SHAKESPEARE FOR **B**RAIN **H**EALTH
Thursday 23 April 2026
Transcript

ROYAL CENTRAL SCHOOL OF SPEECH & DRAMA
UNIVERSITY OF LONDON

VERONICARTS
Arts for Brain Health

For World Innovation and Creativity Day & Shakespeare's Birthday.

Aim: Through the evidence of neuroscience and performance, to encourage drama training and Shakespearean workshops to override early dementia symptoms and preserve brain health.

C O N T E N T S

Veronica Franklin Gould MBE, *Greengross Global Arts for Brain Health Changemaker Conversations*

Hello! A very warm welcome to you all, tuning in from Spain, Australia, Switzerland, Taiwan, Canada, the United States, Guernsey and around the United Kingdom. Today, for Shakespeare's birthday, we examine his timeless insight into human nature and revolutionary use of language that has for decades mesmerised and energised actors and audiences like none other. Shakespeare is said to have invented 1,700 new words. His 'functional shift', transforming nouns into verbs, surprises the brain into active thought. Recognised the world over, Shakespeare widens our vision, to look beyond our concerns, inducing a sense of awe – as our speakers demonstrate through neuroscience and performance.

I am Veronica Franklin Gould, founder of Arts 4 Dementia the charity that runs and signposts cultural programmes to re-energise and inspire people and their families above the stigma and early challenges of the condition. Often it is social fear, even shame, that makes them anxious about leaving the safety of home. So cultural activities need to be compelling, of high calibre, as well as sociable – to 'preserve their brain health.'

Our speakers today exemplify par excellence how Shakespeare's inventive, energising, musical language offers valuable new learning and participation opportunities for cultural venues:

Dr Christopher Bailey,, founding Co-Director of the Jameel Arts and Health Lab at University College London, and until recently Arts and Health Lead at the World Health Organisation, set my mind ablaze with his performance of Shakespeare for Mental Wellbeing at the Globe Theatre last year. Our opening interview will be with Christopher, who explains how the Bard inspires his global arts-for-health practice.

The Bard on the Brain: Understanding the Mind Through the Art of Shakespeare and the Science of Brain Imaging is the best book on the subject. Today, its co-author, Professor Paul Matthews is here to explain the neuroscience behind Shakespeare's human insight and language. And who better to speak the language than Britain's eminent Shakespearean actress and author Dame Harriet Walter.

Selina Busby, Professor of Social and Applied Theatre at the Royal Central School of Speech and Drama will host a Conversation on the zoom with Paul and Harriet. After a brief interval, Selina will chair a Q&A for her MA Applied Drama students with the speakers.

Finally, Sian Brand, Chair of the Social Prescribing Network, will explain the route to wellbeing for people seeking non-medical treatment for their conditions, for example, wishing to 'preserve brain health' - a constructive concept to avoid the stigmatising term 'dementia.'

Now let us welcome Christopher, whose Arts for Health work has taken him to South Dakota, from where he records this interview today.

Dr Christopher Bailey, Co-Founding Director, Jameel Arts and Health Lab at University College London.

'Shakespeare and Wellness'

Veronica Franklin Gould: Good morning, Christopher. It is wonderful of you to join us for Shakespeare for Brain Health. It is due to you that this inspiration for the meeting happened. Hearing your talk at the Globe theatre, it was extraordinary to hear how much Shakespeare you have used in your Arts for Health work.

I particularly loved hearing how a person with a condition of any kind, whether mental health, pain, early dementia worries, finds through Shakespeare such opportunities to think beyond themselves, to think about the human state, the world, that sense of awe, and something beyond.

You mentioned particular interest in the neurological elements in Shakespeare covers and how people use Shakespeare to manage their condition, to thrive. You've seen this and used this all over the world, so we'd love to hear a little bit about it.

Christopher Bailey: Sure. I think on the first, it's pretty remarkable when even a cursory stroll through the canon, you see pop up neurological conditions that are quite specific.

You have a very accurate description of epilepsy in both *Julius Caesar* and *Othello*, for instance. And going even beyond neurology, just basic medical health and psychological observations that are strikingly specific, from the post-traumatic psychosis of *Macbeth* and some of the specific aspects of that, of the both visual and auditory hallucinations, the dissociation, and the difficulty in trying to reassociate after committing moral trauma is spelled out in extreme accuracy in *Macbeth*, which is one of the reasons why I often like to use it.

You also have in *Henry IV Part II*, Cumberland describing the basic principles of vaccination, and you think, well, what did they know in Elizabethan medicine? How does Shakespeare know all this? Is he just such a voracious reader and such an eminently curious. person that he simply observed all these things? Well, maybe, but it is interesting to note that a lot of the medical references do appear from the midpoint of his writing career on, and specifically at about the time when one of his daughters was engaged to a doctor, a guy named John Hall. One could imagine in the absence of any biographical detail, that his future son-in-law may have spent a number of evenings with Shakespeare. sipping a bottle of port and trying to impress his future father-in-law with his medical and professional knowledge, and Shakespeare nodding his head and going, hmm, I could use that, you know?

Veronica Franklin Gould: This is fascinating because I'm thinking through this event to encourage people theatre companies, drama colleges, arts hubs, day centres, care homes etc, to run Shakespearean weekly activities for people to help them override their conditions. The idea is that people who are experiencing these should perhaps first discuss together – whether it's a soliloquy, or dialogue – and go on to recreate or compose their own verse or scenario. So, it is interesting, you're starting off at the level of their mental state, how they feel at the

time; and then, encourage them to extend this through Shakespeare. We'd love to hear how you actually used this.

Christopher Bailey: I think first of all that any kind of creative expression in any art form is beneficial; and within the world of theatre and poetry, it can be anyone. Shakespeare isn't a magic cheat code or anything, but I think there is something about the universality of his canon and the endless curiosity of. his mind that makes it very accessible, no matter what your background or conditions are. Now, in terms of how to use the Shakespeare, well, I think the general rule in creative arts therapies are: Begin where they are. In other words, it's not so much prescribing something that you think is good for someone else. It's more deep listening and experiencing what somebody else is going through – good, bad, or indifferent – and then taking a journey together, in this case, through the lens of Shakespeare.

As an example, last week we had a number of young performers who have been diagnosed as autistic, and they found not only Shakespeare to be a wonderful frame through which they can find expression – where they have built-in neurological difficulties from the autism – either reading expression or expressing it themselves. It offered them the freedom to explore areas that, because of the social stigma of the autism, they might have found it more difficult to do otherwise. So, for instance, at one point. We were exploring *Hamlet* in terms of its incredibly honest depiction of depression and intimations of self-harm. Several of the young performers got up and did this beautiful interpretive dance to this soundscape done from the 'To Be or Not To Be' monologue, but each player saying a line. And it became this multi-faceted, textured, emotional expressing through movement and rhythm and words and meaning, incredibly moving. And so, Shakespeare was the gateway to get there. I think we would be hard-pressed to find anything in human experience where you couldn't find some kind of resonant moment within the Shakespearean canon somewhere. I think when you get right down to it, and it gets to the heart of creative arts therapy, this message is to meet people where they are. If someone is feeling sad, you do not play happy music. You do not say, 'snap out of it', 'feel better', 'it's not that bad', because basically you're invalidating their feelings. And oftentimes, a person might have two reactions to that. On the one hand, they could feel the stigma of feeling sad and retreat within themselves and have their self-loathing unexpressed and build. Or it could trigger an angry reaction of, *You're not listening to me. You're invalidating my feelings.* But if someone is sad and you play sad music, suddenly, they become alert. And it doesn't increase the sadness. What it does is it signals that you're being heard. And from there, you can take a journey together. And that, to me, cuts to the core of the power of the arts in terms of a mental health journey. And it goes back to a quote from Carl Jung, which is *Loneliness is not the absence of people. Loneliness is the inability to express what matters to you most*. And if you can't express it through words, you can do it through a sound, through a movement, through space, through the framing of an image.

There are many reasons why you might not be able to express it. It could be a neurological deficit of some sort. It could be an unequal power relationship. It could be social shame. It could be many things. But to have that space where you have the freedom to express what you're really going through and have that played out and heard and built upon is incredibly empowering.

Veronica Franklin Gould: Absolutely, thank you indeed, Christopher. But you've really brought the great advantages of engaging with Shakespeare and insight from the language and how the language makes people move. And the very interesting idea that when people are low, to meet them down where they are, and the opportunities it gives them to grow. So thank you very much, Christopher. thank you for inspiring today.

Christopher Bailey: My pleasure. And I'm sorry I couldn't be with you live. As you know, I'm on the Pine Ridge Reservation in South Dakota working with the Lakota Sioux on arts and health practice.

Veronica Franklin Gould: Thank you very much indeed, Christopher. Your message of the transformative power of Shakespearean thought and language in improving our health and wellbeing has inspired our Conversation today. And now:

'Understanding the mind through the art of Shakespeare and the science of brain imaging'
Professor Paul Matthews and
Dame Harriet Walter.

Professor Paul Matthews is Professor of Translational Neuroscience at Imperial College London, a Group Leader in the UK Dementia Research Institute and Director of the Rosalind Franklin Institute, where he leads the national research centre in developing innovative imaging and technology for health sciences. He is co-author of *The Bard on the Brain: Understanding the Mind Through the Art of Shakespeare and the Science of Brain Imaging* (2003).

Veronica Franklin Gould: We hugely look forward to learning from Paul the neuroscientific thinking and response to Shakespeare. At the Library of Congress in Washington DC, England is represented in *The Evolution of Civilisation* mural by the Victorian actress Dame Ellen Terry, holding open Shakespeare's First Folio. Paul is joined today by her counterpart,

Dame Harriet Walter DBE. Harriet is a multi-award-winning Shakespearean actress. She has performed in over twenty Shakespeare plays - male and female roles - to huge public acclaim and written many books, among them, *She Speaks! What Shakespeare's Women Might Have Said* (2025) *Brutus and Other Heroines: Playing Shakespeare's Roles for Women* (2016). *Facing It: Reflections on Images of Older Women* (2011) *Macbeth (Actors on Shakespeare)* (2002).

