

One woman's deradicalisation – from neo-Nazi to preacher of tolerance

An in-depth interview with a formerly violent right-wing extremist has provided psychologists with rare insights into the processes of disengagement and deradicalisation. John Horgan at Georgia State University and his colleagues interviewed 'Sarah' face-to-face for several hours, and also followed up with telephone calls. Their account is published in *Behavioral Sciences of Terrorism and Political Aggression*. The woman had previously been a member of various neo-Nazi right-wing groups and was ultimately imprisoned for her part in the armed robbery of a shop. Today, Sarah works to combat violence and racism by speaking to at-risk youths, and says she feels a 'responsibility to go out and try to undo damage'.

The background to this from a research perspective is that violent extremism remains, thankfully, rare. Therefore psychologists rely on insights into the deradicalisation process mostly from interviews with professionals, family and friends who have contact with extremists. Interviews with extremists themselves are hard to obtain, making this in-depth case study a rare opportunity. A major limitation is that some or all of the processes involved in this case may not generalise to other extremists.

The researchers applied their 'arc framework' to Sarah's story – this is the idea that the path from extremist to deradicalisation goes from involvement, to engagement, to disengagement, and that the nature of disengagement and deradicalisation (often a long-term process, rather than a sudden moment) will likely be shaped by the reasons behind initial involvement and engagement.

Sarah's involvement in right-wing extremism came about through teenage feelings of alienation. These feelings were fostered by a religious schooling that clashed with her parents' alcoholism and racism, and her emerging sexual interest in other girls. Sarah fell in with skinheads at high school. This group later split into neo-Nazi and anti-fascist groups, and Sarah chose the



In *Behavioral Sciences of Terrorism and Political Aggression*

former, where she found a sense of purpose and belonging.

Sarah's true engagement began when she volunteered to expel another member. 'That to me was my crossover and where I said okay this is ... now at this time I'm making this commitment, you know, to follow these rules, to be a member of the group.' She got more neo-Nazi tattoos and was exposed to right-wing literature – she says this didn't influence her beliefs, so much as give her a way to impress the other extremists around her. In fact, she says ideology only played a small part in her involvement – rather, she found the alternative and socially challenging lifestyle an attractive option, especially in light of her uncomfortable family circumstances.

The roots of Sarah's disengagement run deep. She describes feeling doubts very early on, not least because she engaged in activities that she knew ran contrary to the beliefs of the groups she was involved with, such as her sexual promiscuity, including being involved with a Hispanic man. Her doubts were later compounded by the 1995 Oklahoma City bombing (by a right-wing extremist), including the image of an infant victim. But still, as her doubts intensified, she drowned them in more drink, drugs and deeper extremist involvement. As this tension between her desires to leave and her commitment took their toll, Sarah says she simply lacked the resources to leave, and her involvement continued to provide her with 'self-worth, validation and protection'.

The turning point came when Sarah was arrested for her part in an armed robbery, which she'd undertaken with her then boyfriend who was a key figure in her extremist group. Her subsequent imprisonment meant involuntary disengagement from the group. This changed Sarah. She took responsibility for her actions, and whereas we often hear about people being radicalised in prison, the researchers say it was clear that the physical distance created by imprisonment provided the space and opportunity for Sarah to confront her doubts.

Once in jail she befriended black women and was surprised by their acceptance of her (despite her notoriety and racist tattoos). Sarah took a degree, broadened her outlook. She 'started realizing the world truly is so much bigger than [her] and [her] beliefs and ideas and, you know, [her] feelings' which, she says, gave her a 'terrific sense of freedom'. She subsequently began teaching in prison, including tutoring other inmates in how to read and write. She discovered her capacity for compassion and empathy, 'you know actually caring about people that I professed to hate for so many years – those kind of experiences changed me tremendously'.

