In the discussion after testing *Method 1*, Lucy's reflections on the exercise were somewhat comparable to the experiences of Capgras syndrome in the biomedical research reported in Baird and Thompson (2019), notably the

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[29] One of the transmitter microphone ports had broken, and no replacement transmitters were available at short notice. While mobile phones could have offered a work around to this, the building used to conduct workshops in, severely restricted mobile phone signal, meaning this also would not work.

aspect of surprise and shock. Relating to how it felt to hear a different voice, Lucy described how:

> It’s that thing again where I came in [to the scene] really confident and thought we were just going to read the scene and […] it just broke what I was doing basically. It was weird, I really wasn’t expecting it. I really thought we were just going to read this scene straight. I was thrown. (00:03:15 – 00:03:40)
>
> […]
>
> I was surprised to hear Claire’s voice. I wasn’t expecting it at all. And, then just confused because I didn’t know who to look at and that you were miming the words. […] It was bizarre and I didn’t know how to play it [the scene] anymore. (00:04:20 – 00:04:40)

Although the exercise failed to convince Lucy that Anna as an impostor, her visceral reaction to the technique did demonstrate ideas as to how the exercise might be adapted. In the biomedical research of Baird and Thompson (2019) and Fischer et al (2009), both described instances where a person’s expectations and recognition of what they understood to be ‘familiar’ within a given environment were disrupted. Lucy’s reaction to this exercise was similar to the findings of both patients described in these papers, in that the effects were acutely felt rather than gradual. Comparable to the documented effects of Capgras, the immediate nature of the switch also caused Lucy to develop feelings of mistrust and suspicion. When asked to reflect on whether her perception of Anna had changed due to the sudden change from Anna’s voice to Claire, Lucy observed: ‘It was that feeling again that I wasn’t in on the thing with you guys and suddenly the thing I thought that was happening, wasn’t happening’ (00:03:45 – 00:04:07).

The biomedical research reported similar feelings in that, once the familiar became unfamiliar, people emotionally responded with suspicion and mistrust. For example, TC’s unfamiliarity and related mistrust of her husband led her to order him out of the house (Baird and Thompson, 2019, p.456). In Fischer et al (2009), the patient became suspicious when she believed that once familiar objects (porcelain figures) had been replaced with cheap imitations (p.509). While Lucy did express feelings of suspicion, these feels did not constitute a delusional belief similar to the documented effects of Capgras syndrome. Importantly, because Capgras syndrome was part of a much wider set of advanced symptoms experienced by TC (Baird and Thompson, 2019), Lucy could not fully dissociate from her ability to recognise Anna, and, arguably, this was too ambitious an aim for the exercise and would potentially cause harm.

Following this workshop, looking at Capgras, I, together with the actors, held a discussion to devise new methods of examining this symptom more effectively, trying to replicate the sudden feelings of 'otherness' expressed by Lucy. From this, I concluded that trying to actively guide an actor to believe that a familiar person had been replaced with an impostor was neither ethical nor the most appropriate method of exploring the effects of Capgras. Several ideas were then discussed with the actors, including altering an actor's ability to identify certain key features of a person, such as their facial expression by using face masks or by asking one actor to markedly change their emotional and physical behaviour towards another. The latter of these two points proved substantial grounds for further conversation and ideas on how to adapt the exercise accordingly. Below follows a detailed analysis of our discussion, inclusive of the actors' insights and how this led to the generation of a new, revised method for *Exercise 8.*

4.5.2.2 Discussion of exercise idea

(***See the full discussion: 00:07:20 – 00:10:30***)

The discussion between me and the actors (Claire, Anna and Lucy) focused on devising new methods of exploring Capgras based on the themes of familiarity, otherness and identity, similar to the main themes identified in Baird and Thompson (2019) and Fischer et al (2009).

Using these two themes as a basis for conversation, Claire first suggested that one conceivable method for achieving the exercise's aim would be to embody two visibly contrasting emotions, hypothesising that:

> If somebody was very, very blankly communicating with you with no real expression or even a lack of eye contact […] where like the person in front of you is visibly who you know but there's a disconnect there. (00:07:20 – 00:07:52)

Claire's point about emotional disconnection is significant as it allows the actor to first consider *how* a person is made identifiable to them, thereby offering methods to subvert that expectation. The significance of Claire's idea led me to review further biomedical research materials on Capgras syndrome. In Kayo et al (2023) a patient claimed:

> She met several imposters of her husband. She called each imposter in different name, described each as a slightly different appearance, and expressed different level of sense of familiarity. (p.187).

The implication of this finding means that evidence exists to prove that Capgras can affect the ability to perceive people (otherwise considered familiar) not in absolute terms, but rather as a scaled effect. Points of familiarity, such as behaviour, intentions and displays of emotion could therefore be challenged to affect the overall sense of familiarity one person has for another.

Building on Claire's observations, Anna referenced a time when she and I had accidentally met prior to working together on this research project and the idea of expected behaviour, movement and attitude, she described how:

> Thinking about when I saw you at Hebden Tea and didn't recognise you because you had a mask on.[30] Just thinking about the few indicators that we have of 'Oh, that's so and so that I know', like their walk, their behaviour, their voice and how if any

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[30] Anna had met me in the street of York during the phased COVID19 lockdowns taking place across the U.K., hence the reference to a facemask.

> one of those things those changes, it suddenly does really complicate who you are seeing.
>
> […]
>
> [With] the behaviour, […] if I, seeing you as you are now and came over and said hi and you completely like [makes a gesture indicating indifferent behaviour/lack of recognition], that would introduce that disconnect as well. (00:09:20 – 00:10:10)

These insights further built on Claire's initial point around disconnecting from the typical traits and behaviours that otherwise allow a person to recognise someone they know. Crucially, this has further been evidenced in Thiel et al (2014) where a 70-year-old woman (with AD) acknowledged that while the man who cared for her resembled her husband, the person standing before her was not the same (p.77). There remained a sense of familiarity, although a profound disconnection manifested with who the patient believed the person to be when standing in front of them. The patient did recognise them as someone vaguely familiar, noting that they had cared for them, but did not associate this with her husband. These findings helped to solidify the development of *Method 2: Shifting attitudes*. Where two actors would then improvise a scene together and, at an undisclosed point, one actor would exit the scene and re-enter, displaying a completely different attitude towards their scene partner. In this regard, the revised exercise would observe both the acute nature of Capgras and further experiment with subverting the ability to familiarise with an otherwise known person. Redeveloping *Exercise 8* would not have been possible without the actors' ability to critically reflect on their own experiences relative to the intended aims of the exercise idea. In this regard, the actors' contribution to the research process is deemed essential to both generating new knowledge around how symptoms of AD manifest and affect behaviour. Further, their ability to critically reflect on the purpose and intentions of the exercise and then recognise how this is intended to make them feel is of vital importance to the methods of examining how biomedical research can be embodied to generate enhanced knowledge of AD's effects.

4.5.2.3 Actor reflections – Method 2: Shifting attitudes

Method 2: Shifting attitudes (conducted in a later workshop) examined what would happen when Claire (Actor B), in an improvised scene with Jacob (Actor A), behaved in one way in the first part of the scene and re-entered, behaving completely differently. The revised idea for *Exercise 8* was therefore to make Claire's behaviour and mannerisms appear different to those which Jacob typically associated with Claire, as though someone different had taken her place.

The improvisational setting was a conversation between Claire and Jacob, where they would discuss plans for an evening out. Having established a dialogue, Claire was instructed to leave the room mid-exercise and re-enter, adopting a distinct shift in tone, physicality and behavioural intention that appeared much more disinterested and, at times, hostile towards Jacob. When sharing his observations of the shift in Claire's behavioural change, Jacob detected subtle mood shifts, which led him to question Claire's motivations and thought process during the exercise. He described his emotional response to Claire after she re-entered the scene:

> Before going out and coming back in, it was just very amicable and fun and I was excited for different drinks and going out. Afterwards, […] I think I felt self-conscious afterwards, I felt like I was having to question what I was saying – *Am I suddenly being boring? Am I suddenly striking the wrong tone, am I asking the right things?*
>
> Is Claire thinking of something different and doesn't want this conversation anymore? But why have we suddenly shifted from this conversation to something else? There was an elephant in the room basically and I was trying to figure out what that was. (00:18:14 – 00:18:58)

As in *Method 1*, the initial response to any kind of sudden shift (in this instance Claire's behavioural change to Jacob) created feelings of confusion and suspicion. This is significant in demonstrating that the acute nature of

Capgras can be reliably recreated. When questioned further on his response to the exercise, Jacob reflected more on his part in the change in mood, questioning his actions as much as those of Claire. This method proved to be more successful in destabilising feelings of familiarity, with a potential for an additional emotional layer of self-doubt and blame associated with the other person's attitude change. Jacob said the following about his exchange with Claire:

> I think having had two minutes to [reflect], the best way I can describe it was, I was chatting to not a specific friend, but a type of friend that I know [...] at the start and then when you went out and came back in and sat down – suddenly my mind went, *Oh, we're chatting to a different type of friend*. I've got to change my strategies.
>
> I know both people, it wasn't like I didn't know the second person, it's just the second [person] I know [is] like that. […] One friend has disappeared, but a new friend has come in, what strategies do I deploy to this friend? What do I normally do? (00:21:34 – 00:22:21)

While Jacob's ability to recognise Claire was initially impacted by her change in attitude, this did not move to suggest a reality where Claire had been replaced with an unrecognised person. Instead, the exercise forced Jacob to adapt to the situation, viewing Claire as different in behaviour and attitude, although still a version of Claire. Therefore, while this exercise allows the actors to identify, and be impacted by, a change in attitude and emotional interactions, it did not go further to replicate the feelings of a different person having replaced the actor they knew, as documented in reports on the actual impact of Capgras on people with AD.

4.5.2.4 Conclusions

While the results of both approaches to *Exercise 8* did not fully achieve their aim of allowing actors to explore Capgras syndrome, the second experiment proved more successful in realising the aims of affecting an actor's perception of and responses to the changing identity of their scene partner. This raised interesting questions about how actors understand each other's intentions and comprehend what is both familiar and then unfamiliar. While none of these exercises reliably cause an actor to be unable to recognise their scene partner for who they really are, *Method 2* in particular did affect their ability to fully familiarise themselves with the person standing in front of them. In this respect, the actors findings from the testing do, correlate more with the understanding of Capgras syndrome in both Thiel et al (2014) and Kayo et al (2023), as Jacob did express a different sense of familiarity with Claire's changed attitude, as though seeing different versions of the same person. Overall, *Exercise 8*, in its current iteration, remains a valuable resource to encourage actors to question and embody elements of disconnect between the familiar and unfamiliar. However (as an untenable option for the timeframe of this research project), as a complex symptom of AD, this exercise requires further development and testing, to more effectively support the aims and objectives to explore Capgras syndrome in the rehearsal process.

The different methods in this workshop guide provide critical foundations for exploring and embodying sensations around familiarity, comfort and discomfort, especially in *Method 2.* Further work to develop this exercise should also seek to explore how the experience of Capgras syndrome does not present as a 'permanent state', but rather transitionary and as a scaled experience. While distressing, it is equal to a transitionary phase, during which the familiar is replaced by a temporary unknown, before subsiding and again entering a familiar yet altered state (e.g. Fischer et al, 2009). Relatedly, the experiment could be conducted again, using a framework of liminality and liminal entities, as described in Victor Turner's, *The Ritual Process* (2011):

> The attributes of liminality or of liminal personae ('threshold people') are necessarily ambiguous, since this condition and these persons elude or slip through the network of classifications that normally locate states and positions in cultural space (p.95).