Veronica Franklin Gould: Harriet, I also treasure your book on *Macbeth*! and much look forward to your response to Paul, your expression of Shakespearean thought illuminating the neuroscientific impact.

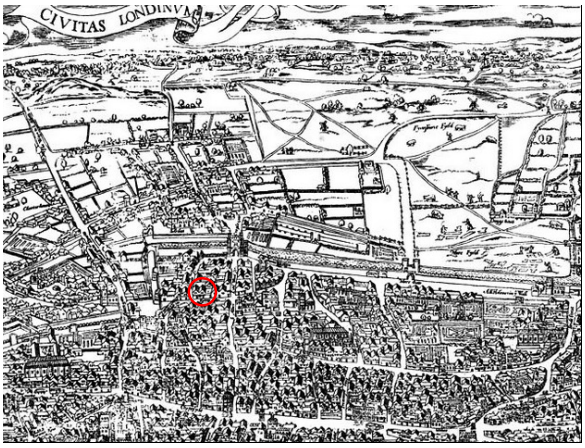
Professor Paul Matthews: Thank you. I'm looking forward to working with you, Harriet.

William Shakespeare (1554-1616). All of you have seen this image of Shakespeare, I am sure. There is no doubt that it really doesn't represent his true visage very well. There are very few extant pictures from the time, but it gives us a sense of a man who is looking both at the world but also within himself. He lived four hundred years ago, but yet as we shall hear today, his words are as alive now as they must have been then.

National Portrait Gallery, London

London c. 1570-90

Shakespeare grew up and lived – and most importantly – worked in an England that was very different from ours in some ways. But what's important is that London at the time was a hugely diverse cosmopolitan city, as now.



Site of Shakespeare's House Silver St and Mugale St, 1604.

In 1604, Shakespeare was living in the nicer part of London, near Silver Street, illustrated here on the map of the time. But he was surrounded by a very rich community, from which he drew inspiration for his works. Shakespeare worked in an incredibly, commercially competitive environment.

The London Inn and 'pop-up' theatre in Elizabethan England

Theatres of the time were more often, and particularly in Shakespeare's early days, pop-up theatre in pubs. There were a diverse, very broad range of acting groups in the city at the time, each competing for favour. It was some time before Shakespeare found himself established enough to be able to consider himself really successful. That is an important part of the story today, because this competitive environment, the need to attract the audience and to maintain their attention really led, I think, to the excitement in his theatre.

Cross Keys Inn. Like the Red Lion.

Shakespeare's iterative approach comparable to today's scientific method

Shakespeare, whether as an actor, playwright or producer, was forced to distil and continuously refine his theatre in what I think were iterative "experiments" to see how the audience responded, and find ways of continuing to attract them. This iterative approach to reaching his audience in many ways invites comparison with the scientific method we use today, and that, I believe, is how Shakespeare refined his descriptions of human behaviour so well.

The brain – the seat of the embodied mind

Throughout his work, Shakespeare repeatedly demonstrates an awareness, growing in the Renaissance, of which he was near the beginning, of the "embodied mind", the idea that our thinking, our behaviour, our motivations lie within ourselves. They're not imposed from the outside. And Shakespeare, I believe, even recognized the brain as a centre for this. With this, he explored psychology through his plays and the brain correlates of the psychology that he explored, the questions that he wrestled with in his theatre. are still a focus for wonder and exploration in science today.

Let me start by setting the central player in today's story, which is the brain. Here is a brain post-mortem taken out of the cranium. What you can see are the marked convolutions, the worm-like surface which arises as the very big flat sheet of the brain, very big because it contains so many nerve cells that perform the computations, is squeezed into the tiny space, forcing this crinkling pattern.

Regions of the brain**:** The brain is divided into different regions. They're a little bit difficult to see on the outside, but if you look to the left, that's the front part of the brain, the frontal lobe, where much of the reflective thinking occurs. If you look to the far right, that's the back part of the brain, the occipital lobe, where vision is processed. In the middle is where sensation and action are refined; and then down below, beneath the large longitudinal fissure is where one finds more interest, more internal representations of feeling and thought.

The skull. An important part of what Shakespeare would have been aware of is he probably didn't spend much time looking at brains, but he certainly knew what a skull looked like. This probably was important, and certainly by the time of the early nineteenth century became very important, as a guide to what the brain was. If you look on the skull, the skull is not smooth, but has bumps of different sizes and shapes, each skull being unique. If one looks inside the skull, and begins to probe the interior, one can actually see the imprint of the soft brain, where the blood vessels are, those dark lines that you see on the post-mortem brain. You can see where the brain was larger, on a side, and where it was smaller.

This gave rise to the notion embodied most fully in phrenology in the early nineteenth century that claimed that a person's mental faculties and character traits both were localized to specific regions of the brain and that the size and shape of the skull could be used to reveal the development of these regions and the person. We don't believe that now. It's not so simple. There isn't such a simple localization of functions in the brain that we can recognize a person's traits from just looking at the bumps on the skull. But despite being wrong, much of the core of what was embodied in that thinking, which grew up in the Renaissance into the nineteenth century, is still considered part of the foundation of our thinking about the way the brain functions.

- First, there's a localization of functions. Different parts of the brain have different functional roles in our cognition.

- The second is that there's a link between what goes on in the brain and our behaviour, and that emphasizes that behaviour arises from the brain. It's not something that comes from an abstract soul or otherwise is imposed from the outside.
- Finally, it highlights how the understandings of how the brain works becomes a key to understanding who we are as people, or who others are.

***Hamlet* and Yorick's skull in Act V:**

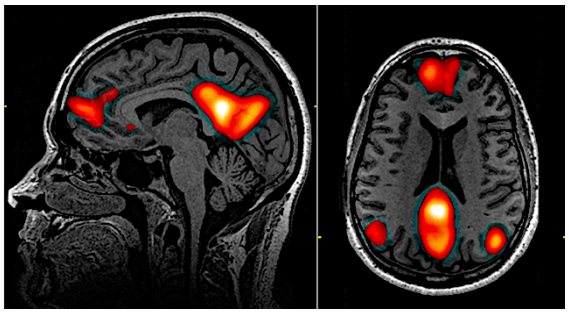
I think the most widely recalled scene in Shakespeare's canon that draws us to think about the brain through the skull comes from *Hamlet* (Act V Scene i), where we have Hamlet and Horatio encountering two gravediggers preparing for a burial. The gravediggers joke casually about death. One of them tosses up a skull from deep in the ground. Hamlet picks up the skull; and then he is told that it belonged to Yorick, the king's jester. The jester that Hamlet grew up with as a child. And holding the skull, through looking at the shape of the skull and its indentations, he recalls the full person, Yorick. Let me go to Harriet . . .

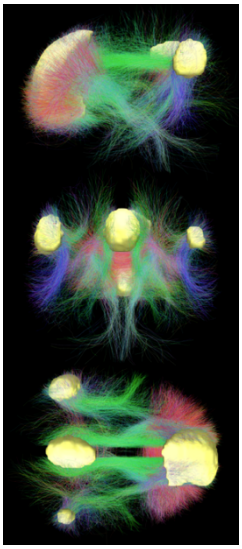
Dame Harriet Walter as Hamlet

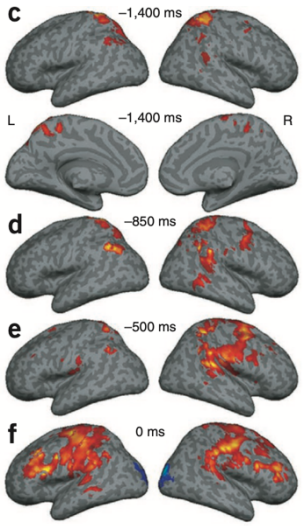
> . . . *Alas, poor Yorick! I knew him, Horatio—a fellow of infinite jest, of most excellent fancy. He hath bore me on his back a thousand times, and now how abhorred in my imagination it is! My gorge rises at it. Here hung those lips that I have kissed I know not how oft. Where be your gibes now? your gambols? your songs? your flashes of merriment that were wont to set the table on a roar? Not one now to mock your own grinning? Quite chapfallen? Now get you to my lady's ⟨chamber,⟩ and tell her, let her paint an inch thick, to this favour she must come. Make her laugh at that.*
>
> (*Hamlet, Prince of Denmark,* V.i.190-202).

Paul Matthews: The ruminative brain and indecision

Much of Shakespeare's canon dwells on thinking internally, on his characters ruminating, often ruminating with indecision, and sometimes ruminating towards decision. We've learned a lot about how we look into ourselves. How we monitor our thinking, and this is much of what has come in this science and in the science I'm going to describe subsequently, arises from methods of functional magnetic resonance imaging, where we can use an MRI scanner to look at the way the brain activity changes over time.







Nature Neuroscience Vol.15 | No.3 | March 2012

What you see illustrated on the far left are two slices of the brain, done electronically, that show us areas in bright orange and yellow where the brain is very active when the individual in the magnet being scanned is ruminating, thinking internal thoughts.

These areas are connected by a rich range of nerve fibres, illustrated here in this magnetic resonance imaging diffusion image. If you look at the yellow blobs, those are the equivalents of the orange-yellow ones you see at the left. Running between them is this rich array of hair-like fibres, each of which comes from one nerve cell connecting with another, showing how the functional connections occur across the whole brain.

What's interesting about rumination is that it tells us a little bit about the way the brain is organized. This over on the far left is the idea generator; and then what happens is when we move towards action, there's more activity up in the front of the brain, which is where the decision engine lives. Rumination is the self-reinforcing thought that could loop without resolution unless the front of the brain drives it towards action.

Here is an extraordinary set of images (above: 3rd on right) that were acquired by Tim Behrens and his group in London, that give us the time series. These are each snapshots of time, preceding a decision to move. Looking way up at the top, you see some elements of this ruminative default mode network. The bright orange areas highlighted near the back of the brain; coming up, down to the bottom, you see the front part of the brain beginning to be engaged as rumination switches to decision for action. The brain is starting to think about what it will do, and then it moves to decision, to evolve towards the motor action that results in this experiment.

