Dementia, Music, and the Loss of Self

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"But to those who are lost in dementia…[m]usic is no luxury to them, but a necessity, and can have a power beyond anything to restore them to themselves, and to others, at least for a while."[1]

In his recent book *Musicophilia*, the neurologist Oliver Sacks explores the links between the human brain and music through case studies that range from autistic savants to professional musicians and "everyday people."[1] These patient stories show the potency of music on a diverse range of medical conditions. Sack's final chapter addresses the role of music therapy within dementia. Those of us in the clinical years of study will most likely have come across patients who suffer with dementia. Like Sacks, however, my personal encounters with the effects of music amongst dementia patients have profoundly impacted the way that I think as both a medical student and keen classical pianist.

This article offers up some of these thoughts by drawing on a theoretical exposition of music performance studies, dementia, philosophical accounts of the "self" and my first-hand experiences of attending a music therapy session. These insider experiences are synthesised with existing literature of multiple disciplines to provide a rich narrative.

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Dementia and Music Therapy

In the case of Parkinson's disease, the rhythm in music can produce a response akin to the *kinesia paradoxa* phenomenon: "the movement response elicited in a person with Parkinson's disease when wooden rungs, placed on a level, help overcome the extreme, immobilizing bradykinesia."[2] Rhythmic drive provides a means for those with Parkinson's to regain fluency and a smooth cadence of movement; however, like the game of musical statues, with Parkinson's, "once the music stops, so too does the flow."[1] Yet for those with dementia, music has pervasive effects that endure even after the music has stopped.

I certainly witnessed these signs when I participated in a session last year organised by *Singing for the Brain*, a nationwide scheme run by the Alzheimer's Society, a UK charity for Alzheimer's disease.[3] The scheme comprises group singing sessions in the community. These sessions provide a social space for those with dementia to meet similar people and, moreover, enable them to access the benefits of music. At the session, there were about twelve participants with dementia along with their carers. The session started with sung 'hellos' to the group. I was a little shy about participating at first. Whether this was due to five years of medical school training to be 'small c' conservative in front of patients and family or my singing phobia, I cannot be certain. We proceeded into singing wartime songs, nursery rhymes, and 60s pop hits. By this point, any feelings of embarrassment had

dissipated as I became deeply struck witnessing the transformative power of music. The participants' reactions while hearing simple songs and melodies turned from masked, withdrawn facial expression into smiles and laughter. Some that initially appeared lost in their sea of neurofibrillary plaques and tangles became connected with the group, both in song and also in conversation with others during the tea-breaks. How incredibly exciting it was to see this change in behaviour and demeanour over a couple of hours.

Similar observations exist within the literature. One study looking at the effects of music therapy on engagement between dementia patients and their care-givers found that engagement has carry over effects into non-musical visits.[4] In addition, music has been found to improve the challenging biological and psychological symptoms of dementia (BPSD).[5] Live music seems particularly effective in decreasing agitation, and decreases in wandering have been observed during structured music therapy or listening sessions.[6]

In dementia, loss of an individual's sense of self-identity and memory are defining pathological characteristics. Music challenges this nihilistic view; music, which is steeped in emotion and memories of bygone years, "seeks to address the emotions, cognitive powers, thoughts, and memories, the surviving 'self' of the patient, to stimulate these and bring them to the fore."[1] Sacks hints at the seeming impossibility of this task given that a person with Alzheimer's may not be able to recall specific autobiographical details or life events.[1] However, despite the disease, what is remarkable is that musical memory remains preserved."[2,7,8] Cowles et al. describe the case of SL, a musician with Alzheimer's disease who had severe disturbances in orientation and "could not remember a single incident from any period in his life, even when given cues" but who remained able to "play premorbidly acquired songs competently on both the piano and the violin" and learn and recall a new piece the researchers gave to him.[8]

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Implicit memory—the memory of doing tasks without conscious thought—is maintained in Alzheimer's disease. The neurological basis of implicit memory arises from the basal ganglia, a deep motor area of the brain.[9] Such memory is also preserved in non-musicians with the disease. At *Singing for the Brain* the participants (of whom only one was a musician) reeled off tune after tune, all by heart. Given that these participants had experienced irreversible and diffuse cortical damage,[1] to witness this feat was quite astonishing. The sparing of subcortical areas such as the neostriatum[9] means that music is still able to touch those with the disease because it acts on an area away from the site of pathology.

This effect of music on the subcortical areas demonstrates a form of implicit memory. In the assessment of an older person's level of functioning and independence, it is implicit memory which enables them to perform activities of daily living like washing, dressing and eating.[10] Compared to explicit memory (the memory of factual recall), implicit memory is far more important for survival. It could be argued that, given the survival benefit of implicit memory, this memory is preserved and sensitive to music in Alzheimer's because music provides a way for those who have lost other cognitive faculties to survive. Sack's endearing case illustrates this

idea: Woody, an ex-professional singer, "feels 'broken inside'" from his Alzheimer's disease and "[w]henever he is not actively singing or otherwise engaged…he now whistles all the while. Not only through his waking hours; he whistles (and sometimes sings) in his sleep – so, at least in this sense, Woody is companioned by music, calls on it, around the clock."[1]

a human being, in order to be able to be present in the face of the suffering of others.' Remen's idea might appear antiquated. We might feel that the demands of 21st century medical school mean that we do not have time for self-development. Indeed, time spent in developing the "self" could be interpreted as being *self*ish or *self*-indulgent. After all, medicine demands that we prioritize the patient and not our*selves*.

"In the busyness of our training, we can forget why it is that we want to be doctors."