This concept of the ambiguous ‘threshold people’ could be used as a foundation for the director to explore how Capgras syndrome fundamentally changes a person’s ability to recognise the familiar, by temporarily placing them in a different environment. Finally, there is scope to further develop *Method 2* of this exercise to encourage the ‘imposter’ to present themselves more pronouncedly as a completely different character to their scene partner. This would include giving time to shape the imposter’s intentions, emotions and physicality, in such a way that they appear as a completely different person to their known identity.

4.5.3 Exercise 9: Memory

See video ‘Exercise 9: Memory’

The final exercise of the workshop guide, *Exercise 9*, focuses on what is undoubtedly the most recognisable and commonly associated symptom of AD – the impairment of memory. This exercise aimed to examine the effects of AD on memory function, beyond the perception of this as mere memory loss. As discussed in the literature review, many existing depictions of AD paint it as a condition predominantly of memory decline, suggesting that all who live with the disease are emptied of their life experience and lose their ‘former selves’ (Dunford and Genova, 2018, p.79). The reality of AD is, however, far more complex than the tragic decline so often viewable in contemporary theatre performances. To highlight a different aspect of memory function affected by AD, that does not overtly focus on loss, this exercise explored the impact of the disease on implicit and procedural memory functions. More specifically, its objective was to demonstrate that, while AD impairs memory function, a person does not necessarily forget *how* to undertake a task or perform an action, as though the information were deleted from their memory bank. Utilising the findings of Sabat (1991 and 2018), this exercise examined how memory is affected in AD, in ways beyond the idea of loss, by exploring procedural memory in a workshop environment.

The exercise required an actor, tested in this instance by Claire Morley, to follow a set of fifteen steps to make a cup of tea. Ahead of the exercise starting, cards numbered 1-15 were placed around a kitchen space.

Claire had to find the cards before she could begin the corresponding instruction, each of which were prerecorded on to a mobile phone and numbered correspondingly so Claire could play the audio file once she found a corresponding card. Claire was free to search for and select any of the cards, but once found, she had to complete that step before searching for the next card. This exercise was designed to encourage an empathetic understanding of how AD can impact implicit memory recall and procedural tasks. As will be discussed, the results of this workshop suggest that, while Claire had an advanced knowledge of the task (to make a pot of tea), the disrupted sequencing of the steps caused her to become disorientated and frustrated. What could be viewed as a ‘familiar’ and ‘easy’ task was therefore rendered into a confusing and difficult activity that the actor had no control over.

4.5.3.1 Actor reflections

A central observation of this test was that, while Claire initially found the exercise fun, she progressively found both locating the cards and undertaking the out-of-sequence tasks frustrating and deflating. Her change in responses to completing this task were largely due to the order in which she selected the cards. The first card she selected (step 13) asked her to sit and ‘savour the flavour of the tea’, which she had not yet made. Having no finished cup of tea to drink, she opted for eating a pear that had unintentionally been left on the table. When asked to reflect on the exercise, Claire noted:

> My first [instruction] was to sit down and savour the flavour. So I didn’t know at that point that the overall task was to make a cup of tea. So I thought, well I can’t savour the flavour without eating or drinking something and that [a conference pear placed on the table] was the nearest thing so that’s why I ate the pear. (00:17:30 – 00:18:00)

At this early stage, Claire eating a pear demonstrated her willingness to adapt her approach to the task, by using the items within her immediate environment, despite temporarily forgetting the overall purpose of the task.

Increasingly, however, the exercise revealed that both the act of locating of cue cards and in what order she selected them determined how Claire felt emotionally, as she proceeded with the task. She became more visibly disorientated and angry as she tried to follow the instructions:

> What became frustrating was when I couldn’t do something because I hadn’t done the first thing. One of the tasks was to steep the tea for two minutes, but I hadn’t been told to boil any water so [the tea] was just sitting in the pot with no water. And obviously I chucked it away [the tea] to wash up early on […] So by the time it came to taste the tea to see if it was my required strength, I didn’t really want to. I’d kind of lost the motivation to make the tea by that point because I knew it wouldn't be tasty. (00:18:20 – 00:19:15)

The complex and confusing nature of the task therefore discouraged Claire from wanting to complete the overall task. As she continued to find cue cards in the wrong order, she realised her inability to complete the task was progressively diminishing, which prompted additional feelings of apathy and disinterest in the exercise.

Claire’s embodied reactions and her reflections on the exercise were comparative to that of people with AD. As the disease progresses, it can make simple, familiar tasks increasingly difficult for people with AD, which can then affect their confidence. Claire’s initial reaction to undertaking the exercise was more positive and energetic:

> To start with it was quite fun, because I was [thinking] it’s like a treasure hunt and then towards the end it did become a bit like, well now it’s pointless because I know whatever I’m going to be asked to do next, I’ve probably sabotaged the task myself before [...] being asked to do that next point. (00:19:20 – 00:19:44)

However, as the exercise progressed, Claire’s mood and energy both dropped, as she came to realise that she would not be able to successfully make a cup of tea:

> I [thought] well, I'm not going to be making anything that is drinkable, so I'll just literally follow the instructions. So, when it said to put hot water in something I didn't even bother boiling the kettle, I'll just turn the hot water tap on and put that in the cup. I was following the instructions but wasn't then thinking of the final process, [....] that was to sit and savour this cup of tea. [...] I suppose it was a little bit of frustration at that point, of just like going through the motions. (00:19:55 – 00:20:40)

From her reflection, Claire was became increasingly disempowered by her lack of agency over completing the task, and her frustration turned into a sense of defeat and apathy. This was notable when she described 'going through the motions' to complete the task, especially when she continued to repeatedly search the same places to find the next card.

4.5.3.2 Conclusions

This exercise was incredibly successful in demonstrating how biomedical research shapes the ability to comprehend and embody how memory impairments can affect people with AD. It supported the actor in experiencing the frustration behind the impact of difficulties with procedural memory on emotional well-being. Claire's experiences were directly comparable to those of people with AD, found in the biomedical research of Sabat (1991) and (2018) and ethnographic accounts from people living with the disease. For example, Barry, in the informational film, 'Living with Dementia' (Social Care Institute for Excellence, 2014) expressed his frustration at the inability to recall where to find the items he needed to make a cup of tea, and his deflation as he thought: 'This is my kitchen. I used to manage butcher shops, I used to run a care home, […] and here I am, I can't make a cup of tea'. Importantly, there is scope to work with other aspects of AD and memory that move away from the uncomplicated image of 'cognitive decline', as achieved with *Exercise 9*, which proved to be successful in reframing memory functions in AD and exploring the impact it can have, beyond simply forgetting. As shown in the complete workshop guide, however, these would need to be explored alongside a variety of symptoms of AD, to ensure that shallow stereotypes of the disease are not perpetuated.

Chapter 5 Conclusions

In a review of Francis Poet's play *Maggie May*, Mark Fisher (2022) stated:

> But as with so many plays about illness, Maggie May presents no dilemma to be debated, just a condition to be experienced. In dramatic terms, Alzheimer's has no resolution. That means the story has no inevitable place to end.

While Fisher is right that there is no firm conclusion to a story about illness, the 'dilemma' that plays like *Maggie May* can help us to continually (re)consider, is how do people adapt to the life changes that come with a disease like AD? Up to this point, the answer to this question has remained largely one that sees a person on a trajectory of terminal decline, towards a 'non-character', a person who is emptied of memory, agency and the ability to navigate the world around them. While AD *is* a progressive illness, assuming an apparent and inevitable conclusion is ultimately an unempathetic framework that ignores the details of someone's life around the disease. Such stereotypical depictions of AD, particularly as a consumer of memory and identity, only serve to propagate fear and misinformation about how people with dementia can and do live.

This thesis aimed to facilitate the actors' ability to embody the complex symptoms of AD that force a person to adapt to an ever-evolving set of circumstances and challenges in their daily lives. It achieved this by exploring the extent to which a biomedical research-informed workshop guide could support a director to work with actors to enhance an embodied approach to exploring AD symptoms. Specifically, as practice-led research, it answered this question through practical testing of the proposed exercises with actors in a workshop space. The culmination of this work was the director's workshop guide for enhancing of AD. Overall, the research outcomes demonstrate that using biomedical research to shape practical theatre exercises is a valid and important method to enhance the actor's embodiment of AD symptoms within the rehearsal process, by adding nuance, and increasing capacity for empathy and personally evocative insight.

The workshop guide encourages the director to act as a facilitator and observer, to support actors' self-reflective development of *enhanced* methods of embodiment of AD rather than curating perfect representations. In doing so, it ensures that directors, together with actors, move away from any suggestion that a 'standard' representative depiction of AD exists (Robins and Byrne, 2011, p.1027). As demonstrated in this thesis, that is a truer reflection of the plethora of biomedical research that shows the expansive symptoms and experiences of the disease. As a result, the workshop guide encourages directors to develop increasingly experimental and evocative understandings of AD, while mitigating a sense of fear of 'getting it wrong', by removing the idea of a binary or exact definition of the disease. Further, it illustrates that biomedical research, when used to inform creative practice, provides a director with more than a list of disabilities and challenges, which can be *imposed* on an actor, to simulate the symptoms of AD. For example, in *Exercise 4: Aphasia affecting speech*, Patricia, while having her vocabulary restricted (removing words including *cash, take, ten* etc.), developed strategies to overcome these limitations, again a feature that is extensively explored in biomedical reports of people with AD (e.g. Sabat, 1991, p.174). Further the guide encourages the director to run the exercises as experiments. By testing the methods and reflecting on the process through the exercises' reflective questions, the director and actors can discover the complex nature of dementia through a series of practical challenges. The outcomes of each exercise could be different each time they are used, consummate with the reality of living with AD, meaning that their use can be relevant across different rehearsal and performance processes. Additionally, directors can choose one, different combinations of, or all the exercises, where pertinent to the aspects of AD they wish to explore and perform.

The testing was critical for demonstrating the extent to which this biomedically shaped workshop exercises can enhance an actors' embodied approach to understanding AD. The tests provided critical actor responses and researcher observations to review whether the exercises allowed actors to manifest the different symptomatic presentations, the methods that most effectively supported the exercise aims and objectives, and the supporting tools were usable (especially in the case of headphone technologies). The responses, observations and outcomes, could then be reviewed, alongside the findings in the biomedical research, to ensure that emotional responses and experiences were comparable to those of patients documented in the biomedical research. Thorough testing also demonstrated how the workshop guide could support the actors to comprehend and relate to the social and emotional challenges AD presents. While the actors should not be deliberately guided to experience pain and distress, the exercises and reflections on them provided them with opportunities to shape their perception and understanding of the world, when living with AD. For instance, in *Exercise 6*, when Lucy watched Anna and Claire establish a social connection by singing the same song, she described feeling ‘disconnected’ from Anna due to the exercise. The same feelings were evidenced in the biomedical research between TC and her husband – when TC lost the ability to speak, he described feeling distant from his wife (Baird and Thompson, 2019, p.461). Additionally, the research findings showed that biomedical research-informed exercises led actors to better relate to and comprehend the social and emotional challenges associated with AD. This was demonstrated, for example, in *Exercise 7: Emotions and cognitive empathy*, as Patricia became angry and frustrated when unable to understand and relate to Claire’s laughter in response to her distressing financial situation.