***Hamlet*, '*To be, or not to be – that is the question . . .* (Act III, Scene I)**

Shakespeare was well aware of this rumination preceding action, this back and forth of indecision until a choice is made; and the most memorable speech in Shakespeare arises as a consequence of this, in the famous lines of *Hamlet*: 'To be, or not to be.' where Hamlet has recently confirmed that his uncle Claudius had murdered his father but he has yet to act on his duty of revenge. He is alone on the stage in the presentations. He is speaking to himself, trying to weigh between what he regarded as a life of suffering, where he will have to act on his duty or to choose the palliation of a peaceful death. A peaceful death, but … So, here, before the play moves forward with a decision to action, let me move again to Harriet.

Harriet Walter, as Hamlet:

To be, or not to be—that is the question:
Whether 'tis nobler in the mind to suffer
The slings and arrows of outrageous fortune,
Or to take arms against a sea of troubles
And, by opposing, end them. To die, to sleep—
No more—and by a sleep to say we end
The heartache and the thousand natural shocks
That flesh is heir to —'tis a consummation
Devoutly to be wished. To die, to sleep —
To sleep, perchance to dream. Ay, there's the rub,
For in that sleep of death what dreams may come,
When we have shuffled off this mortal coil,
Must give us pause. There's the respect
That makes calamity of so long life.
For who would bear the whips and scorns of time,
Th' oppressor's wrong, the proud man's contumely,
The pangs of despised love, the law's delay,
The insolence of office, and the spurns
That patient merit of th' unworthy takes,
When he himself might his quietus make
With a bare bodkin? Who would fardels bear,
To grunt and sweat under a weary life,
But that the dread of something after death,

The undiscovered country from whose bourn
No traveller returns, puzzles the will
And makes us rather bear those ills we have
Than fly to others that we know not of?
Thus conscience does make cowards of us all,
And thus the native hue of resolution
Is sicklied o'er with the pale cast of thought,
And enterprises of great pitch and moment
With this regard their currents turn awry
And lose the name of action.

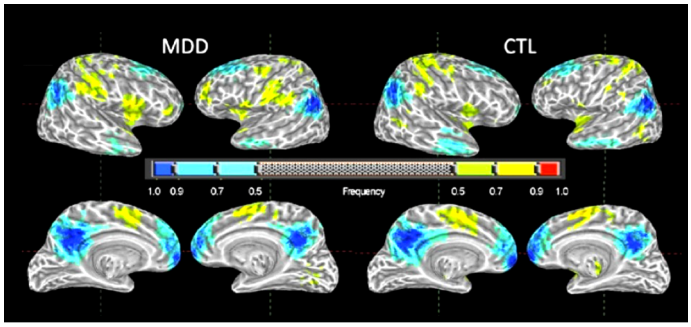
(*Hamlet,* III.i.64-96)

Paul Matthews: Maladaptive rumination

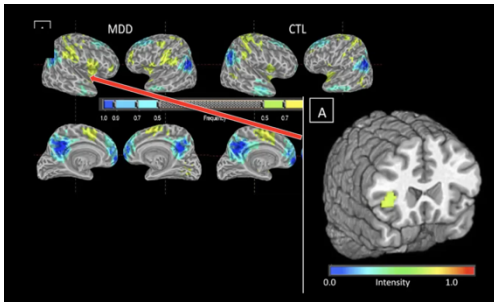
Rumination in Shakespeare, as I have mentioned, is a big theme. The potential and liabilities of this self-reflective mind that he recognized as part of the Renaissance recurs through Shakespeare's plays. They highlight a modern view of mental health, though. It's one of agency as well as liability for the self-reflective mind.

Depression, we now know, can be framed well as a maladaptive rumination, a repetitive, passive focus on negative feelings and their causes and consequences that we lose control of, that are sticky, that amplify negative biases, preferentially retrieving negative memories.

This has been studied a great deal using these functional magnetic resonance techniques. Now that you all know something about the default mode network, this rumination network, here in these images from on the right, healthy people, and those on the left from people with major depressive disorder. If you look in the areas that are highlighted in the blue colours, you can see the same sort of default mode network that I illustrated previously that's involved in rumination in the yellow-orange. Then you see, in addition, I've highlighted the area that Hamlet may have activated in his brain – that I spoke about being activated with decision – in yellow. So there's a crisscross, a trade-off in activity between these blue areas of the brain ruminating and the yellow areas that exert action.



Biol Psychiatry, 2011. 70:327–33



In people with major depressive disorder activity, the blue areas become much more prominent and become very sticky, stuck in a ruminative phase, relative to the yellow areas. You begin to see this down at the bottom of the slide. What actually helpful in highlighting the switch is there's a little space in the middle of the brain, which is highlighted here on the right, that one can find if you mathematically subtract

all of the areas in the depressive disorder people from those in the healthy controls. You can identify those areas that don't respond appropriately in making this switch between the ruminative and the active phases that don't allow the depressed individual to snap out of it. That's in this small area down here, involving what's known as the insula. What we've learned since is that this area can be modulated by the front of the brain, by methods such as cognitive behavioural therapy (CBT) or even mindfulness controls this switch to decouple negative thoughts and allow us to move forward in action.

This maladaptive rumination behaviour that I've described is a risk factor, a trait that some people have that makes them more likely to become depressed, but it is also a mechanism, a way in which depression is maintained in the brain if this little "switch" area can't be activated.

The exciting thing, and the really hopeful thing, is there are many ways in which that switch area can be made activated: behavioural activation, mindfulness, CBT, neuromodulation.

***King John* (Act III, Scene iv)**

Shakespeare was aware of this too. It is a remarkable consequence of this self-reflective brain that it can look at its own behaviour and find ways of explaining, describing and moving away from it. I think this is illustrated quite well in *King John*. Act 3, Scene 4 provides an example of a sort of mindfulness, as Constance, the mother of Arthur, addresses her own perceived depressive behaviour. Constance's young son Arthur has been captured by King John. She has been separated from her son and fears for his life. She is grieving, raging, refusing consolation. Her emotional intensity in all of this – a mother's concern for her child – leads others to believe that she has lost her reason. But she insists that her grief is rational – and that is how she is "thinking herself out of it". So, King John.

Harriet Walter, as Constance in *King John*:

Thou art not holy to belie me so.
I am not mad. This hair I tear is mine;
My name is Constance; I was Geoffrey's wife;
Young Arthur is my son, and he is lost.
I am not mad; I would to heaven I were,
For then 'tis like I should forget myself.
O, if I could, what grief should I forget!

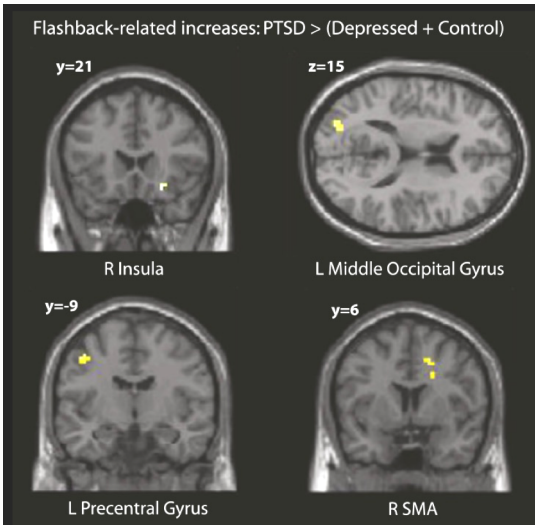
Preach some philosophy to make me mad,
And thou shalt be canonized, cardinal.
For, being not mad but sensible of grief,
My reasonable part produces reason
How I may be delivered of these woes,
And teaches me to kill or hang myself.
If I were mad, I should forget my son,
Or madly think a babe of clouts were he.
I am not mad. Too well, too well I feel
The different plague of each calamity.

(*King John,* III.iv.45-61)

Paul Matthews: Intrusive memories and post-traumatic stress

But we don't always have control over our thoughts. Sometimes memories can become intrusive particularly in the context of post-traumatic stress disorder (PTSD). Chris Bailey has already referred to this in his preceding talk. Intrusive memories are vivid. They become embedded and they are usually associated with highly emotional events that are encoded in the brain with unusually strong salience. In PTSD, these memories are sensory rich, easily triggered and they are just not integrated with the rest of our thinking. What's notable is that there is a dominance of sensations, visual and often motor perceptual systems are strong and engaged. In fact, it is because the brain stores memories of perception in very similar ways that it uses to store the sensations themselves.

Here is an example of how brain activity for intrusive memories arises. These brain activation images were generated from scans of a group of people who suffered from PTSD. Their brain images were taken just during the intrusive memory. What it shows is the parts of the brain in which inner reflective thought are activated to trigger feelings that are very similar to those that they have had during the initial event. What becomes pathological is a failure of tagging by past and present. Memory isn't clearly very good as past. They experience the problem anew. I interpret, as does Chris Bailey, Lady Macbeth's illness as an example of this.



Brain and Cognition 81 (2013) 151–59.

***Macbeth* (Act V Scene i)**

Lady Macbeth is being observed at night by a doctor and a gentlewoman. They have noticed that she has risen from bed. She is sleepwalking and carries her candle and is rubbing her hands repeatedly as if washing them. Let me take you to the scene with Lady Macbeth, 'Out, damned spot, out!'

Harriet Walter, as Lady Macbeth

Out, damned spot, out, I say! One. Two.
Why then, 'tis time to do 't. Hell is murky. Fie, my lord, fie, a soldier and afeard? What need we fear who knows it, when none can call our power to account? Yet who would have thought the old man to have had so much blood in him? 37-42)

... The Thane of Fife had a wife. Where is she now? What, will these hands ne'er be clean? No more o' that, my lord, no more o' that. You mar all with this starting.

... Here's the smell of the blood still. All the perfumes of Arabia will not sweeten this little hand. O, O, O!

... Wash your hands. Put on your nightgown. Look not so pale. I tell you yet again, Banquo's buried; he cannot come out on 's grave.

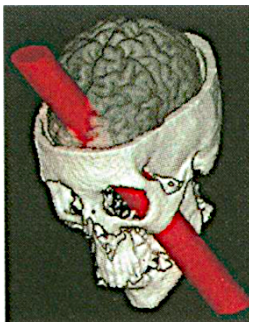
... To bed, to bed. There's knocking at the gate. Come, come, come, come. Give me your hand. What's done cannot be undone. To bed, to bed, to bed.