On her release, Sarah was terrified that she had 'hardwired her brain' in her earlier life, but she made a conscious decision to challenge any racist thoughts that emerged in her mind, a process she likens to 'breaking a bad habit'. Sarah's feelings of responsibility to undo past damage and her newfound social role as preacher of tolerance have also been protective – helping to deepen her disengagement and making it psychologically meaningful. Today her fears of being hardwired to be racist have subsided.

The researchers acknowledged that their account of Sarah's case is 'partial, idiosyncratic and limited', but they noted that 'most of what is said and written about violent extremist offenders [is] rarely complemented by insights from the offenders themselves'. They concluded: 'We do firmly hope that this case study serves as an illustration for future research purposes.' CJ

Want to remember something? Draw it

In *Quarterly Journal of Experimental Psychology*

If you've got some revision to do, get yourself a sketch pad and start drawing out the words or concepts that you want to remember. That's the clear message from a series of studies in the *Quarterly Journal of Experimental Psychology* that demonstrates drawing is a powerful memory aid.

Jeffrey Wammes and his colleagues first presented dozens of students with 30 easily drawable words such as 'apple'. For each word, they had to spend 40 seconds writing it out repeatedly, or drawing it. The students then completed a filler task for a couple of minutes, which involved classifying the pitch of different tones. Then they were given a surprise memory test and asked to recall as many of the earlier words as possible. Participants recalled more than double the proportion of drawn words than written words. The drawing advantage held in a variation of

the experiment in which the 40 seconds were spent either drawing each word repeatedly, or writing out each word just once and then spending additional time adding visual detail, such as shading.

In further experiments with dozens more students, the researchers showed that drawing was a better memory aid than visualising the words, or writing a description of the physical characteristics of each word's meaning (designed to encourage deep-level encoding of the words), and more effective than looking at pictures of the words. The drawing advantage also remained when participants were given just four seconds to draw each word, and whether they performed the tasks alone or together in a lecture hall.

The researchers think that drawing has this effect because



it involves lots of different mental processes that are known to benefit memory, such as visualisation and deep-level elaboration. 'We propose that drawing, through the seamless integration of its constituent parts, produces a synergistic effect, whereby the whole benefit is greater than the sum of the benefit of each

component,' they said. They acknowledged more research is needed to show the usefulness of these findings to real life: 'While we did show that the drawing effect is reliable in group testing in our experiments, the content was still only single words and hardly representative of an academic setting.' CJ

The most effective leaders clash with their company's culture

In *Journal of Applied Psychology*

Anyone will tell you that the most successful organisations have leaders who match the company culture. A CEO fixated on getting things done should lead somewhere driven by outcomes, a 'mission culture', whereas a people-focused leader suits a place focused on involvement and participation. This way everything is neat, tidy and aligned, with messages presented consistently, providing staff with reliable guides as to how to behave. But this is not what the data says in a new study published in the *Journal of Applied Psychology*. The new results argue that your leader shouldn't line up with the culture – they should supply what it's missing.

Chad Hartnell and his colleagues surveyed the management of firms within a technology consortium, asking members of 120 management teams to rate their CEOs on task leadership (e.g. 'encourages the use of uniform policies') and relational leadership ('is friendly and approachable'), and to rate their organisation's culture on



these same task and relation dimensions. The researchers wanted to find out which combinations of leadership and culture would, nine months later, show the greatest benefit in a tangible outcome: firm finances.

The data drew a gloomy picture for alignment. For relationship focus, mismatches were always better. Firms with a strong relational culture performed better when led by a leader with a low relational focus, and highly relational leaders were associated with stronger results when they operated in a culture with lower concern with relations. A similar picture emerged for task focus, where a combination of a high-focus culture and leader was the worst one possible. These associations held true even after controlling for past performance, CEO tenure and size of the firm.