Safety was central to the development and delivery of the workshop guide. For example, aspects of *Chapter 4: Critical reflections* demonstrated that some exercises irritated and frustrated the actors. Asking actors to place themselves in uncomfortable situations or challenging circumstances is not without risk and, although every effort is made to safeguard actors, this kind of work cannot always protect them from challenging emotions or experiences. The guide therefore ensures that those who use the guide in future are reminded that, although the intention is never to cause harm, the exercises can cause stress and, in some instances, lead to (re)traumatisation. Establishing clear boundaries between the purpose of the exercises and lived experiences of trauma or emotional distress has been and should continue to be an essential aspect of working with this type of material. For example, when looking at how language loss can impact a person with AD, the exercises induce a feeling of increasing isolated from other people (*Exercises 4*, *5*, and *6*). Therefore, the guide, and by extension the director, was designed to ensure that the actors understand that they have full agency over the decision to continue or stop participating in any of the exercises. Additionally, while also a time to develop deeper, empathetic perspectives of living with AD, the questions at the end of each exercise also serve a secondary purpose of providing space for the actors to reflect on the experience of the tasks. Finally (and an invaluable recommendation by actor Patricia Jones), the guide also encourages directors to lead post-workshop relaxation exercises and provide additional support resources to guide actors on where to seek professional help.

It must be acknowledged that the workshop guide must keep up to date with advances in biomedical research into the symptoms and causes of AD. In this respect, the guide is not a finished and static contribution to research, rather it is the start of a movement to reframe the significance and potential uses of biomedical research within the rehearsal process. The thesis is set out in such a way that the formats used to construct each of the exercises can be replicated by other directors to source and work with any biomedical research, to continue to explore the extensive symptomatic effects of AD in performance. Notwithstanding the importance of keeping the guide relevant, a critical component of its value is its ability to provide opportunities for increasingly nuanced and empathetic ways of exploring AD within the creative process. Performances involving the representation of a person with AD must therefore be drawn from different lived experiences of and biomedical research about the disease. As demonstrated, these sources can provide greater understanding of what AD looks and feels like for the person living with it and support methods to enhance cultural representations of complex illness. For this to continue to be successful, the workshop guide must remain in step with the advances in biomedical research to continually improve on a shared understanding of AD. In effect, this workshop guide is not a finished piece of work. It is a blueprint on how to use advances in biomedical research to shape a different kind of narrative around living with AD that do not suggest a homogenous symptomatic experience.

Moving beyond this research project, the aim is for the workshop guide to be used for professional practice and future academic research networks. For example, there is scope to set up partnerships with a professional theatre companies and academic institutions, to further test and develop the workshop guide for different professional performances of AD. This would help to refine the exercises to be usable across the sector, as well as provide opportunities to ask new questions of the process and outcomes of using the guide. Additionally, to support the aims of the workshop guide, there needs to be greater examination of *how* and *why* AD is seen and understood within performance contexts (especially in the case of performances that use actors to envisage those with the disease). This includes, for example, working with writers to build characters that move beyond shallow narratives of decline.

Multiple industries, including performance and care, should be encouraged to increasingly recognise the value of biomedical research as a creative resource; to enhance personified, individual, empathic and embodied understandings of the disease. This can only be of benefit to the future of understanding dementia and providing care for those who need it.

Appendix: Theatre director workshop guide

This version of the workshop guide has been reformatted for use by theatre directors in professional settings. This includes adding a content page, changing the spacing, removing footnotes and providing a list of references to materials cited in the guide only. It can therefore be directly lifted from the thesis for use in workshop processes.

Theatre director workshop guide

Enhancing actors’ ability to embody symptoms of Alzheimer’s disease as part of the rehearsal process

Nicholas Newman

Version 1.0 (November 2024)

Contents

About this guide

Hearing and social interactions: Exercises 1 – 3

Language perception: Exercises 4 – 6

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About this workshop guide

This guide is intended for use by a theatre director, providing a user-friendly explanation of a set of symptomatic effects of Alzheimer's disease (AD). It provides information on related biomedical research and methods for practically exploring the symptoms with actors. It is designed to be used at the beginning of a creative project, such as working with actors and a playwright, to generate ideas and material, or as a part of a larger rehearsal process when working on published plays.

This is not a 'how-to perform AD' guide and does not suggest what AD should or should not look, feel or sound like. The biomedical research used to shape the exercises is therefore not intended to be used prescriptively. Instead, the workshop guide should encourage actors to practically investigate and explore the embodied effects of AD. The results of one exercise used by one director will therefore likely be different to those of another director.

AD presents differently for every person who is diagnosed and lives with the disease. Two people can have similar symptoms but not necessarily experience them in the same way. As a result, the exercises in this workshop guide are meant to encourage new and enhanced methods of exploring the effects of AD, so a director can facilitate an actors' attempts at developing embodied knowledge of symptoms within the rehearsal process.

When this workshop guide was created in 2024, it used the most currently available biomedical research to shape practical exercises. Just as AD is never a constant or permanent 'state', biomedical research continues to advance. When this guide no longer reflects important new or amended understandings of AD, it may need to be updated, to best reflect current trends both in science and culture. Importantly, as a theatre director using this guide, please use it as both a workshop aid and a resource to advance approaches to rehearsal and to find new ways to introduce research from different disciplines to your creative process.

What is Alzheimer’s disease?

Alzheimer’s disease (AD) is a neurodegenerative disease categorised under the umbrella term ‘dementia’. The exact cause of the disease has not yet been agreed by biomedical scientists, but prominent theories suggest that the excessive build-up of proteins (beta-amyloid and tau) in the brain, which cannot be cleared by the body’s immune system cause brain cell death by blocking and disrupting normal cell functions. It is a progressive disease that can include a diverse set of symptoms, meaning that no two people will likely experience the disease in the same way. Symptoms can include sensory issues, like the presence of visual, auditory and olfactory hallucinations, language and speech disturbances, movement and motor skill deterioration, and memory impairments.

Safety and support

AD can be a difficult, challenging and distressing disease. The people you work with may have experience of it. Bear this in mind when working with this subject, as some of the exercises contained within this guide may produce unpleasant effects, distress and upset. Together, you (as the director) and your actors may feel uncomfortable and challenged in situations where all the necessary information is not necessarily shared with actors before working with an exercise. Because the health and safety of you and your actors remains paramount, please stop if, at any point, someone identifies that they feel unsafe or uncomfortable beyond what is expected of the exercise.

Supporting actors and the director at the end of a workshop is critical. It is therefore encouraged that the director runs a relaxation exercise class at the end of the workshop, involving supportive discussion and breath work.

Resources

You may find the following resources useful if you or your actors require further support.

Alzheimer’s Society (dementia support)
Tele: 0333 150 3456
Website: www.alzheimers.org.uk/about-us/contact-us

Mind
Tele: 0208 215 2243
Website: www.mind.org.uk/about-us/contact-us

Samaritans
Tele: 116 123 (from any telephone to speak directly to a Samaritan)
Website: www.samaritans.org/how-we-can-help/contact-samaritan

Hearing and social interactions

Exercises 1 – 3

Exercise 1: Hearing distortions

Several links have been identified between AD and hearing deficits and complications. One such complication is hyperacusis, a condition that makes the perception of sound painful and overwhelming. Increasingly, auditory disturbances are being recognised and reported in association with a diagnosis of AD. They are, however, largely unrecognised in common understandings of the illness.

Biomedical examples

Bature et al (2018) found that auditory disturbances could help to identify people with undiagnosed AD, especially among female patients (p.12). Additionally, Taiwo (2022) reported that hyperacusis was present in 19% of their research patients with 'frontal variant AD' (p.1). This symptom was also associated with:

- Restlessness
- Agitation
- Poor mental function
- Prominent language disturbances

These effects cause distress and further complications to daily life for people with the condition. For example, in the online blog Dementia Diaries (2019), Wendy Mitchell described how she was affected by hearing issues (later diagnosed as hyperacusis), as one of the first symptoms she experienced because of AD:

> I'm not going deaf, it's just that certain tones of noise physically hurt my ears. Now audiologists are recognising it's affecting many people with dementia and diagnosing them with hyperacusis.

For Mitchell, AD affected her ability to navigate an environment, as distinguishing sounds and sound amplification became increasingly difficult.

Aims and objectives

This exercise aims to replicate the experience of sounds heard by someone with hyperacusis. Two actors work together, to consider how one of them responds to changes in their auditory environment and note how this affects their relationship.

To simulate the effects of pain caused by hyperacusis, one actor must wear a set of headphones, which is playing audio that they cannot control. Where possible, it is useful to have an operator to oversee the audio, to ensure the director remains free to observe the exercise.

Preparation

Materials

- Two actors.
- An audio operator.
- One set of headphones (over- or in-ear design).

NB The headphones must have the functionality to connect to a computer via Bluetooth for this exercise to operate as intended – this avoids tripping hazards caused by trailing long cables.

- A computer or similar device (e.g. mobile phone) connected to the headphones, which can play a high-pitched tone and be independently volume controlled.
- A high-pitched sound (use for example: https://www.youtube.com/watch?v=AzOsKZ-9LTo).

Organising your actors

- Label one actor '**Actor A**' and the other '**Actor B**'.
- Your **audio operator** is responsible for playing the audio and controlling the volume level.

Safety notice

The hyperacusis effect requires the actor to listen to high-pitch tones played through headphones. Be aware that excessive exposure to these sounds can cause hearing damage. Therefore, before beginning the exercise, test the sounds with **Actor A** to find an agreed point where the sound is uncomfortable, but not likely to cause damage. **Actor A** should remove the headphones immediately in any event that the sound becomes unbearable or unsafe.

Before you begin, test the sound with the **audio operator** and **Actor A**.

- Ensure **Actor A** is wearing the headphones and that the headphones are connected to the transmitting device (computer or mobile phone).
- Ensure the volume is set low before first testing.
- Incrementally raise the volume (e.g. 10% of maximum, 25% of maximum)
- For each increment, play the sound to **Actor A**, to determine:
    1. A comfortable and audible level.
    2. At what point the sound is uncomfortable but not unsafe.
- Make note of this volume, and **do not exceed this point.**

Once you have tested the equipment, introduce an improvisational scenario to the actors. For example:

- Friends gathered for a surprise party.
- A night out in a busy pub or bar.
- Speed dating.
- Sat in a taxi in heavy traffic.

Running the exercise

1. Decide on the improvisation you want to explore.
2. Time the exercise to last no longer than 5 minutes.
3. As the exercise progresses, periodically play (or cue the **audio operator** to play) varying intensities of the sound for short intervals, by gradually adjusting the volume levels.
4. Do not begin playing the sound at the loudest setting, as this is likely to startle **Actor A**. Begin at 25% of the maximum volume.
5. Play (or have the **audio operator** play) the sound in short bursts at random intervals rather than as one continuous noise.
6. At the end of the exercise, ask **Actor A** to remove the headphones before addressing the discussion questions.