(*Macbeth*, V.i. 37-72)

Paul Matthews: Psychopathy and impulse control

Psychological traits bias decisions and action in people. These traits are influenced by the structure and wiring of the brain, although not directly so in complex it's often in complex and difficult to decipher ways, but there are, we're beginning to have some understanding of this.

A striking example of this comes from the very sad case of Phineas Gage (1823-60). Phineas Gage was an American railway worker. In 1848 he was a respected supervisor of a work team building the Transcontinental Railway, which involved dynamite through large sections of mountainsides in order to create space for the track to run. As part of this work, there was a dangerous element where the dynamite had to be tamped down in a hole drilled in the rock, had to go down deeply enough so that the explosion could break fissures to allow the rock to crack. As he was using the long iron bar to tamp down the dynamite, his head being held over the top of the bar, a spark caught against the side of the rock. The dynamite exploded and the tamping iron was thrown through his skull, going through the left cheek, just behind the left eye and right through the front part of his brain.



This is a modern reconstruction of that injury, generated from Phineas Gage's skull, which is still preserved. Hannah and Richard Demasio in California performed CT scans and reconstructed the precise path of that tamping gauge shown in red. They then reconstructed the shape and size of Phineas Gage's brain from the inner surface of the skull to define exactly where the bar went. The consequences of this injury were profound. Contemporary reports described Phineas Gage as an immensely reliable, sensible, rational worker before his injury.

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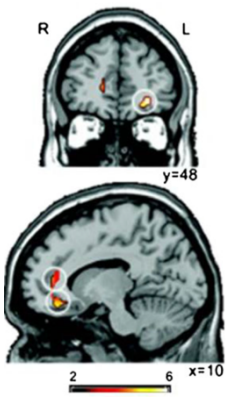


After this event – which did not kill him – he had preserved language, he had intact intelligence and his perception was normal. However, he became impulsive. His judgement became impaired. He became socially disinhibited, becoming an alcoholic. He was unreliable. He lost all ability to regulate his social interactions and to make decisions about the future. His personality had utterly altered. The iron bar went through areas of the brain that we see in these functional brain images which highlight the areas of brain involved in impulse control: the tamping bar selectively sliced out those parts of the brain that allow the control judgement and social interactions, that support us as social beings.

Modern brain imaging has explored this in the context of psychopathic criminals and there is some evidence that psychopathic traits show a modest correlation with structural differences in precisely these regions, the regions that Phineas Gage lost. This may be associated with a weaker ability to appropriately weigh values, manage emotions, conform to social norms. In fact, in the United States where there is a strong, adversarial litigation environment, evidence related to this has been used as a mitigating circumstance in sentencing for people who have committed a crime and who have been shown to have damage to the brain in this region.

***Life and Death of King Richard III* (Opening scene)**

One of the most dramatic examples of psychopathology in Shakespeare lies in *Richard III* where Richard justifies his sociopathy on the basis of his physical exceptionalism. He implies that his own deformities set him aside from other men and from normal rules of society. Let's go to that scene.

The Wars of the Roses (1455-87) have ended. Richard's brother, King Edward IV has secured the throne. England has moved from war to peace, from winter to glorious summer. That should be a time for celebration, but Richard doesn't behave as normal men. He cannot enjoy peace. He would blame this on his physical deformities, both of body and brain.

Harriet Walter, as Richard III

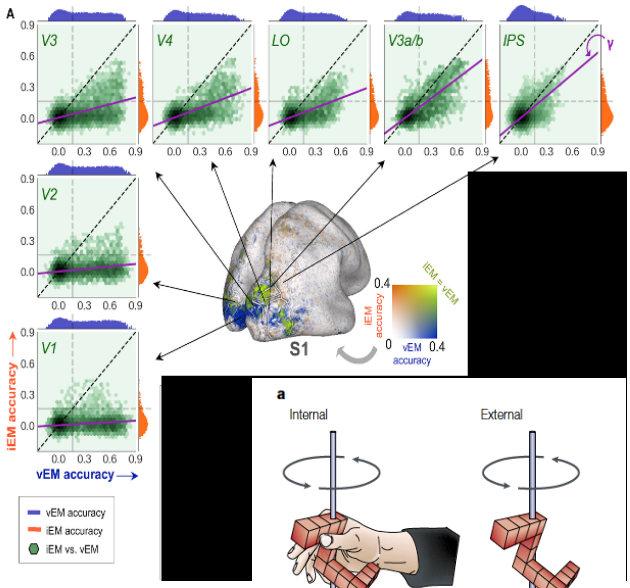
Now is the winter of our discontent
Made glorious summer by this son of York,
And all the clouds that loured upon our house
In the deep bosom of the ocean buried.
Now are our brows bound with victorious wreaths,
Our bruisèd arms hung up for monuments,
Our stern alarums changed to merry meetings,
Our dreadful marches to delightful measures.
Grim-visaged war hath smoothed his wrinkled front;
And now, instead of mounting barbèd steeds
To fright the souls of fearful adversaries,
He capers nimbly in a lady's chamber
To the lascivious pleasing of a lute.
But I, that am not shaped for sportive tricks,
Nor made to court an amorous looking glass;
I, that am rudely stamped and want love's majesty
To strut before a wanton ambling nymph;
I, that am curtailed of this fair proportion,
Cheated of feature by dissembling nature,
Deformed, unfinished, sent before my time

Into this breathing world scarce half made up,
And that so lamely and unfashionable
That dogs bark at me as I halt by them—
Why, I, in this weak piping time of peace,
Have no delight to pass away the time,
Unless to see my shadow in the sun
And descant on mine own deformity.
And therefore, since I cannot prove a lover
To entertain these fair well-spoken days,
I am determinèd to prove a villain
And hate the idle pleasures of these days.
Plots have I laid, inductions dangerous,
By drunken prophecies, libels, and dreams,
To set my brother Clarence and the King
In deadly hate, the one against the other;

(*Richard III*. I.i.1-35)

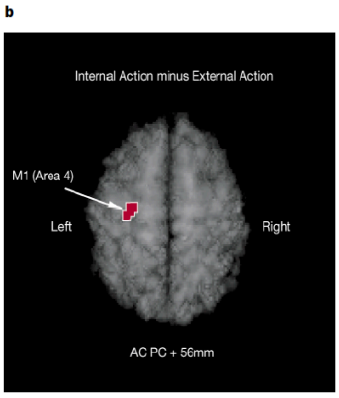
Paul Matthews **Imagery of scene and action**

Theatre involves manipulation of perception in the audience, drawing the audience into the story. For me, this is evident nowhere as clearly as in some of Shakespeare's imagery in the plays and their descriptions of action. The neuroscience of sensory and motor imagery is now beginning to make clear how this happens. Some of it is remarkably simple. Let me show you an example.



This is looking at the brain from the back. The areas in blue highlight what happens when the areas that become active, when one is looking at a visual scene, watching a scene. The areas in green which overlap with the areas in blue are those that we see in our mind's eye when we imagine the scene. I won't go through all the graphs on the side, but the important point is that there's a strong overlap between these areas, particularly as one moves slightly away from the primary sensory area to the areas that put the visual sensation together into a picture, which are highlighted a little bit far farther forward.

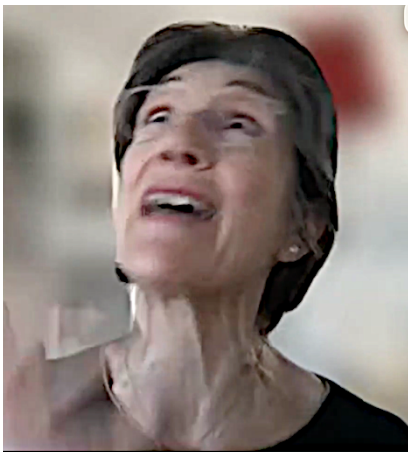
If we look at action, as another example, imagining the hand doing something and then making the hand doing something, 70-90% of the same areas of brain are activated. Here is an example in the primary motor area of the brain, for the right hand in which a person is first imagining turning a rod and then actually turning the rod. There is almost a perfect overlap in the areas of the brain activated! The brain is reconstructing the primary sensation or feeling of action as it imagines it.



King Henry V

My favourite example of this, and I hope you will feel this too, comes from *Henry V* Act One, the opening spoken by the Chorus. The Chorus steps forward to introduce to the audience directly to the story of Henry V's campaign in France that leads ultimately to the battle of Agincourt. The Chorus asks the audience to bear with the imperfections of the actors and harness their thoughts, imagining horses, battlefields, kings and armies just activating these areas that I am showing you here. This is showing us how theatre becomes a collaboration between stage and mind – turning the play into a shared act of imaginative reconstruction:

Harriet Walter, as Chorus in *King Henry V* (Prologue)



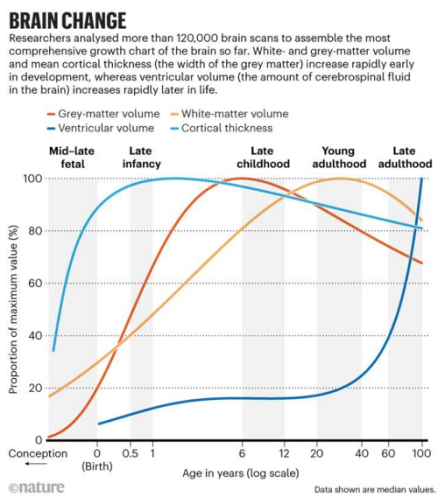
O, for a muse of fire that would ascend
The brightest heaven of invention!
A kingdom for a stage, princes to act,
And monarchs to behold the swelling scene!
Then should the warlike Harry, like himself,
Assume the port of Mars, and at his heels,
Leashed in like hounds, should famine, sword, and
fire
Crouch for employment. But pardon, gentles all,
The flat unraisèd spirits that hath dared
On this unworthy scaffold to bring forth
So great an object. Can this cockpit hold
The vasty fields of France? Or may we cram
Within this wooden O the very casques
That did affright the air at Agincourt?
O pardon, since a crookèd figure may
Attest in little place a million,
And let us, ciphers to this great account,
On your imaginary forces work.
Suppose within the girdle of these walls
Are now confined two mighty monarchies,
Whose high uprearèd and abutting fronts
The perilous narrow ocean parts asunder.
Piece out our imperfections with your thoughts.
Into a thousand parts divide one man,
And make imaginary puissance.
Think, when we talk of horses, that you see them
Printing their proud hoofs i' th' receiving earth,
For 'tis your thoughts that now must deck our
kings,

Carry them here and there, jumping o'er times,
Turning th' accomplishment of many years
Into an hourglass; for the which supply,
Admit me chorus to this history,
Who, prologue-like, your humble patience pray
Gently to hear, kindly to judge our play.