Why could this be? When leader and culture are aligned, much of the leader's efforts are redundant. When an organisation's history of competition and high standards leads to a highly outcome-focused culture, the CEO generates limited returns from focusing on task outcomes, as culture is acting as a 'substitute for leadership'. The job of a leader is to bring something new and needed to the table, such as a relational focus in a highly clinical culture.

Hartnell's team point out their finding operates at a very broad level – more or less focus on people or outcomes – and that this shouldn't be taken as querying whether leaders can ever be a misfit for a culture; clearly they can. So this study isn't a paean to appointing disruptive contrarians, but rather, to considering the broader picture of what an organisation needs at any given time. Leaders who've been successful in steering their ship should reflect on whether the lessons they came to teach have now been learned, and whether it's time to shift who they are as a leader, so they can begin to offer new ones. AF

Teaching ancient 'mental abacus' technique boosted maths abilities more than normal extra tuition

In *Child Development*

Seeing an expert abacus user in action is a sight to behold. Their hands are a blur as they perform arithmetic operations far quicker than anyone using an electronic calculator. The mental abacus technique is even more impressive – it works just the same as a real abacus, except that you visualise moving the beads in your mind's eye (see tinyurl.com/jq38ap2 for a video of people using mental abacus to perform amazing feats of arithmetic).

Surprisingly, there is little research on the benefits of teaching the mental abacus technique to children. But now, psychologists in the US have



conducted a three-year randomised controlled trial of the effects of teaching the mental abacus on 183 five-to-seven year-old children at a charitable school in Vadodara,

India. Their results suggest that training in the mental abacus can have impressive benefits for students' mathematical abilities, above and beyond those seen for standard supplementary teaching, but that these benefits may not extend to children with weaker cognitive abilities.

The children took baseline tests of their maths and cognitive abilities, then they were allocated randomly to a group to receive three hours per week extra tuition in the abacus (the first year focused mostly on the physical abacus – specifically the Japanese soroban style – and then later years graduated to the mental abacus) or to a group that received three hours per week supplementary maths tuition, following the OUP New Enjoying Maths series.

When the children's maths and cognitive abilities were tested again at the end of the three-year study, those in the mental abacus group showed

superior improvements in their maths abilities, including calculation, arithmetic and the conceptual understanding of place value, compared with the control group (effect sizes were large), and some modest advantages in their academic grades in maths and science. The mental abacus did not lead to wider benefits in cognitive abilities, and it didn't change the children's attitudes to maths or reduce their maths anxiety – this latter result sounds disappointing, but also means the main benefit to maths ability is unlikely to be a placebo effect. Unfortunately, the exceptional benefits of mental abacus training to maths ability were not found among a subset of children who started out the study with weak spatial and working memory abilities.

'We find evidence that mental abacus – a system rooted in a centuries-old technology for arithmetic and counting – is likely to afford some children a measurable advantage in arithmetic calculation compared to additional hours of standard math training,' the researchers said. 'Our evidence suggests that mental abacus provides this benefit by building on children's pre-existing cognitive capacities rather than by modifying their ability to visualise and manipulate objects in working memory.' CJ

LINK FEAST

The Impostors' Survival Guide (BBC radio show)

Oliver Burkeman explores the impostor phenomenon. That inexplicable feeling of fraudulence that plagues the working lives of so many people.

www.bbc.co.uk/programmes/b07865h3

Why So Many Smart People Aren't Happy

It's a paradox: Shouldn't the most accomplished be well equipped to make choices that maximize life satisfaction?

www.theatlantic.com/business/archive/2016/04/why-so-many-smart-people-arent-happy/479832

Is Social Media Making People Depressed?

Mark Widdowson (Lecturer in Counselling and Psychotherapy, University of Salford) gives his verdict at *The Conversation*.

<https://theconversation.com/is-social-media-making-people-depressed-58242>

Sorry, You Can't Speed Read

Two psychologists have reviewed the literature and they conclude that 'it's extremely unlikely you can greatly improve your reading speed without missing out on a lot of meaning'.

www.nytimes.com/2016/04/17/opinion/sunday/sorry-you-cant-speed-read.html

What Can a Lemon Tell You About Your Personality?