Questions following the exercise

Questions for **Actor A**:

- When you heard the noise at different intensities, can you tell us what that felt like? How did your relationship to the sound change?
- Did you begin to associate any emotions or sensations to the sound you heard?
- How (if at all) did the sound affect your relationship with **Actor B** in the scene?

Questions for **Actor B**:

- Describe what you thought **Actor A** was experiencing.
- How did you perceive **Actor A's** behaviour towards you during the improvisation, while wearing the headphones?
- During the exercise, did you observe any significant shifts in **Actor A's** behaviour or attitude towards you? If so, explain what these were.

Exercise 2: Pure word deafness

Pure word deafness (PWD) is a complex condition that affects the ability to perceive spoken words as they are intended to be heard. Being able to understand and communicate with other people is an integral part of the human experience. PWD, a rare yet recognised symptom associated predominantly with early-onset AD (before the age of 65), can profoundly impact someone's ability to communicate and share with others. More specifically, PWD causes the person to hear random words as either sounds or noises in place of recognisable words.

Biomedical examples

PWD is often not considered a key diagnostic symptom of AD. In two recorded instances (Kim et al, 2011; Buciuc et al, 2021), patients with PWD caused by AD experienced difficulties with familiar tasks and social activities, while otherwise noticing no discernible differences to other aspects of their everyday lives. For example, in Kim et al (2011), a 59-year-old Korean woman visited clinicians, following complaints of difficulties in comprehending spoken word language for over two years. The patient was reported as hearing:

> spoken conversation sounding like a noise, and sometimes buzzing, which was worse in crowded public areas. [The patient was] unable to understand spoken questions when interviewed, but was able to comprehend and give correct answers by lip reading or responding to gestural cues (p.227).

The report also noted that, while she had 'deficiencies in verbal comprehension', she could still 'express her own thoughts, recall events, get directions, or use public transportation' (p.227). This type of scenario was also identified in a report by Buciuc et al (2021), where a 70-year-old Canadian woman 'reported 2-3 years of wordfinding difficulties, impaired verbal comprehension, and unimpaired hearing' (p.908). Therefore, though these women did not present with the 'typical' AD symptoms, like memory problems, a diagnosis could have been made sooner, based on their inability to audibly recognise words and language.

Aims and objectives

This exercise explores the effects of PWD, by distorting and confusing language comprehension for **Actor B**, to make them feel socially distant from **Actor A**. It uses a secret code (designed to simulate PWD) to affect the actors’ relationship and ability to understand one another. To achieve this, **Actor A** will use a secret code language and/or foreign language words.

Preparation

Materials

- Two actors.
- **Either**: edited copies of the scripts you are using, with different edits for each actor (example below).

  The altered script for **Actor A** will have certain words replaced with coded words.

  The redacted script for **Actor B** needs to provide cue lines and their lines, to prevent them from pre-empting or rehearsing any potential responses to the exercise. All stage directions also need to be removed.

- **Or**: a copy of the agreed code words for **Actor A** only to use in an improvisation (example below).

Organising your actors

- Label one actor '**Actor A**' and the other '**Actor B**'.
- **Actor A** will use the code, exchanging random words for either nonsensical noises or foreign language words, while **Actor B** will be using the edited script (containing only their lines). This is to mitigate the possibility of **Actor B** preparing and rehearsing their responses.
- **Actor B** must not know about the code's existence until the exercise is completed.
- **Actor A** should incorporate the code as though they were speaking normally.
- **Actor B** should experience a dissociative effect through not expecting or understanding what **Actor A** is communicating.

Using coded words

Use a code that changes both non-specific words and significant nouns. These can be built into a script or linked to an improvisation topic. For example, if the improvisation setting was **Actor A** (a taxi driver) driving **Actor B** somewhere, **Actor A's** dialogue might be made up of the following coded words:

Non-specific words:

- You = Shhhppp
- That = Fffrrrr
- How = Buuuzzz
- The = Tttttttttt

Significant nouns:

- Fare = Prrriiinnnggg
- York (as a location that **Actor B** is trying to get to) = Zzziiippp
- Meter = Fffrrrssshhh
- Car = Rrrrrrr

The words you choose to code will likely differ, depending on the script or improvisational setting you use. These examples can be used as a starting point, before adding in examples of your own, as you begin to experiment more with the exercise.

Running the exercises

1. Provide **Actor A** with a copy of a script with the coded words added in, 5-10 minutes ahead of the exercise beginning, to give them enough time to memorise the code and the script.
2. If no script is being used, provide **Actor A** with a list of coded words that they can refer to during the exercise, 5 minutes ahead of the exercise beginning.
3. Where a script is being used, give **Actor B** their redacted script, just before they begin the scene.

It is not necessary to redact or change the cue words in **Actor B's** script (which should have been done for **Actor A's** script), as a certain level of expectation of what they will hear will add to the effectiveness of the code.

Developing the exercise further

As the actors become increasingly confident with the code, you could incorporate multiple actors into a scene and involve more people using the code while one person is left unaware until the end of the exercise.

Questions following the exercise

Questions for **Actor A**:

- How did you feel about speaking in a nonsensical way to **Actor B**?
- Can you recall any specific moments in your interaction with **Actor B**? Did they behave in a certain way towards you?
  Describe how this exercise affected your ability to communicate and understand one another.

Questions for **Actor B**:

- Describe how you initially felt when you heard sounds or noises in place of recognisable words?
- How did this exercise affect your perception of **Actor A** and their behaviour and intentions towards you?

- Can you describe any emotions or sensations you felt during the exercise?

Below is an example of edited scripts (which you can use in your own exercise) using Matthew Seager, *In Other Words* (2019, pp.17-18).

Actor A plays **Jane** and **Actor B** plays **Arthur**.

Altered script for Actor A

Jane: Have you checked the pot by the front door?

Arthur: Of course I have!

Jane: How about the drawer in your bedside table?

Arthur: They are *not* there!

Jane: Look, ***buzz!*** You had them last, I know you did!

Arthur: I can't have. You can't be sure. Let's just think, shall we?

Jane: I am sure! Can you just think? You went to the ***shhhh,*** you had lost them, again, so I lent you mine, (*looks at her watch*) and now we're late, and it's ***tttttttt***–

Arthur: Again? What do you mean again? How is that helping? That's not going to help is it?

Jane: Alright ok. Ok, ok. Will you just try to ***shhhh*** and think?

Arthur: Oh, try and think. Oh, see, I wasn't thinking, and now you've told me to think, we'll be able to find them much more easily.

Jane: **Fzzzzz**! **Bello**! Great work!

Arthur: Well, thank you very much, Jane because everything else is my fucking fault.

Jane: What do you mean, ***vrrreeettt, pppppring?*** I'm not talking about ***ttttttttt*** – I'm talking about this –

Arthur: You're not even going to entertain the possibility, for a second, that you could have lost the keys?

Jane: ***Rrrrrrrr!*** I'm not ***Bfffffff!*** You know it was you and you know that I am not being unreasonable!

When did you last have them?

Arthur: What?

Have what?

Jane: Ci sono vrrat?

Frrritt bbbbb!

Arthur: Yes… yes… I know that. Last time I had them I … Well, I got home and… they were… umm… they were…

Jane: *Shhhivvvv*?

Arthur: On the… they were on the…

Jane: *Frisshhh*?

Arthur: Table! They were on the kitchen table!

Jane: (Looking at the table) Lovely! Well they're ***tttttttt bbbbbb*** now are / they

Arthur: Well I'm just saying that they *were* on the / table

Jane: And now we've missed it.

Arthur: GOOD! I DIDN'T WANT TO FUCKING GO ANYWAY!

Redacted script for Actor B:

Jane: … by the front door?

Arthur: Of course I have!

Jane: … your bedside table?

Arthur: They are *not* there!

Jane: … I know you did!

Arthur: I can't have. You can't be sure. Let's just think, shall we?

Jane: … we're late, and it's important –

Arthur: Again? What do you mean again? How is that helping? That's not going to help is it?

Jane: … and think?

Arthur: Oh, try and think. Oh, see, I wasn't thinking, and now you've told me to think, we'll be able to find them much more easily.

Jane: … Great work!

Arthur: Well, thank you very much, Jane because everything else is my fucking fault.

Jane: … I'm talking about this –

Arthur: You're not even going to entertain the possibility, for a second, that

Jane: … last have them?

Arthur: What?

Have what?

Jane: … keys!

Arthur: Yes … yes … I know that. Last time I had them I … Well, I got home and… they were… umm… they were….

Arthur: On the… they were on the…

Arthur: Table! They were on the kitchen table!

Jane: … not there now are / they

Arthur: Well I’m just saying that they *were* on the / table

Jane: ... we’ve missed it.

Arthur: GOOD! I DIDN’T WANT TO FUCKING GO ANYWAY!

Exercise 3: Auditory hallucinations

Auditory hallucinations can include imaginary stimuli, such as hearing voices and noises like explosions, bangs and music. Although these stimuli are the result of neurodegeneration in AD, auditory hallucinations present as part of the real world for the person experiencing them. As part of a broader set of symptoms, both visual and auditory hallucinations can take place simultaneously or separately.

Biomedical examples

Hallucinations are a recognised and prevalent symptom amongst communities of people with AD, and present in a median of 23% of cases (Bassiony and Lyketsos, 2003, p.390). Hallucinations are typically associated with increasing neurodegenerative decline and cause additional care requirements to manage challenging symptoms, such as behavioural and mood changes.

Auditory hallucinations that are the result of AD can significantly impact a person's quality of life (Choi et al, 2021). This can include having adverse effects on their social life and mental health, as well as making a person feel distressed and confused. According to El Haj et al (2015), the phenomenological aspects of hallucinations can cause people to experience altered judgement and perception, leading to 'confusion, inconsistency, anger and aggression' (p.282).

Wendy Mitchell described the lived experience of auditory hallucinations, in her book, *What I wish people knew about dementia* (2022):

> Dementia distorts your reality on a daily basis. That bang you heard outside that sent a chill all the way up your spine, it didn't exist. A firecracker, the sound of a mad gunman on the loose, these are all our hallucinations that leave you pinned to your armchair, heart racing, too terrified to look outside. […] Yet one brave look out of the window, proves there is no one rampaging

> the street with a sawn-off shotgun. […] All these are tricks of a diseased brain, but ones that no one warns you about (pp.26-27).

In theatre performance, auditory hallucinations are an important aspect of AD that a director can use to explore how the unseen effects of the disease can affect behaviour, mood and attitudes towards other people.

Aims and objectives

This exercise explores how auditory hallucinations might impact feelings and behaviours in people with AD. Producing a real auditory hallucination is not practical or safe. Instead, it involves withholding certain information about the purpose of the exercise from certain actors, until the discussion at the end of the exercise. Overall, it aims to simulate an experience of how auditory hallucinations can affect behaviour, mood and emotions for the actors.

The exercise uses improvisation, where **Actor A** is guided by **Actor B** (using a mobile phone) to find them outside of the rehearsal space, much like in a game of hide and seek. **Actor B** must remain hidden throughout the exercise, guiding **Actor A** towards discovering **Actor C**. When **Actor A** and **Actor C** meet, both **Actor B** and **Actor C** must try to deliberately mislead **Actor A** into thinking that **Actor C** is present and can be seen. The director must not reveal the intentions of the exercise to **Actor A** until the end of the experiment.