(*King Henry V,* Prologue)

Paul Matthews: **The brain evolves through the lifespan**

The brain and the body evolved through the lifespan. Shakespeare was well aware of this. Shakespeare's plays chart life, from adolescence to old age, referring to mothers tending mulling babes and aged kings as their lives end. He recognised maturation of wisdom and failure of judgement as both in youthful impulsiveness and with declining reason in late life. It is a subject that is close to all of us. The brain changes constantly through life. On the left



are graphs of brain sizes drawn from a series of brain images taken of people ranging from the foetal ages to late adulthood, showing us how the volume of, for example, the grey matter of the brain (orange), increases rapidly over time as the baby brain grows. In fact, the time we have the biggest brain is about six years of age. Then as we age beyond that, I'm afraid we're on a slippery slope down!

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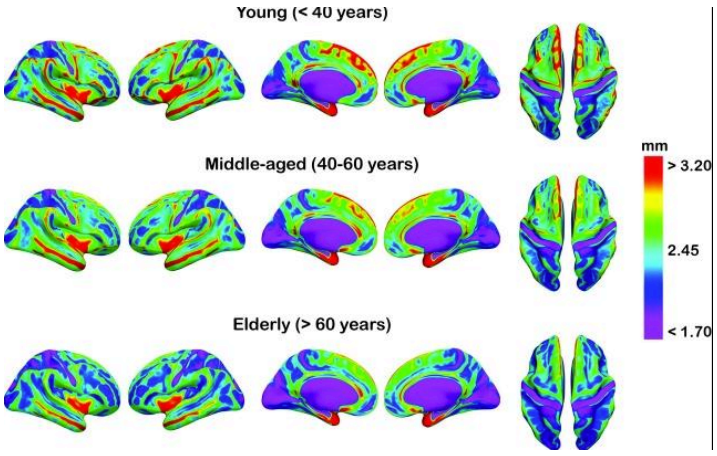


To the right is a more sophisticated version of similar data. This shows us areas the thickness of the grey matter in the brain where the nerve cells, the computational elements are kept. The colours from blue to green to red represent different thicknesses of the cortex. The red areas are the thickest and the blue areas are the thinnest. If, for example, we focus on the front part of the brain, which is the right of the left-hand images going from the young to the elderly, we see that what happens as we become older is the brain naturally thins. Now, brain size does matter, but it is mostly a proxy, it's a driver of ability. What really matters is how the brain is organised within that matter. In fact, in the first few decades of life, the brain becomes more and more efficient in its organisation.

In later life cortical thickness decreases in density. We do lose the connect some connections between brains, but it is highly variable, and most importantly, there are compensatory changes that also can occur. The brain learns new tricks to get around areas in which it has lost connections. The changes in behaviour are not as marked as the changes in brain size; and even into late adulthood we can use this reorganisation capacity of the brain, the adaptive compensatory capacity, to keep our brains alert by learning, interacting with people attending theatre.

***As You Like It* – The seven ages of man (Act II, Scene vii)**

Shakespeare's most magisterial overview of this whole journey of life, from childhood to late life, is captured in *As You Like It*, spoken by Jacques. The dramatic situation places the characters in the Forest of Arden, so they gather around the exiled Duke. Jacques, somewhat cynic in the play, speaks to reframe human life as a structured predictable series of roles.

Harriet Walter, as Jacques in *As You Like It*

All the world's a stage,
And all the men and women merely players.
They have their exits and their entrances,
And one man in his time plays many parts,
His acts being seven ages. At first the infant,
Mewling and puking in the nurse's arms.
Then the whining schoolboy with his satchel
And shining morning face, creeping like snail
Unwillingly to school. And then the lover,
Sighing like furnace, with a woeful ballad
Made to his mistress' eyebrow. Then a soldier,
Full of strange oaths and bearded like the pard,
Jealous in honour, sudden and quick in quarrel,
Seeking the bubble reputation
Even in the cannon's mouth. And then the justice,
In fair round belly with good capon lined,
With eyes severe and beard of formal cut,
Full of wise saws and modern instances;

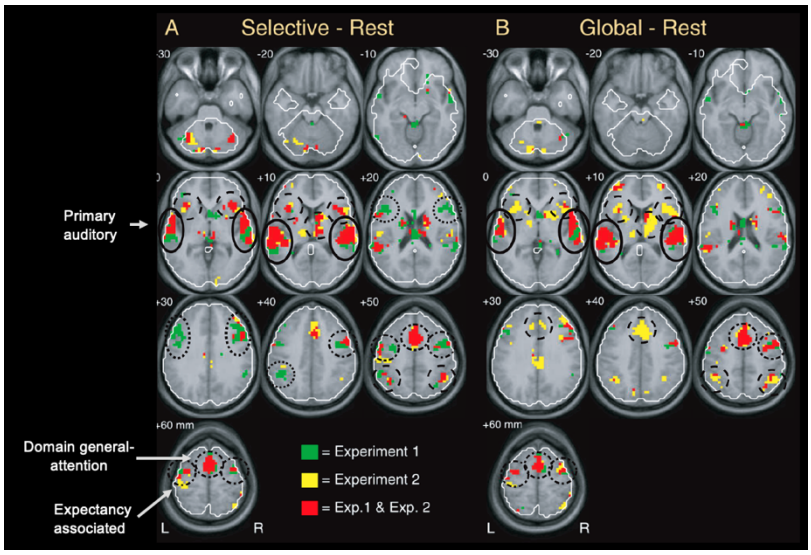
And so he plays his part. The sixth age shifts
Into the lean and slippered pantaloon
With spectacles on nose and pouch on side,
His youthful hose, well saved, a world too wide
For his shrunk shank, and his big manly voice,
Turning again toward childish treble, pipes
And whistles in his sound. Last scene of all,
That ends this strange eventful history,
Is second childishness and mere oblivion,
Sans teeth, sans eyes, sans taste, sans everything.

(*As you Like It*, II.vii.146-73.)

Paul Matthews: Musical perception engages attentional, sensory and emotional response regions in the brain

I cannot close today without reference to Shakespeare's focus on music. Music permeates the plays! Shakespeare recognised that music is powerful. It simultaneously engages sensory, motor, predictive, and emotional systems in the brain. It drives reward and emotional circuits. In that respect, it is much like food, social interaction or learning. One way of thinking about the music is by examining functional brain images of the brains of people listening to music. This allows us to divide musical perception into constituent pieces.

What we're looking at is the way the brain is changing its activity, listening to music in contrast to sitting in a silent room. In this set of experiments, two experiments, the same music was used, but on the left-hand side the individuals were asked to focus on the sound of a specific instrument. In the experiment on the right, the individuals were asked to focus on the melody that strings all of the instruments in the orchestra together.



P. Janeta et al. Ann NY Academic Science 1060 (205) 111-24

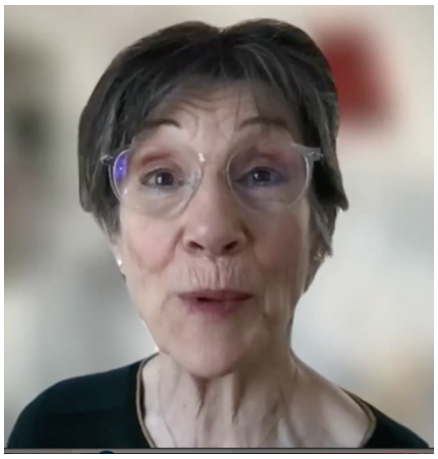
Both of these are part of what we do when we listen to music, often moving between the two. Music starts by activation in the middle of the primary auditory cortex, the hearing, the perceptual part of the brain, which decodes the signals coming from sound. It then begins to involve areas in the superior part of the middle brain shown in these green areas down in the third row on the left, which are involved in decoding melody and harmony, the brain extracts and that's how we recognise individual instruments. If we look on the right, we see much more involvement of areas including those deep in the brain, the so-called basal ganglia, which are involved in putting the prosody together, the time course and the melody.

There is another thing that is really important that goes on that can be seen in the far-right-hand image: activation (red) near the top of the brain. This is near the motor cortex, because the brain is continually thinking about movement as it is listening to music. The motor cortex becomes very active. This explains our almost unsuppressable desire at times to tap or.dance; Throughout all of this, I am not going to be able to point it out adequately, but music engages the emotional parts of the brain. It is emotionally powerful because it engages our attention. It is linked to reward. It is embodied through its effects on action. All of this occurs at once. It is a perfect example of what one wants to do in theatre.

The Winter's Tale **(Act V, Scene iii)**

Here the final scene of *The Winter's Tale*, Paulina's speech demonstrates in a very literal way how music animates. Just giving you the dramatic situation: some years earlier, King Leontes has falsely accused his wife, Hermione of infidelity. Hermione was reported dead, the shock of the events. Sixteen years later, Leontes now remorseful of his abuse of his wife is brought by Paulina to see what looks like a statue of Hermione. But it is unusually lifelike and perfect; and this is the music. This is the moment in which Paulina uses music to literally animate the statue and bring Hermione back to life. Harriet . . .