Lost in Dementia, Lost in Music, Lost as a Medical Student

Having observed the therapeutic effects of music on those with Alzheimer's, I can relate to the experiences of those with the disease. Music helps me unlock and draw attention to certain preserved memories. These memories and experiences ultimately shaped my decision to become a doctor, and it has allowed me to cope with the everyday rigors that parallel life as a medical student. The emotional energy needed to confront illness and suffering everyday, combined with commuting to placements and exam-cramming, can be tiring. I sometimes feel a sense of being lost at medical school; on occasion, I ask myself what I am doing here.

Dr. Rachel Naomi Remen, clinical professor of Family and Community Medicine at UCSF School of Medicine and founder of the *Healer's Art* course, notes this is a common phenomenon amongst medical students.[11] In the busyness of our training, we can forget *why* it is that we want to be doctors. Such memories become locked up. Remen proposes that the way medical education is delivered today is worlds apart from how it was historically, '[d]uring the Middle Ages—the time of Hippocrates— the first thing that happened was that the student of medicine spent a number of years developing him or herself as

Some might question my choice to spend a couple of hours a day practicing piano after a day's work at the hospital or medical school – "surely you should spend some extra time in the library or at the hospital?" However, the Aristotelian idea of flourishing (*eudaimonia,* also translated as "happiness" or "well-being") comes to mind.[12] In order for our patient's health to flourish, we as (future) clinicians must flourish too.

This argument is emphasized from the stance of music performance. One of the big questions in this field is "what makes a great musician?" Given that musicologists have been debating this for centuries,[13] a comprehensive answer is beyond the scope of this article. However, a common premise amongst many musicians, including myself, is to serve the music first. This means the composer's intentions, of how they envisaged the music to be performed, are put above the musician's own intentions.[14] The musician should not use music as a means of their own self-expression or self-promotion. Rather, the notes on the page take center stage, and then it is for the musician to create and bring those notes to life—to be a vehicle allowing the music to speak. In order to put the music first, you have to give selflessly to the music. It requires a kind of generosity to the music.[15] There is no room for being shy or self-conscious or, at the other extreme, wanting to play a particular part of the

music your *own* way instead of the composer's way.

Consider the preceding sentence now in terms of medicine. In order to put the *patient* first, you have to give selflessly to the *patient*. Therefore, when I play the piano, the act of giving myself fully to the music cultivates the ability to give myself fully – my diagnostic brain power, emotional energy, time and attention – to the patient in front of me.

This is where the dots join up between being lost in dementia, lost in music and lost as a medical student. For me, music is a necessary part of my ability to live fully for two reasons. Like those with dementia, music (but for you it might be sport, art, drama…) provides a respite from feeling lost. It allows me to come back to my studies refreshed, and, with a clear head, I can remind and reassure myself that the memories of why I chose medicine remain preserved. The ability to give myself fully to music for a little while provides a kind of training for my future practice, so that when I am called to the ward on the night shift, despite wanting to snuggle up on the sofa in the doctor's mess, I would give my full attention to the patient in front of me so that they can flourish.

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REFERENCES

1. Sacks OW. *Musicophilia*. Great Britain: Picador; 20011.

2. Cuddy LL, Duffin J. Music, memory and Alzheimer's disease. *Med Hypotheses*. 2005; 64:229-235.

3. Singing for the Brain – What is Singing for the Brain? Alzheimer's Society Website. Available at: https://www.alzheimers.org.uk/site/scripts/documents_info.php?documentID=760. Published 2014. Accessed March 27, 2014.

4. Ann Clair A. The effects of music therapy on engagement in family caregiver and care receiver couples with dementia. *Am J Alzheimers Dis Other Demen.* 2002; 17: 286-290.

5. Lawlor B. Managing behavioural and psychological symptoms in dementia. *Brit J Psychiat*. 2002; 181: 463-465.

6. Brotons M, Koger SM, Pickett-Cooper P. Music and dementias: A review of literature. *J Music Ther.* 1997; 34(4): 204-245.

7. Fornazzari L, Castle T, Nadkarni S, et al. Preservation of episodic musical memory in a pianist with Alzheimer disease. *Neurology.* 2006; 66:610-611.

8. Cowles A, Beatty SJ, Nixon LJ, et al. Musical Skill in Dementia: A Violinist Presumed to Have Alzheimer's Disease Learns to Play a New Song. *Neurocase.* 2003; 9(6): 493-503.

9. Crystal HA, Grober E, Masur D. Preservation of musical memory in Alzheimer's disease. *J Neurol Neurosurg PS.* 1989; 52 (12):1415-1416.

10. Mahoney FI, Barthel D. Functional evaluation: the Barthel Index. *Maryland State Med Journal*. 1965;14:56-61..

11. Tucker, C. Teaching the Heart of Medicine: An Interview with Rachel Noemi Remen, MD. *San Francisco Medicine*. September 2005, p. 11-13, 28.

12. Virtue Ethics. Stanford Encyclopedia of Philosophy Website. Available at: http://plato.stanford.edu/entries/ethics-virtue/#2. Published 2003. Accessed March 27, 2014.

13. Cook N. Music: A Very Short Introduction. Oxford: Oxford University Press; 2000.

14. Kivy P. Authenticities: Philosophical Reflections on Musical Performance. Ithaca, NY: Cornell University; 1995.

15. Is New Age thinking good or bad for musicians? Stephen Hough - The Telegraph Website. Available at: http://blogs.telegraph.co.uk/culture/stephenhough/100070684/is-new-age-thinking-good-or-bad-for-musicians/. Published 2013. Accessed March 27, 2014.