Preparation

Materials

- Three actors.
- A set of Bluetooth headphones (over- or in-ear design).
- Two mobile phones.

Organising your actors

- Label each actor as '**Actor A**', '**Actor B**' or '**Actor C**'.
- Label the mobile phones '**Mobile A**' and '**Mobile B**'.
- Assign Mobile A to Actor A.
- Assign Mobile B to Actor B.

Before beginning the exercise

- Check that both mobile phones can make and receive calls.
- Start a call between **Mobile A** and **Mobile B**.

For **Actor A**

- Pair the Bluetooth headphones with **Mobile A**.
- Give the headphones to **Actor A**, but not the mobile phone.
- Mute **Mobile A's** call function so that only **Mobile B** can be heard – this is to encourage **Actor A** to focus only on **Actor B's** voice and instructions.

For **Actor B**

- Give **Actor B** their **Mobile B** and ask them to leave the room to hide somewhere outside of the rehearsal space.

For **Actor C**

- Ask **Actor C** to leave the room and wait in a specific location.

Running the exercise

Time the exercise to last for no more than 10 minutes.

1. Ensure that **Actor B** knows the location of **Actor C**.
2. **Actor A** must remain unaware of what is taking place between **Actor B** and **Actor C**.
3. Once all actors are ready and in position, **Actor B** can begin speaking into **Mobile B**, to guide **Actor A** to the location of **Actor C**, under the assumption that **Actor A** needs to then locate **Actor B**.
4. **Actor B** needs to convince **Actor A** that they are searching for them and no one else.
5. When **Actor A** finds **Actor C** in place of **Actor B**, **Actor B** must try to convince **Actor A** that **Actor B** is present and can be seen by **Actor A**.
6. Towards the end of the exercise, let **Actor B** physically reveal themselves to the other actors.

Developing the exercise further

If attempting the exercise a second time, allow **Actor A** and **B** to speak and hear one another, and consider how this interaction may change the subsequent interaction with **Actor C.**

Additionally, you could assemble all the actors in a room and use a speaker to play a noise or sound, such as a pre-recorded voice or footsteps, which **Actor A** and **Actor B** deny they can hear.

Questions following the exercise

Questions for **Actor A**:

- What were your expectations of the exercise?
- Describe your initial reaction to following the instructions you heard to guide you to find that person.
- How did your attitude change towards **Actor B** (the voice you heard), when you met **Actor C** in place of **Actor B**?
- What was your interaction like with **Actor C**, when you met them in place of **Actor B**?
- What did it feel like to have **Actor B** continually try to reassure you that they were present in the same space as you?

Questions for **Actor B**:

- Can you describe any significant moments in your interaction with **Actor A**?
- When **Actor A** met **Actor C** instead of you, what did you do to try and convince **Actor A** that you were also present?
- Describe how **Actor A** responded to your attempts to convince them that you were present in the space with **Actor C** and could see them.

Questions for **Actor C**:

- Can you describe any feelings or emotions you observed in **Actor A's** behaviour, when they first approached you (expecting **Actor B**)?
- Given the limited information you were provided with at the beginning of the exercise, how did you feel when **Actor A** approached you?
- How did your relationship change as you learned more about the situation, simulated for the exercise?

Language perception

Exercises 4 – 6

Exercise 4: Aphasia affecting speech

Aphasia is a condition that causes someone to have difficulty with their speech and language. This can present in multiple forms, and can affect speech and reading, and word comprehension, recognition and delivery. It is common for people with dementia (inclusive of AD) to have at least a mild form of aphasia.

Biomedical examples

In a review of major subtypes of AD in patient case reports, Dickerson et al (2017) found that spoken word language, word pronunciation and recognition were commonly affected in people with AD. Aphasia can be identified in patients with AD, using a ‘verbal fluency test’, which asks a person to name as many words as possible from a specific category within a given time. For example, ‘how many animals can you name that begin with the letter *A*?’.

An example of this symptom can be found in a case report, detailing a 65-year-old woman, with a two-year history of progressive ‘difficulty finding words in conversation, increasing mispronunciation of words, and new difficulty spelling’ (Dickerson et al, 2017, p.443). Relatedly, the woman also found difficulty in phrasing sentences, having developed a condition called Phonemic Paraphasia (PP). PP is described as ‘when a sound substitution or rearrangement is made, but the stated word still resembles the intended word’ (The Aphasia Community, 2024). For example:

> *A typical sentence*: Can you pass me my **hat**, it’s cold outside.
>
> *A sentence using PP*: Can you pass me my **gnat**, it’s **gold** outside.

Because, as Dickerson et al found, ‘25% of cases of AD do not conform to the stereotypical progression’ (2017, p.446), more awareness is needed of the different presentations of AD in diagnostics, including language disturbances. Aphasia can cause challenges for engaging in social interactions. While over time a person may learn what a person with AD is trying to communicate, it is first important to consider how this condition initially impacts social interactions. This exercise therefore encourages an exploration of aphasia and PP and how they affect the ability to select and communicate specific words.

Aims and objectives

This exercise aims to explore compromised speech patterns for actors, similar to the effects of aphasia in AD. **Actor A** will read from their ‘edited script’, while **Actor B** is deliberately unaware of the purpose of the exercise, as they only have access to their lines and part of a cue line of their scene partner (see a similar format in **Exercise 2: Pure word deafness**). This ensures that **Actor B** does not have the opportunity to predict or rehearse their responses.

Preparation

Materials

- Two actors.
- Edited scripts **or** an improvisational scene (example included).

Organising your actors

- Label one actor ‘**Actor A**’ and the other ‘**Actor B**’.

Running the exercise

In both the scripted and improvisational versions of the exercise, as the **director**, you need to observe how **Actor A's** delivery affects **Actor B's** ability to interact with them during the exercise. Note any shifts in their ability to comprehend one another, how their relationship is affected and develops, and ultimately to what extent the exercise affects the actors work together.

Time the exercise to last for no more than 10 minutes.

Using a script for PP and aphasia

1. **Actor A** will speak their lines as though they had aphasia. Give them a script which has been edited to contain PP words and only the cue line of their scene partner (see below). This will allow **Actor A** to focus on the PP.
2. **Actor B** should be given a redacted copy of the script, which does not include the PP text or any of the lines of **Actor A**, except the cue line (see below). **Actor B** must not be told, in advance, what will happen during the exercise.

Using the exercise in an improvisation

3. Choose an improvisation settings, which could include:

    - A person in a bank trying to withdraw money at the counter.
    - Two people in a supermarket, one is a sales assistant, and the other is trying to book a taxi.
    - Friends catching up after one has come back from a holiday.

4. Provide **Actor A** with a cue card containing words that are relevant to a specific situation, which they should avoid using in conversation (example included). For instance, the word *money* cannot be used while **Actor A** is trying to withdraw funds from the bank.

Examples of redacted words to remove from an improvised scene in a bank:

- Pounds
- Ten
- Money
- Change

Developing the improvisation

You could introduce specific tasks for actors to complete, to add to the complexity of the exercise. For example, in the bank scenario, **Actor A** needs to withdraw £350 in specific denominations.

Additionally, rather than using silence in place of ‘lost’ words, you could ask **Actor A** to enunciate using elongated sounds such as *ahhh, ghhh, nnnn…*

Questions following the exercise

Questions for **Actor A**:

- Did you find any specific elements or moments of this exercise challenging?
- How did the use of limited language make you feel, physically and emotionally?
- Did you feel that **Actor B’s** behaviour or attitude towards you shifted in any way, when you had difficulty with speaking?

Questions for **Actor B**:

- At what point did you first notice changes in your scene partner’s behaviour as they began speaking in unclear sentences?
- To what extent were you aware that you were exacerbating **Actor A’s** challenges with communication, and how did this change your approach to the situation?
- How did **Actor A’s** confusing dialogue make you feel, physically and emotionally?

Below is an example of an edited script (that you can use in your own exercise) using Craig Taylor, *One Million Tiny Plays about Britain* (Play no. 72, 2011, p.137).

Actor A plays **Pat** and **Actor B** plays **Viv**.

Edited PP and aphasia script for Actor A

Key:

- **…** = a missing word i.e., where aphasia has limited word access.
- *Italics* = a phonemic paraphasia, for example 'preening' has been substituted for *screening*.
- A dash (-) = a cue line.

(Two women stand at a lottery booth in a shopping precinct in Grimsby)

Viv: You finally got winning numbers for us?

Pat: I give you *price* numbers every time.

Viv: - not winning at all so far.

Pat: Should be … them for myself, then, shouldn't I?

Viv: - my pocket this time?

Pat: Listen to the peacock, *screening* before she's even won. It's only 3.2 this week, love.

Viv: - with a smile.

Pat: I wouldn't turn *clown* up 3.2, I'll tell you that much.

Viv: I'd spend all her inheritance.

Pat: How's the… been then? Is Jenny *thriving* back down tomorrow?

Viv: - what's always got the TV on.

Pat: Couple of students. She didn't really say that.

Viv: - who said that one.

Pat: Because I was... to say it *rounds* like the boyfriend the mouth on him.

Viv: - it's just a tax on the stupid.

Pat: Then he's calling you stupid to your face.

Viv: - I don't play every week.

Pat: I do. (pause) What a terrible thing to *pay*. I got close the other week, didn't I?

Viv: Which week?

Pat: The other… And I've just seen someone leave here with £35 today. That's not stupid.

Viv: - It's just the poor paying tax.

Pat: It's *cow* to become not poor.

Viv: - hardly speaks to me all weekend.

Pat: The *south*... *him*… *You want me to flick* your numbers, then?

Viv: I don't know, really. Think I'll have a lucky dip instead.

Edited script for Actor B:

(Two women stand at a lottery booth in a shopping precinct in Grimsby)

Viv: You finally got winning numbers for us?

Pat: - every time.

Viv: They're not winning at all so far.

Pat: - for myself then, shouldn't I?

Viv: How much'll be going into my pocket this time?

Pat: - it's only 3.2 this week, love.

Viv: I'll take it with a smile.

Pat: - I'll tell you that much.

Viv: I'd spend all her inheritance.

Pat: - back down tomorrow?

Viv: Went today, didn't she, because they say they can't revise in a house what's always got the TV on.

Pat: - She didn't really say that.

Viv: To be fair, it was her boyfriend who said that one.

Pat: - the mouth on him.

Viv: He gives me a lift here and says the lottery, it's just a tax on the stupid.

Pat: - calling you stupid to your face.

Viv: To be fair, I don't play every week.

Pat: - I got close the other week, didn't I?

Viv: Which week?

Pat: - £35 today. That’s not stupid.

Viv: He says it’s just the poor paying tax.

Pat: - become not-poor.

Viv: She likes his theories. She hardly speaks to me all weekend.

Pat: - You want me to pick your numbers, then?

Viv: I don’t know, really. Think I’ll have a lucky dip instead.

Exercise 5: Aphasia affecting language skills

Much like its effect on speech, aphasia (linked to AD) can affect a person's language skills in different ways. Beyond difficulties with spoken words, this can include increasing challenges with language perception, including hearing, reading, writing and spelling.