Harriet Walter, as Paulina, wife to the Sicilian lord Antigonus, in *The Winter's Tale*



Music, awake her! Strike!
'Tis time. Descend. Be stone no more. Approach.
Strike all that look upon with marvel. Come,
I'll fill your grave up. Stir, nay, come away.
Bequeath to death your numbness, for from him
Dear life redeems you.—You perceive she stirs.
[Hermione comes down from the pedesta.]
Start not. Her actions shall be holy as
You hear my spell is lawful. Do not shun her
Until you see her die again, for then
You kill her double. Nay, present your hand.
When she was young, you wooed her; now in age
Is she become the suitor?
... That she is living,
Were it but told you, should be hooted at
Like an old tale, but it appears she lives,
Though yet she speak not. Mark a little while.
Please you to interpose, fair madam, Kneel,
And pray your mother's blessing - Turn, good lady.
Our Perdita is found.

Veronica Franklin Gould Thank you both so much for bringing Shakespeare alive, making us want to engage with him so much. Harriet, it was lovely to see you as Jaques earlier this year speaking those very words, commanding the stage but appearing to share the idea among the cast. Thank you Paul for showing us how the brain responds to Shakespearean language, to emotion, and finally to music. We have all learned so much. How *Henry V*. 'O, for a Muse of Fire . . .' inspires us. That was the feeling that came to me when I saw Chris at the Globe, I came away thinking, *Oh, let's do it.!* And you've brought Shakespeare's language magnificently to life. Thank you indeed.

CHAT Sian Brand : How wonderful and so interesting! Thank you so much both!

May I now introduce you to Professor Selina Busby of the Royal Central School of Speech and Drama. Selina, we very much look forward to hearing you chair

The Panel Discussion with Paul and Harriet.

Professor Selina Busby (SB) is Professor of Social and Applied Theatre at the Royal Central School of Speech and Drama, where she leads the MA Applied Theatre course. Her research and practice focus on theatre that invites the possibility of change, both in contemporary plays and in participatory performance. Selina is co-editor of Research in Drama Education: The Journal of Applied Theatre *and author of* Applied Theatre, A Pedagogy of Utopia (2021).

Selina Busby

Thank you Veronica, and thank you both so much. It was remarkable to have the science and the performances juxtaposed with each other, really amazing. Harriet's performance was as expected, beautiful and absolutely bought your thinking to life, Paul, so it was really moving and informative.

Harriet, I'm really curious to hear from you what you think. You have spent a lifetime working in Shakespeare and with amazing performances. How does the dialogue with Paul or the interactions with Paul make you rethink what you've been doing, or how you feel about the work. Knowing how much your brain is lighting up as you're doing Shakespeare, what does that mean to you, I guess, is where I'd like to start the Discussion between the two of you.

Harriet Walter

There are so many areas that were illuminated by Paul for me. I don't think I would change the way I did something. It just explains so much of what's going on, both as a performer and in the character you're performing, particularly about motion and music, and the impulse to move and the impulse to take action. As an actor, particularly in Shakespeare, one of the most puzzling and difficult things to get together is – do I think then speak, then move? Or do I think then move, then speak? Or do I move then think, then feel, the order in which these impulses come. Because there are such infinitesimal seconds, milliseconds – it is hard to unpack them and work the other way, get to the heart of them.

I found it so fascinating looking at the actual brain imagery and how miraculous it is. It is wonderful to think that Shakespeare just looking at this skull was able in some way to know that in that bone-work there was a person, and that the person was wholly in that bone-work and not anywhere else – at a time when people thought, felt differently, that we had souls and all these things. It was his great humanist play, where he discovered that we own our own actions, our own moral decisions. There is so much. I want to take Paul aside and ask him a million questions.

Selina Busby

Absolutely. Do you want to take the moment to ask him one of those questions. Is there any burning question that you have for Paul?

Harriet Walter

Well, just the gradations. If people haven't been through trauma or haven't had a terrible accident, how different are our brains? Are we all the magnitude of the trauma? Does that make a big difference? Or when we imagine trauma or watch a horror movie, are our brains doing similar things?

Paul Matthews

No, it's a very good question. Let me touch on the first. Each of our brains is unique. If we look at those convolutions in the brain that I showed you, those little foldings, they occur uniquely in each of our brains. It's as special to each of us as a fingerprint is. But if we look at brothers and sisters, particularly twins, and particularly identical twins, the nature of those convolutions is very similar.

It tells us that genetics, the genes we inherit from our parents determines a large part of that. Yet, on the other hand, there are aspects of the way in which the connections are made within the shape of the brain that we are responsible for, and our experiences shape. I think that's a really exciting element.

To be specific about this, athletes use visual imagery or motor imagery in order to train themselves. Often what an athlete will do before a particularly challenging gymnastic event, for example, is that they will think through what they're about to do, preparing their mind, limbering up mentally. They can teach themselves how to make moves faster than they could ever consciously make them, by training their mind again and again to think through the sequence of movements. That actually changes the wiring in the brain. So that overlap between what we imagine and then what we activate when we do, becomes very, very important.

I think this touches on acting probably too. It's really trying to reflect deeply on an experience, helps to project that feeling of experience outward. It's not trying to mime the experience. That sounds too crude, but it's actually exploring the experience internally.

I'll just close by saying I think while the methods are very different between those that I showed you with functional brain imaging and the kinds of exploration Shakespeare made in framing his characters and their dialogue, I think they both express a desire to describe using the language that's available, what these phenomena of mind are and how they evolve.

Harriet Walter

It is fascinating.

CHAT
Professor Edward Chaney: I wonder what the panel, and Paul in particular, think of the notion that Shakespeare himself was a depressive... As a relative newcomer to Shakespeare studies, though I have suggested in print, I am surprised that in the vast literature on him there is so little speculation on this...
Professor Edward Chaney: Many thanx ... All v interesting. Continuing my rumination, I was underwhelmed by the first three quarters of the film version of *Hamnet* but the climax in the Globe moved me as much as it did because it seemed to portray a fellow depressive (in the guise of Shakespeare himself playing Hamlet's father). Some of the relevant plays have been mentioned but *Timon, Titus, Coriolanus, Richard II, Lear* and indeed the majority of his plays suggest to me some experience of depression, if not bi-polarism?
Professor Paul Matthews: A great question! I do not know of any direct information about Shakespeare's mental health so can only infer from the plays and history. The plays are unusual for the degree to which they explore the inner man. This suggests to me that Shakespeare also must have reflected deeply on his own life. Melancholy was a popular theme of the time. His personal reflections were in this context and- whether one takes the narrative of Hamnet at face value or not- his deep concern for family (e.g., pursuing his father's efforts to secure a coat of arms, ensuring that his family was provided for in Stratford despite his absence and the echoes of grief over his son's death that one cannot escape in his writing) and his long absence may well have contributed to personal melancholy and occasional grief. I don't see evidence for depression- clinically significant and not able to be controlled by him- but can imagine that he understood and empathised with those who suffered.
Hope this helps! Paul

Selina Busby

It is fascinating, thank you. Harriet, thank you for your really interesting question, which allowed Paul to explain that.

CHAT
Professor Lynne Suo : Shakespeare was not one barely literate man from Stratford… he was, perhaps, any one of several people… many working together over many plays, reiterating characters and remaking the plays for generations… de Vere, Bacon, Marlow
Professor Lynne Suo : But in the Shakespeare canon we have portraits of a vast array of humanity…. a vast array of psychological states…

Veronica Franklin Gould

Thank you Selina. We have heard so brilliantly from Paul and Harriet how Shakespearean language energises our thoughts. What we want to do as a result of today is to share your learning, to encourage Shakespearean workshops for brain health, to spread the word. Just listening to you, it's that magic, that special moment. I think we all need something special in our lives, particularly if we're going through something agonising or we're lonely, as Chris was saying, Shakespeare actually makes us interact, makes us think. I love the way his language shocks us into action. And if people are shocked and they're active – you made a great point about action – soft, but also calmed by the music.

Selina Busby

It is about joining those dots and Shakespeare is a brilliant way to do that.

Veronica Franklin Gould

So interesting. Selina, would you like to invite your students to ask questions of Paul and Harriet, about applying Shakespeare's use of language for brain health and wellbeing.

Q & A

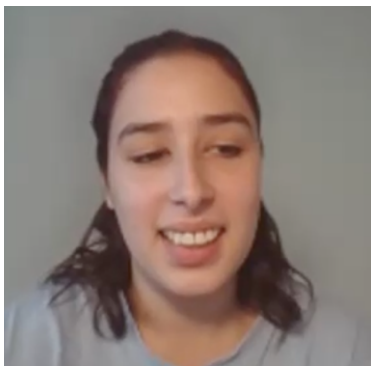
Professor Selina Busby invites Maria Inès Costa and Reanna Magruda, MA Applied Theatre students at the Royal Central School of Speech and Drama (RCSSD), to question Professor Paul Matthews and Dame Harriet Walter.

Selina Busby

We have with us today our MA Applied Theatre students Maria Ines Costa from South America and Reanna Magruda from North America.

Hi Maria! Hi Reanna! We wondered if either of you had any questions specifically, and you might have just heard the conversation, Veronica and the rest of us are particularly interested to see how you might use Shakespeare in your work. If you've thought about that or if you have any questions for Harriet or Paul, this is your moment.

Maria Inès Costa, RCSSD MA Applied Theatre student



Hi everyone. As Selina said, we're Master's students in Applied Theatre at Central. We were just actually talking to each other over break. Thank you so much because it's a great opportunity for us to question how can Shakespeare be applied to our practice and working specifically with people who live with dementia. It was beautiful to hear the performance and to hear everything about the brain, which to be honest is something that I don't know much about. So, it's great to expand my knowledge on that.

I have two questions. One of them, specifically about the practice that just made me think about, which is especially with people who live with dementia, the rolling is something that's really important at the end of the sessions. I was just thinking about how can that be applied in the specific case, to ensure wellbeing. How do we approach helping the participants transition safely out of the role when we're using Shakespeare, for instance? That'll be my first question.

My second question is regarding language, if in this research there was the possibility of thinking about translation, how Shakespeare translates into other languages. [Maria's first language is Portuguese]. We know that in translation that it's impossible to be 100% accurate. Thinking about translation in that sense and how other languages might affect the research or not. Just two very basic questions.

Harriet Walter

They're great questions. Paul will probably put me right, but I've heard and I feel it in my soul, whatever that is, my soul is here – [pointing to her brain] – that music is the last thing that you lose in your mind. So much of my route into Shakespeare's language is musical. So, in a way getting people to sing his words, invent music for them, improvise their own songs around certain words and obviously in different languages the music is different. Finding the right kind of flow in the language that you're dealing with, that strikes the right kind of music

in people's ancient memories. I suppose that would help. But I would love to know what it's like after you've practised all these things.