Do you find yourself salivating at the merest thought of eating a lemon? The answer may say more about your mind than your taste for sour flavours

www.bbc.com/future/story/20160420-what-can-a-lemon-tell-you-about-your-personality

Why We Sleep Badly on Our First Night in a New Place

Is it because half our brain is staying up to keep watch?

www.theatlantic.com/science/archive/2016/04/why-we-sleep-badly-on-our-first-night-in-a-new-place/479091



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Experienced meditators' brains that are physically seven years younger than non-meditators' brains

In *NeuroImage*

If you want to keep your brain young, you could do a lot worse than taking up meditation. That's if you believe the results of a new study in *NeuroImage* that's found experienced meditators have brains that appear 7.5 years younger, on average, than non-meditators.

The researchers used a computer program that they created previously – it was trained on brain scans taken from hundreds of people to recognise what brains of different ages typically look like, in terms of amounts of grey matter, white matter and cerebral spinal fluid. For the new study, the same program analysed the brains of 50 experienced meditators (average age 51, with an average of 20 years meditation experience) and the brains of 50 healthy, non-meditators (also average age 51) and it produced a figure for each person saying how old their brain was in terms of its physical condition, as compared with the actual age of the person. Using this approach, the group of meditators had brains that were 7.5 years younger than the control group, on average.

Moreover, among the controls, the gap between their 'brain age' and chronological age didn't vary with greater age, but among the meditators it did: it was the older meditators who had brains that seemed particularly well preserved, suggesting that meditation provides protection against the brain cell loss associated with ageing.

Should you believe these findings? Prior research has shown that meditation appears to increase brain volume. But some issues to bear in mind include the fact that meditation might not preserve the brain, rather people with more age-resistant brains might be more likely to take up meditation. Similarly, we don't know if people who meditate do other healthy things that non-meditators don't do. Another caveat: this study just looked at the physical characteristics of the participants' brains, there was no test of their mental functioning. As a final aside, the researchers also noted that their female participants had more youthful brains than men – at age 50, they appeared three years younger, on average. **CJ**

DIGEST DIGESTED

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Past controversial research has linked young children's time in day care with later behavioural problems. A new British study of hundreds of children tells a different story – more time in out-of-home day care before age two was associated with superior cognitive scores at age four. *International Journal of Behavioral Development*

Spending time looking at virtual-reality spiders helps people with arachnophobia to judge the size of real spiders more accurately (usually they overestimate their size), and this may be one mechanism by which they subsequently come to see real spiders as less scary. *Biological Psychology*

A clinical psychologist based in the US has written an essay about his experiences of mania without depression. Although the episodes have caused him some problems, he says on balance that his 'madness' has been enriching and that mental disorders should not always be seen as purely pathological. *Psychosis*

Using CCTV footage recorded at the local airport in Zurich, researchers have tested the ability of different groups to spot baggage thieves before they committed a crime. Police officers and detectives performed better than students and novice police recruits, suggesting it's possible to learn the signs of a thief planning a crime. *Applied Cognitive Psychology*



A US study has found that people think scientists are more likely to engage in 'impure activities' such as necrobesty as compared with other social group categories such as Christian, gay or Hispanic. At the same time, scientists were the most liked group. *PLOS One*



A series of field studies conducted in Paris suggests that we're less likely to come to a stranger's need when we're in an area with lots of luxury shops. The researchers believe the shops prime concepts of wealth and money, which in turn encourages selfishness. *Social Influence*

An analysis of all the suicides that occurred in Queensland, Australia in 2004 has found several differences between those victims who left notes and those who didn't. For instance, note leavers were less likely to be female or from indigenous communities. The results challenge suicide research that extrapolates from note leavers to all suicides. *Archives of Suicide Research*