Biomedical examples

Borges et al (2018) review of the case report of a 68-year-old man with AD found that he began showing signs of 'hesitant speech' (p.2). Further investigation revealed that the patient could not answer questions 'because he could not understand what was being said' (p.1). The patient, though able to recognise that someone was speaking to him, therefore could not comprehend what was said. They attributed these difficulties to receptive aphasia, meaning he had difficulty understanding what people were saying to him, while simultaneously having difficulty in communicating his needs.

Difficulties with written tasks are also linked to this type of aphasia. A study by Cathery et al (2005) revealed that AD can affect oral spelling, writing and reading skills, with decreasing oral spelling abilities associated with disease progression. Also cited in **Exercise 4: Aphasia affecting speech**, Dickerson et al (2017) documented a 65-year-old woman with a two-year history of increasing difficulty with word pronunciation and spelling (p.443). Dependent upon different factors, a person with AD may or may not be aware of their perceived difficulties with language affected by aphasia. This exercise looks specifically at the additional impact of AD on language skills, in relation to written and reading language comprehension.

Aims and objectives

This exercise is designed to explore two components of language comprehension affected by aphasia in AD. It encourages **Actor A** to experience receptive oral aphasia (having to listen to and copy out what they hear), while **Actor B** considers the impaired reading abilities related to aphasia in AD. To achieve this, two actors will work together to create an ‘aphasic script’.

- **Actor A** writes down a list of instructions containing words in two different languages – their primary language and a second language that is unfamiliar to both them and **Actor B**.
- This list of instructions is read aloud by the **director** or **an assistant**.
- Once this list is written, it is given to **Actor B**, who must attempt to carry out all steps on the list, as transcribed by **Actor A**, to the best of their abilities.

The use of two languages, including one that is known and the other unknown to all actors, is important for simulating the symptomatic effect through the ‘aphasic script’. This facilitates the receptive aphasia effect, by impacting the communication of the instructions by **Actor A** and the comprehension of the instructions by **Actor B**.

Preparation

Materials

- Two actors.
- A pen and paper (for **Actor B**).
- A translation tool (such as Google Translate).

Organising your actors

- Label one actor '**Actor A**' and the other '**Actor B**'.

Generating the script

As the **director**, you will need to create and read a set of mixed language instructions to **Actor A**.

- First, decide which two languages you will use for the exercise (e.g. English and Welsh).
- Write out a list of 10 sequential instructions to perform a specific task (e.g. locating an item).
- Translate random words in the list to the secondary language.
- Have a copy of the modified instructions available to read the instructions aloud to **Actor A**.

The example below requires **Actor A** to write down your verbal instructions (read aloud only once), which are then given to **Actor B** to help direct them to leave the rehearsal room to locate a red jumper and return to give it to **Actor A**. The instructions given to **Actor A** are modified to include both English and Welsh words.

Original (English only) directions to find the red jumper.

1. Leave the room by the main exit.
2. Once you leave, turn left.
3. In front of you will be two green chairs.
4. Walk to these and turn left.
5. Go through the glass doors, be sure to press the button on the right first.
6. Walk past the bike store and turn right.
7. Head to the bus stop and pick up the red jumper.
8. Turn around and go back to the rehearsal room.
9. Make sure to give the red jumper to **Actor A**.

Modified (English and Welsh) directions to find the red jumper.

Directions to find siwmper goch.

1. Leave the room by the main exit.
2. Unwaith y byddwch yn gadael, trowch i’r chwith.
3. In front of you will be dwy gadair werdd.
4. Walk to these and turn chwith.
5. Go through the drysau gwydr, gofalwch eich bod yn pwoyso’r botwm ar y dde yn gyntaf.
6. Walk heibio’r storfa feiciau and turn right.
7. Head to the safle bws and pick up the goch siwmper.
8. Turn o gwmpas and mynd yn ôl I’r ystafell ymarfer.
9. Make sure to give the siwmper goch to **Actor A**.

Running the exercise

1. Read the modified script aloud to **Actor A**, ensuring they cannot see the script.
2. **Actor A** must write down what they hear, after only one reading of the instructions by the **director** or **assistant**.
3. Reassure **Actor A** that it does not matter if they cannot fully understand what is being said, and to make a best guess or write out what they hear phonetically.
4. Once **Actor A** has written out what they have heard, they must give their handwritten instructions to **Actor B**.
5. **Actor B** must read the instructions and attempt to carry out each of the steps.
6. If **Actor B** cannot complete the exercise after 5 minutes, bring them back into the rehearsal space and move on to the reflection stage of the exercise.

Developing the exercise further

Experiment with the level of difficulty. For instance, dependent upon the level of AD severity you want to explore, use more of the second language in your instructional list. Be mindful that the aphasic script should contain at least some comprehensible language, otherwise the task becomes impossible.

Questions following the exercise

Questions for **Actor A**:

- What did you feel when you were trying to copy out instructions that were unfamiliar to you?
- When you were writing out the instructions, how did you consider **Actor B** and how they might approach the material?

Questions for **Actor B**:

- How did you feel, physically and emotionally, when you first saw the instructions?
- How did this exercise make you feel towards the person who wrote out the instructions for you?
- What was the most challenging part of attempting to complete the task?
- What did you do to overcome any problems you faced in understanding the instructions?

Exercise 6: Singing in place of spoken word language

People with AD related aphasia can, over time, experience a complete loss of speech and language skills. While this can be distressing, research has shown that severely aphasic people can still communicate and share with others, either by singing or through song recognition.

Biomedical examples

Music plays an important role in the lives of people with AD. Biomedical research has documented that, when used in care, music can improve both memory and the fluency and content of speech (Basaglia-Pappas et al, 2013).

An example of this can be found in Baird and Thompson's (2019) case report of 'TC', a 77-year-old woman with AD. They observed that her aphasia was so severe that she produced only 'unintelligible sounds with an occasional word', as well as not having the capacity to understand or respond to questions (p.456). As her expressive language capability decreased, her husband increasingly introduced music and singing into their daily routine. This encouraged her to express herself and helped to 'modulate her mood or physical activity' (p.458). TC's ability to both recognise and continue to sing familiar songs, while being unable to speak or understand the speech of others, demonstrates that different parts of the brain can adapt even in challenging circumstances, and that such strategies can be found to mitigate the effects of AD.

Aims and objectives

This exercise will explore how the use of singing and song, in place of spoken word dialogue can shape actors' evocation and embodied understanding of AD, in relation to the challenges of aphasia.

It will examine what happens when actors sing to one another in place of using everyday speech when only recalling part of a song. To test this, **Actor**

A will memorise a portion of a song and must sing it, as their only means of communication with **Actor B** and **Actor C**. The objective is that **Actor A** can only respond to **Actor B** and/or **Actor C** when the song they were told to remember matches that of their scene partner.

Love songs should be used for this exercise, because, as with TC and her husband, songs featuring the emotion of love provide an emotionally charged impact, which could encourage communication in a person with AD.

Severe aphasia can make social interactions very difficult. Observing the reactions and dynamics between actors in this exercise provides a practical method of exploring this aspect of AD and how people with the disease might overcome this challenge.

Preparation

Materials

- Three actors.
- A device that plays audio (such as a mobile phone).
- Two songs, similar in tone and style to one another (e.g. Nat King Cole's *When I Fall in Love* and *Unforgettable*).
- *Optional* set of headphones if required to hear the audio on the device (e.g. an MP3 player).

Organising your actors

- Label each actor as '**Actor A**', '**Actor B**' or '**Actor C**'.
- As the **director**, you will need to decide who hears what song. In the exercise below, **Actor A's** and **Actor B's** songs **match** (*When I Fall in Love*), and **Actor C's** song is **different** (*Unforgettable*).

Listening to the songs

The actors must listen to the songs before the exercise begins. Ensure that the actors do not discuss the pre-exercise task when they leave the room, and do not tell them that which song they have heard comparative to the other actors.

1. Ask **Actor B** and **Actor C** to leave the room.
2. Play **Actor A** 30 seconds of Nat King Cole's *When I Fall in Love*. Playing only 30-seconds of the song replicates difficulty with memory retrieval associated with aphasia in AD.
3. Once completed, ask **Actor A** to leave the room, and **Actor B** to come into the room.
4. Play **Actor B** the same song as **Actor A** (Nat King Cole's *When I Fall in Love*).
5. Once completed, ask **Actor B** to leave the room, and **Actor C** to come into the room.

6. Play **Actor C** a similar but different song to that of **Actor A** and **Actor B**. For this example, use Nat King Cole’s *Unforgettable*.
7. Once all actors have heard their respective songs, bring everyone back into the room to begin the exercise.

Running the exercise

The exercise requires the actors to sing to one another, to try and match the song and, subsequently, to use the lyrics and music to establish connection and dialogue.

1. Ask **Actor A** to stand in one location, away from **Actor B** and **Actor C**.
2. In turn, ask **Actor B** and **Actor C** to approach **Actor A**, and instruct them to sing the song that they heard before the exercise began to **Actor A**.
3. If **Actor A** hears (and recognises) their corresponding song being sung by **Actor B** or **Actor C**, they should begin singing the matching song.
4. **Actor A** should aim to establish and maintain a dialogue with **Actor B**, once recognising that they share the same song, by continuing to sing together.

Developing the exercise further

To develop this further, one actor can sing to the other to encourage them to perform a certain set of actions or tasks. This might include, for example, asking **Actor B** singing to **Actor A**, to encourage them to dance together, move to a specific location or hold hands.

Questions following the exercise

Questions for **Actor A**:

- Can you describe any emotions or physical sensations you felt during the exercise?
- To what extent did the exercise alter your ability to recognise or relate to either **Actor B** or **Actor C**?
- To what extent did the exercise frame your perspective and emotional understanding of **Actor B** and **Actor C**?

- How was your own recollection of the song you originally heard affected by what you heard **Actor B** sing to you?

Questions for **Actor B**

- Can you describe any emotions or physical sensations you felt during the exercise?
- To what extent did you feel you had established a relationship with **Actor A** in the exercise?
- To what extent did the exercise frame your understanding of either **Actor A** or **Actor C**?

Questions for **Actor C**

- Can you describe any emotions or physical sensations you felt during the exercise?
- How did the exercise change your feelings towards either **Actor A** or **Actor B**?
- To what extent did the exercise frame your understanding of either **Actor A** or **Actor B**?
- Can you describe what you felt when you were unable to establish a shared dialogue with **Actor A** and **Actor B**?

Emotions and memory

Exercises 7 – 9

Exercise 7: Emotions and cognitive empathy

While the most known side-effect of brain deterioration in AD is memory loss, people also experience difficulties with their emotions and the ability to empathise. At a cognitive level, AD can impede a person's ability to empathise with another, to such an extent that they struggle to build a complete mental picture of another person's situation and relate to their feelings.

Biomedical examples

AD attacks different parts of the brain, which causes various aspects of cognitive functioning to be at risk of deterioration. The implications of AD on cognitive empathy mean that a person can find it increasingly difficult to recognise or understand possible reasons for another person's behaviour or display of emotions, or to see the other person's perspective to better relate to their situation (Ávila-Villanueva et al, 2021, p.346). This can cause someone to feel increasingly distressed, depressed, and anxious, and lead them to socially withdraw. For example, Dickerson et al (2017) documented a 61-year-old man with AD who presented with cognitive and mood symptoms, including mild anxiety and depression, because of his condition (p.445). He was often distressed and unable to confidently comprehend the intentions of other people.