Maria Inès Costa, RCSSD MA Applied Theatre student

Thank you. That's really interesting, the music.

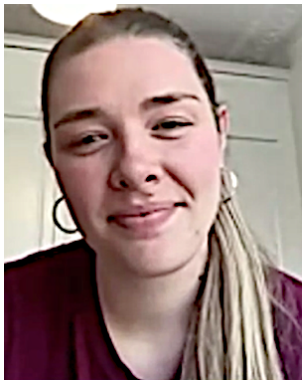
Paul Matthews

I agree with Harriet entirely. The musical parts of the brain are amongst the very last to degenerate in Alzheimer's disease suggesting that the musicality of Shakespeare is something that is relatively preserved. The words and music in Shakespeare work together – the musicality alone can capture elements of the poetry.

This just touches on translation too. A translation should never be word-for-word accurate because words have different meanings in different languages, they have different connotations. Ideally, a good translation should preserve sound or at least the contextually meaningful sound. So curiously, I would say in working with dementia, patients who lose language very early, that one can de-emphasize the language and as they are moving to leave the area of the room. I think one of the ways of helping them come out of the role is to exercise this power of self-reflection, which is impaired in people with dementia but is still there and should be respected so that they can look back on what they've been doing and asked, invited to make personal commentaries on themselves.

Maria Inès Costa, RCSSD MA Applied Theatre student

Thank you so much.



Reanna Magruda, RCSSD MA Applied Theatre student

I'll echo so much of what Maria said. Thank you. Thank you both. This was really beautiful and really I incredibly validating and enriching in terms of what you were touching on Selina, the fact that, I mean we're constantly having discussions in our course about how there's this push for proving what the arts does and that is important, but it also can be reductive and miss the richness of what the arts do to us and for us as human beings. To see this kind of connection and some of this tangible expression of what's happening in our brains is really beautiful. So, thank you both. The performances were beautiful.

My question, forgive me if I stumble through it, I'm kind of trying to formulate it still, but in the very beginning, I believe it was Christopher who said *loneliness is the inability to express what matters to you most*. And as you were going through the presentation, I was thinking on that, and what then defines what matters to us most and this element of our collective shared humanity and shared experience in terms of these similar patterns happening in our brains that can be tracked and predictable or measured. But then this element of individual experience in that as well. I think in applied theatre, in every probably field, but in an applied theatre, we're always, I think, walking this line between the communal and the individual. Watching this I was really feeling the importance of the arts in that navigation. Relating it all the way back to Shakespeare, I would love to ask how you both think Shakespeare and the

language that's used taps into both our shared humanity and the elements that are the same in each of us? We all have brains. We all have these pieces and our individuality and acknowledging that uniqueness that we each have.

Harriet Walter

The soliloquy

One of the things that strikes me – and it came from Chris's talk as well and from Paul's – but isn't it marvellous that Shakespeare puts an individual alone on the stage, sorting out a dilemma, or a plan or observation of their situation. They are alone on the stage, but they are being listened to by hundreds of people – they are sharing their aloneness with many individual alone people who are sitting together thinking, It's such a brilliant invention, the soliloquy, the sharing with the audience those thoughts that you don't dare voice anywhere safely in your own community, but you can share them with a community that isn't going to be directly impacted or threatened by what you say, so you're safe to talk to them.

Image and language

Then the imagery, the words themselves, I think that Shakespeare's genius that you can think of famine and war crouching like hounds at the heels of the king. Those images make feelings and thoughts, concrete, visible, imaginable and therefore they make a bridge between people.

Paul Matthews

Reanna, I will take a slightly different tack, although I think that was very illuminating. When I showed you areas of brain that were activated in people, I think what is really important to recognise is those are areas that are shared between a number of people. That doesn't tell you everything that is activated in each individual person at any moment in time. It tells about general patterns – shared patterns. I think we see that in on the stage as well. One looks at different performances of *Hamlet*. There are some general features that come across all of them. One element of them is the precise words that are used, usually. But I think what is remarkable is the individuality of a performance. I think this is what makes live art so exciting. As I imagine the actors on the stage and certainly as I imagine Shakespeare, Shakespeare didn't have his plays written down, he did them from memory as did the rest of the cast.

They're not reading lines out rote. What they're doing is recalling the lines; and I am sure that they were constantly evolving. He was aware of how the audience was reacting and thinking and aware of the actors beside them. I think Shakespearean acting must have been much more like jazz improvisation, than it was like reading out the script. So, I think there are general characteristics that bind humanity, but what's important is there are unique characteristics of each individual, at each moment, and that is what makes watching and living with people so exciting.

Reanna Magruda, RCSSD MA Applied Theatre student

Thank you both so much. Those are such rich answers and feel so relevant to what we're doing in our course. As you were both speaking, I was thinking of in the experiences I've had

with communities, that element of having moments of aloneness but sharing that with others who are also having their moments of aloneness and the connection that comes from that is, I would argue, maybe even the most palpable and tangibly moving part of this work that we've done. Thank you for the clarification, Paul, that makes so much sense in acknowledging both sides.

Harriet Walter

Bypassing the script

Can I make a comment about not having your script, the way actors learn by memory. If you can bypass the script, if you can teach people by hearing and remembering and copying perhaps what they've heard, rather than feeling they've got to, because our brains are all wired differently. Lots of people can't make that transition from the written word to internalising it in that same way. It would be nice to be able to experiment with simply repeating the song of a speech and then eventually people would find their own interpretation of that song. I think kids, and at the other end of the spectrum, elderly people, we do respond to that kind of imitation mimicry, which you then can make your own in some way rather than reading it round in a boring way at school.

Reanna Magruda, RCSSD MA Applied Theatre student

That's so helpful because when we're working with communities, we're primarily working with people who don't have formal theatre experience or training or have worked with script analysis or memorization. That approach is actually is even more relevant to bringing into our field. Thank you for bringing that forward.

Selina Busby

Thank you both for your questions and asking such considered and informative questions.

Veronica Franklin Gould

Thank you, Selina. You have opened all our eyes; I love the idea of reinterpreting the song of a speech; and improvisation is indeed effective and much enjoyed at Arts for Dementia workshops.

Now I should like to introduce you to Siân Brand who is speaking to us from Essex to explain how through GP referral to social prescribing link workers, the 'What Matters Most' conversation can lead people to cultural activities of special interest nearby. Siân . . .

SIÂN BRAND is Chair of the Social Prescribing Network. With more than 15 years' experience in local NHS commissioning grounded in public health, Siân possesses extensive expertise in the voluntary and community sector, as well as in health creation. Siân is co-author of the BSc in Health, Wellbeing & Community.

Siân Brand

Brilliant. Thank you so much Veronica. Gosh, what a delight! I've worked in social prescribing now for ten years and in communities through health for twenty plus and it always brings me joy, but this has been a really fascinating and glimmer-filled session, so I hope those listening back on this will enjoy it as much as I have.

Social prescribing then, how does that fit with today's session and what you've been talking about in terms of theatre and Shakespeare and the brain?

> *. . . the time of life is short;/ To spend that shortness basically were too long.*
> (Hotspur to a messenger in *Henry IV, Part I,* V.ii.85-86)

Social prescribing (SP) is a process to help people make positive changes in their lives and within their communities by linking people to volunteers, voluntary activities and community groups and public services that help them to feel more involved in their community, meet new people and make some changes to prove their health and wellbeing.

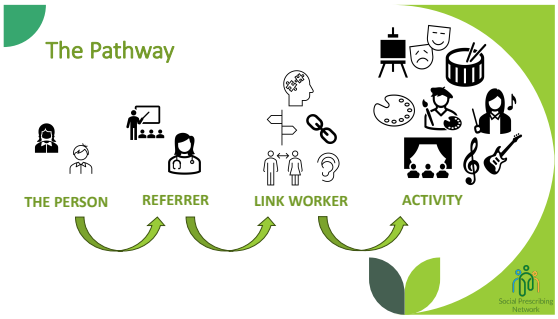
It is personal. What matters to one person will be different to the next. But there are things within our community that really do make a difference to our holistic health and wellbeing. Enjoyment, participation, feeling, emotion and purpose all play into our wider health and wellbeing.

> *All the world's a stage, / And all the men and women merely players*
> Jacques in *As You Like It*, (II.vii.146-47).

Not the first time we've heard these words this afternoon – more eloquently spoken last time, I think. So, what is social prescribing and how can we connect to it?

The person is the absolute front and foremost of what we are thinking about supporting, listening to and giving time and respect to the referrer. You'll think these are all very medical terms, but actually the referrer can be anybody:

The SP Referral Pathway



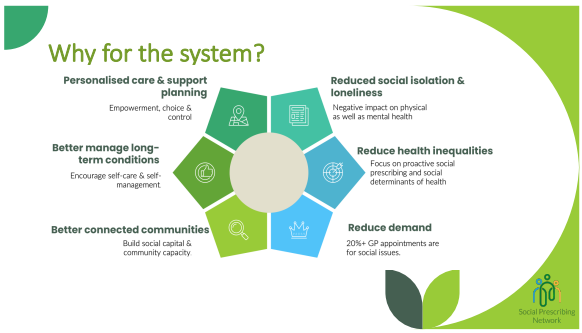
We would expect people to be able to self-refer to SP, to be able to work through their carers, through their general practice, their local GP. It might be through a librarian or a social care worker or a carer or somebody that they might come across during an emergency. We have people that refer in from the emergency services such as ambulance or fire. If people living

with dementia go walk about, we have search and rescue find them. We actually realise that there's much more that they need apart from help with their medical issues.

SP Link worker Then we have the SP link worker and this is the linchpin, the bridge between the services and the person and out to the community. We've so often been directed and looked after and sent to services that really create a dependency and we've forgotten about the power and the opportunities that lie within community. Today we're talking particularly about the arts and culture, but we would also look to think about nature, about green and blue social prescribing, about welfare, about connection to other people.