Changes to the brain caused by AD do not always equate to "decline". For example, research by Chow et al (2023), reported that AD can cause *changes* to cognitive empathy, as opposed to only a *decline* in this functionality. In these instances, where someone's emotional empathy increased in someone with AD, they became more concerned by others welfare (Chow et al, 2023, p.319). While increased emotional awareness is an important facet of this symptom of AD, this exercise looks specifically at the effects of AD and cognitive empathy *decline* (perspective taking) on a person living with the disease, and how an actor can advance their ability to sensitively portray the effects of emotional miscommunication and reception.

Aims and objectives

This exercise aims to make it increasingly difficult for **Actor A** to understand and relate to **Actor B's** behaviour. To achieve this, the exercise encourages **Actor A** to improvise a serious conversation (such as discussing a financial problem) with **Actor**

B, who begins to laugh uncontrollably. It aims is to make **Actor B's** response to **Actor A** appear inexplainable and confusing, and suggest a practical means of considering the effects of AD on cognitive empathy skills.

Laughter is a strong and clear emotion. It may confuse and anger **Actor A** as they try to explain something important and meaningful, while being met with laughter, especially if this is perceived as an attack and misread of the situation. Laughter is not the only emotion that can produce a confused reaction. It has, however, proven to be a highly usable emotion, to contrast to the more negative emotional tone of **Actor A's** situation, and to demonstrate the effects of discordant cognitive empathy.

Preparation

Materials

- Two actors.
- A set of headphones for **Actor B** (use in-ear Bluetooth headphones to better conceal the reason for their emotional reaction).
- A device to play audio, connected to the headphones via Bluetooth (which the **director** will control).
- A song or piece of music that is likely to cause **Actor B** to laugh when hearing it. For example:

Baby Elephant Walk: www.youtube.com/watch?v=9RPQKV6ijBY

The Gonk (music from “Seeing & Doing”):
www.youtube.com/watch?v=2RVM0uhjFIA

Titanic Bad Flute Cover: www.youtube.com/watch?v=BG6EtT-mReM

- You also need to select an improvisational scenario for the actors. For example:

Two housemates meeting to talk about **Actor A** being unable to pay rent for several months, getting into debt and facing eviction. **Actor A** approaches **Actor B** to try and resolve the situation.

A couple meeting to finalise arrangements of their divorce. **Actor A** approaches **Actor B** to arrange ownership of the family home, which they have a greater need for, to support their children.

A note on emotional responses

Humour is subjective and the suggestions above may not be right or cause the actor to laugh. The use of music and headphones in this respect is designed to induce a genuine emotional response for **Actor B**. Testing found it to be a reliable means of confusing **Actor A**, as **Actor B’s** laughter became uncontrollable, which further complicated **Actor A’s** ability to relate to their scene partner.

Below are two suggestions for how you might overcome this challenge, where this method may not work for the actors:

1. Speak to **Actor B** before you begin the scene and find out what makes them laugh, cry or even angry. The aim is for **Actor B** to reliably produce an emotional response that is incongruent with the mood of the conversation, and one which is likely to confuse their scene partner.
2. If **Actor B** does not find the suggested tracks amusing, remove the headphones and agree on a point at which **Actor B** begins to improvise spontaneous laughter, regardless of the situation. Use a subtle signal to indicate to **Actor B** when they should begin this (e.g. when **Actor A** says a particular word or phrase that is likely to come up in conversation, such as ‘I feel’ or ‘I don’t know what to do’).

Organising your actors

- Label one actor ‘**Actor A**’ and the other ‘**Actor B**’.
- Instruct both actors on what the nature of the scene will be, using one of the examples above. In the scene, **Actor A** must share with **Actor B** that they are in financial difficulty and face eviction if they cannot get help. The stakes for **Actor A** need to be high enough so that **Actor B’s** reaction is assumed as lacking empathy and understanding. For **Actor A**, the scene is a high stakes situation, so they should try to share their situation and seek help.
- Discreetly give the headphones to **Actor B** (it may be better to do this outside of the rehearsal space). You can tell them that they will hear sound at a random point. Do not tell **Actor B** exactly what they will hear and when, as this will inhibit the potential for a spontaneous response to the sound, in the context of the situation. **Actor B** will need to keep one in-ear headphone in at all times, to hear the sound, and must leave the other ear free to ensure they can hear **Actor A**.
- The **director** should not start the audio until **Actor A** has had a chance to share the severity of their situation.

Running the exercise

1. Connect the headphones to a mobile phone via Bluetooth. The sound source (mobile phone) must be controlled by the **director**.
2. Allow the actors 3-4 minutes of dialogue before introducing the music heard by **Actor B**, and ensure the music volume is at a level where **Actor B** can still hear **Actor A**.
3. Assuming that **Actor B** is amused by the sound they hear, allow the scene to continue. Work up to a point until **Actor A** has demonstrated that they cannot relate to **Actor B's** behaviour (approximately a further 5 minutes), before bringing the exercise to a close.
4. **Actor A's** inability to relate to **Actor B's** behaviour, and their subsequent responses, may vary. They may become irrational, irritated or angry at the situation, or even accuse **Actor B** of completely misunderstanding the point of the improvisation. Only end the exercise when you are confident that **Actor A** cannot demonstrate that they can empathise with **Actor B's** behaviour.
5. By the end, both actors should recognise and correctly identify their scene partners' emotions. The exercise should, however, prohibit **Actor A** from being able to rationally understand why **Actor B** is behaving in this way.

Developing the exercise further

Laughter is only one strategy for affecting the actors' ability to cognitively empathise with one another. The exercise is founded on the idea of deliberately disrupting one person's behaviour and emotional expectations of the other. When returning to this exercise, consider other emotions and who has access to all the information relevant to the exercise. Remember, you are not trying to get your actors to portray certain emotions, but rather to make it difficult for them to rationally comprehend the reasons for discordant displays of emotion.

Questions following the exercise

Questions for **Actor A**:

- Thinking back to the beginning of the exercise, to what extent did you expect that **Actor B's** emotional behaviour would match your feelings?
- When **Actor B** began laughing during your improvisation, can describe how you felt about yourself, your situation and towards **Actor B** in this moment?
- To what extent were you able to relate to **Actor B's** behaviour?

Questions for **Actor B**

- Given that you were aware before the exercise started that you would need to laugh when **Actor A** spoke, to what extent did your actions affect your ability to relate to **Actor A's** emotions?
- To what extent were you able to relate to **Actor A's** behaviour during and after you began laughing?

Exercise 8: Capgras delusions

Delusional misidentification syndromes cause the brain to create untrue but very realistic scenarios, where something is misidentified as something else – like being convinced that you are surrounded by imposters who look exactly like people you know. A primary type of these syndromes, which affects people with AD, is known as Capgras syndrome.

Biomedical examples

Capgras syndrome, first identified and documented by Joseph Capgras, is recognised as one of four primary delusional misidentification syndromes (Harwood et al, 1999, p.415). Distinct from hallucinations, Capgras is a delusion that typically causes a person to completely believe something which is not true. These delusions severely impact a person's ability to both recognise others and feel safe within familiar environments.

People experiencing the syndrome may believe a loved one or family member has been replaced with an imposter, because they no longer associate the physical person with their perception of that person. Capgras is estimated to affect 10% of people with AD (Fischer et al, 2009, p.510). Baird and Thompson's (2019) case report of 'TC', a 77-year-old woman with AD, documented that she experienced Capgras delusions, resulting from complications with AD. For TC, these delusions came on suddenly and without warning, and meant that she could no longer identify her husband, instead seeing him as a stranger. The delusions were a significant challenge for the couple and caused her to undertake related behaviours. This included TC telling her husband to leave the family home, during which time he would leave the house and sit in the family car, until his wife recognised him again, which could take as long as three hours (p.456).

While Capgras syndrome typically affects recognition of familiar people, it can also affect the ability to identify and recognise personal belongings. In Fischer et al (2009), an 87-year-old woman, admitted to a local emergency care centre with cognitive and behavioural changes, had the 'distressing belief that a woman, whom she did not know or recognise, had been entering her apartment and stealing her belongings' (p.509). She complained that the mystery person was stealing expensive porcelain figures and replacing them with cheap, identical imitations.

Aims and objectives

The aim of this exercise is to create a scenario in which **Actor A** is unable to recognise **Actor B**. This is achieved by making **Actor B** behave in such a way as to cause **Actor A** to dissociate the behaviour they see with the person they know.

There are primarily two ways of achieving this in a workshop, both of which are detailed in this exercise guide:

1. **Switching voices** – requires three actors, one of whom must be concealed from view.
2. **Shifting attitudes** – requires two actors and distinct behavioural shifts from one of the actors.

Method 1: Switching voices

Preparation

Materials

- Three actors.
- A hiding spot for **Actor C**.
- Three copies of the same script (**Actor B** and **Actor C** will play the same part).
- A set of headphones.
- A clip-on microphone.
- A radio receiver (mobile phones will suffice if receivers are not available).
- A radio transmitter (mobile phones will suffice if transmitters are not available).

Organising your actors

- Label each actor as '**Actor A**', '**Actor B**' or '**Actor C**'.
- **Actor A**: Sara.
- **Actor B**: Richard (first half).
- **Actor C**: Richard (second half).

In preparation for the exercise:

- Give **Actor A** the headphones connected to a radio receiver and a copy of the play text.
- Ensure the radio transmitter and receiver are set to the same channels before running the scene.
- Ask **Actor C** to attach the microphone to their clothing, so that it can pick up their voice.
- Mute **Actor C's** microphone, until the switch occurs midway through the script.
- Once they have these items, ask **Actor A** to wait outside and to not enter until you collect them.

Running the exercise

Once **Actor A** has left the room, tell **Actor B** and **Actor C** the following:

1. **Actor B** and **Actor C** will play the same part – **Actor B** performing on stage, and **Actor C** concealed from view throughout the exercise.
2. The switch between **Actor B** and **Actor C** will happen at an agreed point, by marking the script in advance. Below is an example of a marked script.
3. When **Actor A** returns, they will read the script with **Actor B**.
4. Just ahead of the time where the switch between **Actor B** and **Actor C** takes place, **Actor C** unmutes their microphone, so that **Actor A** can hear them speaking over their headphones.
5. At the agreed point in the script, **Actor C** will take over the lines, and **Actor A** will hear **Actor C** speaking instead of **Actor B**.
6. **Actor B** will remain physically present and active throughout the rest of the scene by lip syncing the remainder of the script, to the best of their ability, alongside **Actor C**.
7. Ask **Actor A** to come back into the space, once all the instructions have been explained and understood by **Actor B** and **Actor C**, to commence the exercise.

Questions following Method 1: Switching voices

Questions for **Actor A**:

- How did you feel towards **Actor B** initially, and again when you heard a different voice?
- To what extent did you feel you were able to adapt to the situation once the change occurred?
- What physical sensations and emotions did you observe within yourself during this exercise?

Questions for **Actor B**:

- To what extent did you observe any noticeable shifts in **Actor A's** behaviour and attitude towards you, when they began hearing **Actor C's** voice?
- What physical sensations and emotions did you observe within yourself during this exercise?
- What was it like to continue the scene with **Actor A**, even though you were not the one speaking?