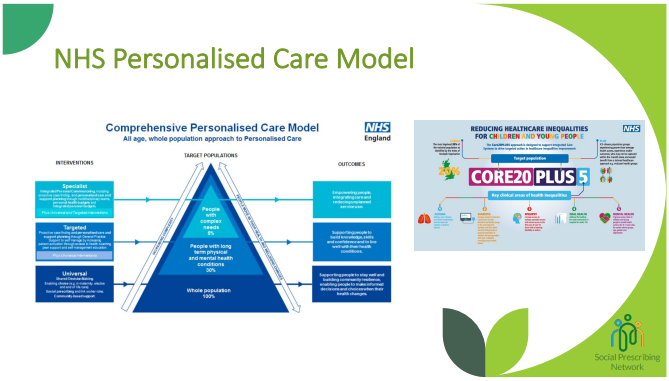
'**No decision about me without me**' It is about placing the person totally at the centre of what's going on, increasing that person's choice and control and their opportunities, focusing on what matters to them, focusing on their strengths and what they do, do what they enjoy doing, maybe what they've forgotten that they enjoy doing or can do. It is about creating that sense of community and building somebody's personal resilience, some of which may have been lost over time. It may have been lost due to a diagnosis of an illness or a long-term condition. So it's really placing the power and the opportunity and the chance back in that person's control with the help of the social prescribing link worker.

Why do we need SP for our system. Our communities, personalised care we know has much better outcomes? If we focus on what the person wants, giving them the skills, the empowerment, and allowing them where possible to take control, we get better outcomes both for health services, but also for the person we can reduce social isolation, loneliness. We know that that has an absolute negative impact on somebody's physical and mental health and therefore impacts on our system as well. It is about reducing those health inequalities, focusing on the people that need us most, that have the most vulnerabilities in our society that aren't most deprived and disadvantaged. At least 20% of GP appointments are for social issues. If we can focus people on managing that, self-serving, getting out to the community, linking to what's available, actually that gives time for the doctors and nurses to focus on the clinical issues that they're trained to look at and having better connected communities, it serves us all better and it's a lot more joyful.



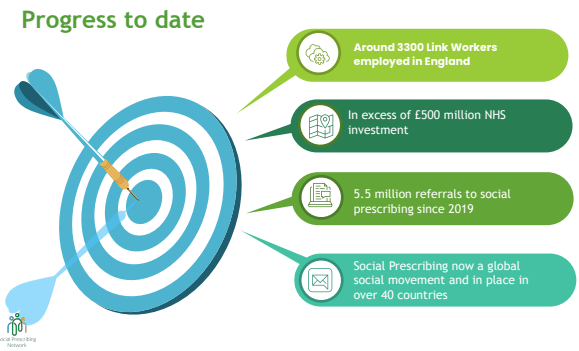
SP has been incredibly quick. We started as a social movement in 2015 and we became national policy in 2019. We are now embedding that's taken less than seven years. Normally it takes fourteen years to get to national policy. It shows the importance of connecting with our communities.

NHS Personalised Care. The NHS loves the triangle, doesn't it, with its policy, but it became part of national policy in 2019. Actually, now the new Long-Term Plan, through neighbourhood working, is also supporting and utilising SP as a vehicle, as a bridge to connecting people out to their communities and particularly things like cultural and theatre.



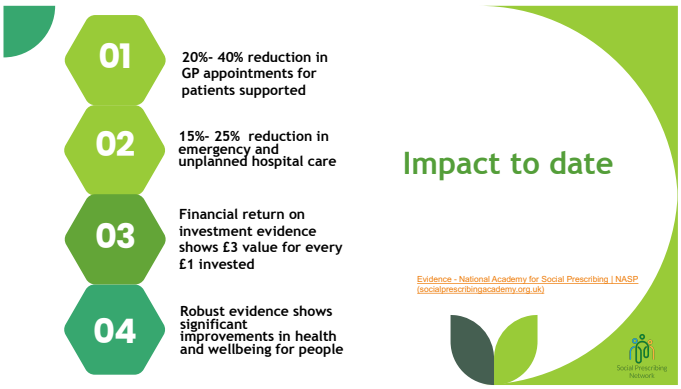
Our remedies often ourselves do lie, / Which we ascribe to heaven . . .
(*All's Well That Ends Well*, I,i,222-23)

The link worker spends time with the person to listen. It might require a number of sessions, or one session depending how activated and motivated that person is and that link worker is skilled with what's going on in the community. Where you create art opportunities, theatre opportunities, work with your link workers. You can find them through your GP practice, your local voluntary sector. They will work with the community to find the gaps. If you have ideas to support a group of vulnerable people around theatre, through theatre encouraging them to meet each other to meet a new opportunity, speak to your link worker.



SP Progress to date

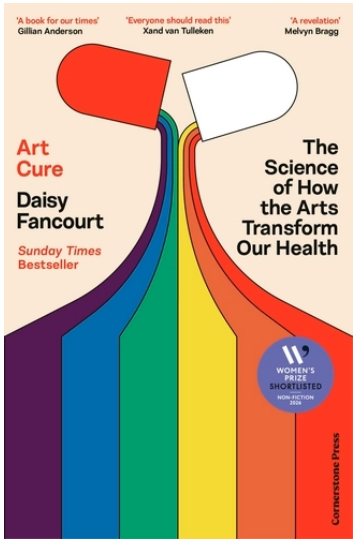
There are 3,300 link workers in England. The NHS has spent millions on SP. There have been over 5 million referrals since the inception of the link worker role in 2019. We are now a movement of over 40 countries. If you run a global programme, you may find SP active in your country. See what is happening locally for you. SP has grown exponentially and is embedding quite strongly around communities and bridging the gap between medical and social wellbeing.



The Impact of SP

We are seeing a huge impact in terms of evidence – there is a financial return on investment as well as a wellbeing return.

With mirth and laughter, let old wrinkles come.
(Gratiano in *The Merchant of Venice*, I.i.85)



These are all examples of the outcomes for health and wellbeing from Daisy Fancourt and research that either she has done herself or is available through arts research and art in health. You will see some of the things here joyfully engaging, a sense of purpose, regulating emotions, getting into the flow, state, self-reflection. These are all positively supporting positive mental and physical health. Please do take a look at that if you want the business case to go with somebody for funding who can deny that any of this is going to be amazing stuff.

So what matters to you? What was your aha moment today? Do take a moment to reflect at the end of the day when you get your cup of tea, before you sit down for your TV or your gym or go into theatre class, what was your aha moment? What are you going to do differently? How will you make a difference and what are you going to do more of? Just to give a quick plug on my behalf of a colleague Daisy Fancourt: A great read that connects to all of this and arts and culture more widely is *Art Cure*. Thank you for listening and it's been a pleasure and privilege to be here today.

Veronica Franklin Gould

Thank you Siân. That was wonderful because you've set us up now for anyone planning arts workshop, Shakespearean workshops to preserve brain health. You have explained how to spread the word to local link workers who will spread the word to any person who wishes.

Siân Brand Invite me too. That'd be great. I'd love to come

Veronica Franklin Gould As well as links in the text above, your superb resources, Christopher's report and Harriet's books, not least *She Speaks!* and Paul's *The Bard on the Brain* – are listed below, with other useful resources and links to training and workshops.

Warm thanks to you all for coming, to our remarkable speakers, whose talks today have meant so much and to Amisha Parmar and my brother Nigel Franklin for magnificent technical support.

It would be lovely if you could let your colleagues know, to help spread the practice, to hear and know how Shakespeare energises us, how his use of language shocks us into active thought, hearing individual quotes upon which each person wishing to preserve their health, their brain health or any other need, can improvise. Thank you, Chris, Harriet, Paul, Siân, Selina, Maria and Reanna – you have motivated and inspired us. Thank you Edward and Lynne for your questions, and Cordelia, Reanna and Lynne for your acknowledgements. It was such a privilege to host you! Now to spread the word – with deepest thanks.

Lynne Suo Many thanks to the wonderful Harriet Walter for her dozens of brilliant performances, her thoughts and books **Cordelia Mayfield** Much to ruminate upon- many thanks! **Reanna Magruder** Thank you all!

Useful Resources for Shakespeare workshops for Brain Health

Arts for health evidence

- What is the evidence on the role of the arts in improving health and wellbeing? A scoping review (WHO: Health Evidence Network synthesis report 57, 2019).
- Daisy Fancourt, *Art Cure, The Science of How the Arts Transform our Health*, (2026)
- *Creative Health: The Arts for Health and Wellbeing* (All-Party Parliamentary Group on Arts Health and Wellbeing Inquiry Report, 2017)

Shakespeare for brain health

- Paul M. Matthews and Jeffrey McQuain, *The Bard on the Brain: Understanding the Mind Through the Art of Shakespeare and the Science of Brain Imaging*, (2003)
- Harriet Walter, *She Speaks! What Shakespeare's Women Might Have Said* (2025)
    - *Brutus and Other Heroines: Playing Shakespeare's Roles for Women* (2016)
    - *Macbeth (Actors on Shakespeare)* (2002)
    - *Other People's Shoes: Thoughts on Acting* (1999).
- Russell Jackson, ed., *Players of Shakespeare 3* (2008).
- University of Liverpool, Reading Shakespeare has a dramatic effect on the brain (2006).
- Veronica Franklin Gould, *Reawakening the Mind* (2013) includes Royal Central School of Speech and Drama MA Applied Theatre A4D programme].

Social prescribing to access Shakespeare and other arts for brain health

- Veronica Franklin Gould, *A.R.T.S. for Brain Health: Social Prescribing transforming the diagnostic narrative for Dementia: From Despair to Desire* (2021).
- Making Sense of Social Prescribing (2017).
- A Connected Society: a Strategy for Tackling Loneliness (2018).
- The NHS Long Term Plan (2019).

Training, talks, workshops

- Early-stage dementia awareness training for arts facilitators
- Dementia and the arts Sharing Practice, Developing Understanding and Enhancing Lives
- The Globe Talks
- Royal Shakespeare Company: Finding Joy
- Leeds Playhouse: Heydays and Our Time
- Southwark Playhouse: Elders Company
- Find and List drama workshops to preserve brain health at Arts for Dementia