Questions for **Actor C:**

- Describe how you felt and what you noticed about the quality of the voices of **Actor A** and **Actor B** throughout the exercise?
- Were you able to discern any noticeable shifts in **Actor A's** voice and attitude towards you after the switch occurred?

Script for Method 1: Actors B and C switch voices

Craig Taylor, *One Million Tiny Plays about Britain* (Play no. 19, 2011, p.38)

(A couple sits in a restaurant in west London)

Richard: I've got another tissue.

Sara: No thank you.

Richard: If you need it.

(He puts it down next to her knife)

Sara: I don't need it.

(She wipes her nose on the back of her hand)

(She dabs at her eyes with her finger)

So.

Richard: So. That's that, then.

Sara: I think I'm going to drink some more wine.

(He fills her glass)

Richard: Simon recommended this place.

Sara: It seems like a Simon type of place.

Richard: He says hello.

Sara: Does he?

Richard: He hopes this won't mean you'll disappear from his and Patricia's life.

Sara: Really? I'm sure that's what he said. This must be the greatest day of his year. He can finally have you to himself. He won't have to put up with my droning interruptions at dinner parties ever again.

Richard: He didn't say droning.

Sara: My 'interruptions' at dinner parties.

Richard: It was a joke and he didn't mean it. You know that. (pause)

Richard: He recommended the mussels.

Sara: I find they tend to drone.

(Pause)

NOTE: Switch from **Actor B** to **Actor C**. **Actor C** is hidden from sight, so that **Actor A** only hears their voice. **Actor B** lip syncs the remainder of the script alongside **Actor C**.

Richard: Well, I would just like to say that I would like to arrange a time to pick up my clothes and belongings.

Sara: Well, I would just like to say that I can have them sent to you.

Richard: I don't want to put you through that.

Sara: I can pack objects, Richard. All your clothes are out of the wardrobe anyway.

Richard: I don't want you to.

Sara: Am I going to find something?

Richard: You're not going to find anything.

Sara: Did you burn your receipts? Did you tear up all her letters?

Richard: There are no letters.

Sara: No, sorry, of course. I must be droning on.

Method 2: Shifting attitudes

Preparation

Materials

- Two actors.
- An improvisation setting (examples provided).

Organising your actors

- Label one actor ‘**Actor A**’ and the other ‘**Actor B**’.

Running the exercise

First, decide on an improvisation setting involving two people. For example:

- Friends sharing drinks and getting ready to go out for the evening.
- A partner returning to the shared home after a busy day at work.
- Friends bumping into one another while out shopping.

Begin by asking **Actor A** to leave the room so you can brief **Actor B** on what should happen during the improvisation. **Actor B** will be the person who abruptly shifts behaviour and attitude. The instructions below are tailored to the first suggested improvisation scenario (friends getting ready to go out for drinks).

1. Decide on the initial kind of character you want **Actor B** to create. For example, they are excited to go out with **Actor A** for the evening, chatting about all the places they want to go.
2. Choose an emotion for **Actor B** to shift to that contradicts the initial characterisation (e.g. anger or suspicion). This must be distinct enough from the previously established atmosphere and mood that **Actor A** struggles to identify **Actor B** as the same person they were previously interacting with.
3. To help **Actor B** with the transition, before beginning the improvisation, give them the instruction to go out of the room to 'get another drink', when they plan the shift and re-enter the space in their new character. Bring **Actor A** back into the room to commence the improvisation.
4. **Actor B** should first facilitate a secure emotional environment that allows **Actor A** to feel comfortable, and attribute *expected* behaviours from their scene partner (excitement and anticipation). To achieve this, allow the actors time to settle into the improvisation, for around 5 minutes, before **Actor B** shifts their emotional frequency.
5. Let the exercise run for another 5 minutes after the emotional shift of **Actor B**.

Developing the exercise further

Experiment with aspects of **Actor B's** character change. For example, **Actor B** enters as though they were disgusted by **Actor A**. Alternatively, try adding in a theme, like making **Actor B** appear as though they were plotting to harm **Actor A**. Below are some examples of how **Actor B** can re-enter the scene introducing a distinct mindset and energy to their role:

- **Actor B** wants to hurt or harm **Actor A** subtly.
- **Actor B** enters as though **Actor A** were a violent criminal.
- **Actor B** returns and tries to steal something from **Actor A**.

Questions following Method 2: Shifting attitudes

Questions for **Actor A**:

- What was noticeable about **Actor B's** behaviour, before and after the shift?
- How did you feel emotionally and physically before the shift in **Actor B's** attitude and behaviour?
- To what extent did you feel secure in the space both prior to and after the shift?

Questions for **Actor B**:

- How did you feel emotionally and physically in the scene, both before and after your character change?
- To what extent did you observe any noticeable shifts in **Actor A's** behaviour and attitude towards you when you re-entered the scene?

Exercise 9: Memory

Human memory is not a static, linear store of knowledge, like pages in a book of fiction. It is an adaptive tool serving multiple functions in a person's daily life. AD can impact memory functions in several ways, not all of which can be compared to an irretrievable loss of information.

Biomedical examples

The most attributed symptoms of AD associated with memory are 'memory loss' and 'forgetfulness' (Alzheimer's Research UK, 2023, p.13). While it is true that AD does affect memory, the term 'memory loss', as a catch-all for people living with the disease, is misleading. Specifically, the word 'loss', used in conjunction with memory, suggests a store of information that is depleted by the effects of AD and becomes irretrievable. This oversimplifies a complex area of biomedical research into these symptoms and further restricts the view of how people are affected by AD (Sabat and Warren, 2023, p.1820).

Two key types of memory function are '**explicit**' and '**implicit**' memory.

- **Explicit memory** is the active, conscious recall of information (like remembering the name of the orange juice brand you prefer). This type of memory recall is more typically affected by AD.
- **Implicit memory** is the unconscious recall of information and is used when performing a learned skill (such as riding a bike, writing or cooking a favourite meal). This type of memory recall remains relatively well preserved in people with AD (Sabat and Warren, 2023, p.1823).

Importantly, the symptomatic effects of AD on memory do not mean a complete loss of memory recall. For example, regarding implicit memory, a person with AD may not recall having performed a certain action in the past, but their approach to performing it again often shows that they have some memory of having done it before (Sabat and Warren, 2023, pp.1821-1822). Additionally, difficulties with explicit memory recall do not always mean that correct information is unrecognisable. For example, one of Sabat’s patients, ‘Dr M’, whose explicit memory was impaired by AD, explained that she experienced temporary difficulty in locating the word ‘physician’, rather than losing it (and its definition) from her lexicon (Sabat, 1991, p.174).

This exercise explores the effects of AD that cause a person to appear forgetful and miss specific steps in a routine. For example, in a video interview produced by the Social Care Institute for Excellence (2014), Barry, who had lived with dementia for over 15 years, found difficulty locating items in his kitchen that he needed to make a cup of tea:

> I couldn’t remember which cupboard was which, couldn’t remember where the jam goes, where the sugar goes, where’s the milk, where’s that. And I was like this for a minute or two, [while thinking] this is my kitchen. Here I am and I can’t make a cup of tea.

Beyond a simple ‘loss’ of memory, Barry’s recall affected his ability to both locate items and recognise the sequence they should be used in.

Aims and objectives

This exercise aims to make the experience of completing a familiar activity difficult, by affecting the actor’s ability to apply a correct sequence to the task. This is achieved by asking the actor to search for numbered cue cards that the director has placed around a space. Each card describes a step in the process of a task, the corresponding instruction for which the actor must carry out when they find them, regardless of whether (or more likely when) they must be done out of sequential order. The use of cue cards means that the actor is free to select them in any order, suggesting a level of control over the outcomes of the exercise.

Inevitably this will lead to confusion, frustration and, in most cases, an inability to successfully complete the task. The objective is to allow the actor to consider how AD disrupts a person’s memory and ability to complete everyday jobs. Rather than deliberately performing an activity incorrectly, which gives them too much agency, actors can discover how the disordering of this multistep task can produce feelings and emotions like those expressed by people with AD.

Preparation

Materials

- One actor.
- A step-by-step guide for a task (example below).
- Numbered cue cards, totalling the number of steps in the task sequence, placed around the space.
- A relevant space to undertake the chosen exercise (a kitchen in the example below), rather than in the workshop space.

Preparing the space

- Before your actor enters the space, ensure you have set up all the necessary equipment needed (e.g. tea bags, milk, kettle, spoons).
- Randomly place the numbered cue cards around the space.
- Avoid placing the cards in any particular order, as this will encourage your actor to explore the space more fully and increase the likelihood of them selecting a random sequence.

The Tea Making List

This example requires 15 cue cards to be placed around a kitchen. The corresponding sequential steps are as follows:

1. First, gather your materials including tea bags, a teapot, a cup, two spoons, sugar and milk.
2. Now fill the kettle with cold water and press the switch on to boil it.
3. Place 2-3 tea bags in the teapot.
4. Allow time for the kettle to boil and wait for the click before pouring the water into the teapot.
5. Give your tea the time it needs to brew in the pot (2 minutes).
6. While you are waiting for the tea to brew, put your cup out ready and place the spoon in the cup ready to stir in milk and sugar.
7. Now that the tea has brewed, fill the cup with tea to three-quarters of the way up the side of the cup.
8. Now you can pour in the amount of milk you would like.
9. Be sure to stir the milk into the tea well so the two don’t separate.
10. Using a separate teaspoon, measure out how much sugar you would like to add to your cup and stir this in well.
11. Now lift the cup and sip carefully to check the temperature is right for drinking.
12. If the tea is too hot you can gently blow on the top of the cup to cool it down before drinking.
13. Find a comfortable spot to sit and savour the flavour of the tea.
14. Once you have finished, place your cup in the sink, ready to be washed.
15. Wash your cup, spoons and the teapot once it is empty.

Running the exercise

Begin the exercise by instructing your actor on how the exercise will work.

1. They should stand in the space and be prepared to make a pot of tea.
2. To do this, the actor will need to look for numbered cue cards within the space and read out the number to the **director** when they find one.
3. The **director** will then provide the corresponding instruction, and the actor should complete that task before moving on to search for the next card.
4. No matter what number card the actor picks up first, they should try to complete the corresponding action, as best they can.
5. The chances of the actor selecting all 15 cards in the correct order are small but not impossible.
6. The actor may pick up several cards in the correct sequence. Do not stop them if this happens, as it is likely they will select a non-sequential number at some point during the exercise.

Give the actor **15 minutes** to work on this exercise, before you stop them and move onto the discussion.

Questions following the exercise

- Describe how you felt emotionally and physically when carrying out instructions in a different sequence to one you might have expected.
- To what extent did the exercise make you feel like you had control over the situation?
- Describe how you felt at the beginning of the exercise and how this may have changed by the end.

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A list of the resources referenced in this workshop guide.

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Abbreviations

AD	Alzheimer’s disease
EOAD	Early Onset Alzheimer’s disease
FAD	Familial Alzheimer’s disease
LOAD	Late Onset Alzheimer’s disease
PCA	Posterior Cortical Atrophy
PP	Phonemic Paraphasia
PWD	Pure Word Deafness

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