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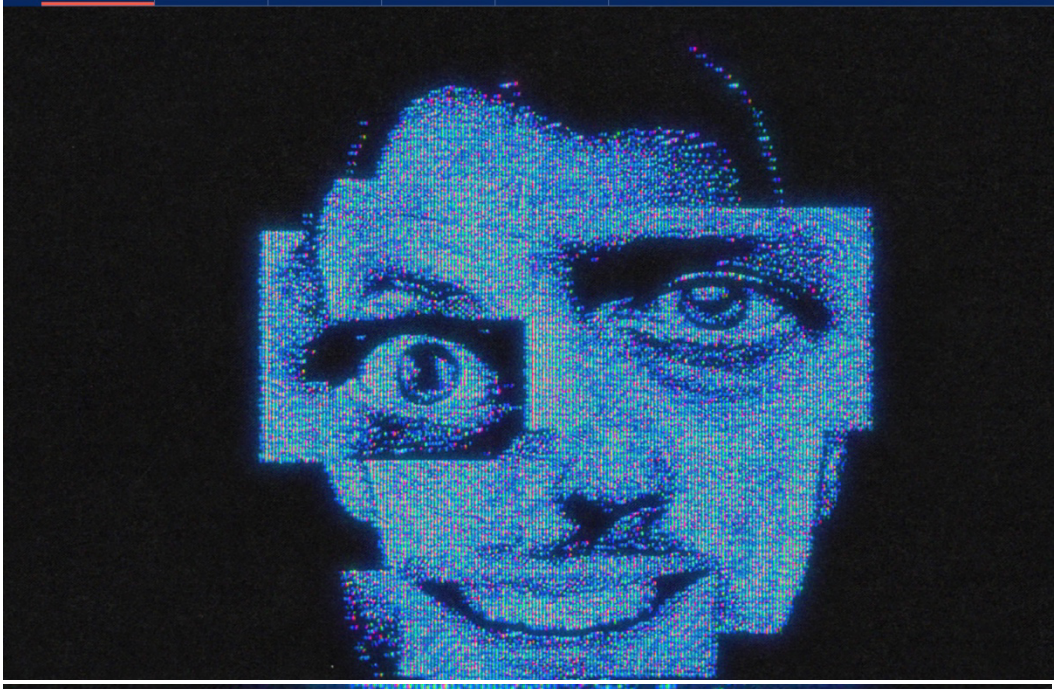

The long read

‘You tried to tell yourself I wasn’t real’: what happens when people with acute psychosis meet the voices in their heads?

In avatar therapy, a clinician gives voice to their patients’ inner demons. For some of the participants in a new trial, the results have been astounding

By Jenny Kleeman

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By Jenny Kleeman
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In the summer of 2019, when Joe was 21, he went on a university rugby tour of California. One night, one of his teammates bought some cannabis edibles to share, and Joe ate some. For the next 12 hours, he believed he was in hell. He was on fire; his body was suffused with pain. His ears were filled first with incoherent screaming and then with sinister whispering. Joe's friends thought their teammate's bad trip was funny, even as they wrestled him away from the windows when he tried to jump from the seventh floor of their hotel.

When he woke up the next morning, Joe was still in hell. A devilish, humanoid form lurking in the periphery of his vision was telling him he had died the previous night. A chorus of other voices joined in, wailing in agony. They were entirely real to him, even though he knew they couldn't be. He had a rugby match to play, and 10 minutes in, he couldn't see or feel his hands; he couldn't move. His teammates laughed as he came off the pitch. Poor old Joe.

The voices came back to the UK with him. "You're not real," they told him incessantly. "You're already dead, so it doesn't matter if you end it all again." He saw blurred, demonic faces smirking at him, sometimes at the edge of his eye line, sometimes up against his face, too close to be in focus.

His parents knew he had struggled with depression and anxiety before, but Joe didn't want to tell anyone about the voices. He drank heavily, every blackout providing temporary respite. He would walk for hours, playing music on his headphones, desperate to drown out the voices. At other times Joe would tell the voices to fuck off,

shut up, leave him alone. He would find himself saying these things out loud, in public. Seeing himself reflected in the fearful eyes of those he walked past, he was terrified that he would never find a way to be normal among them again.

Joe was later told he was experiencing acute psychosis. About two or three people in every 100 experience psychosis, when reality is disrupted by delusions or hallucinations. It can be a symptom of schizophrenia or severe depression, but can also be experienced without any other mental health condition. The acute form – the sudden, rapid onset of auditory or visual hallucinations that Joe experienced – can be triggered by drugs in people who, because of existing biological and social factors, might be predisposed to psychosis. Hearing voices is the most common form of psychosis, affecting as many as 70% of people with schizophrenia, and the voices heard tend to be persecutory and distressing. More than one in 10 people with schizophrenia end up taking their own lives.

Antipsychotic medications, the go-to treatment since the mid-20th century, can come with serious side-effects, including weight gain, exhaustion, bed-wetting, sexual dysfunction and severe constipation. And they don't work for everyone: a quarter of people on antipsychotics will continue to hear voices. The most effective medication, Clozapine, is only used where other antipsychotics have failed because it can cause even more severe side-effects. It was developed in the 1950s; there has been little drug innovation for psychosis in recent decades. There are also non-pharmacological treatments; cognitive behavioural therapy for psychosis (CBTp), when combined with medication, improves symptoms for about 50% of people.

After hearing the voices for two and a half years, Joe went to his GP in winter 2021 and received his formal diagnosis. He was put on a low dose of antipsychotic medication, which he hated: he couldn't get out of bed, couldn't function and, while it helped with his visual hallucinations, the voices remained. He came off the medication after two months. Depressed, despairing and starting to spiral, he got back in touch with his GP, who told him there was something else to try: an experimental therapy, a clinical trial he could be part of, that turned the traditional treatment model for psychosis on its head.

If you hear voices, clinicians don't generally ask what they're saying to you, beyond whether they are asking you to harm yourself or others. "There's been a reluctance to engage much with the content of voices," Ben Alderson-Day, an associate professor of psychology at Durham University who specialises in psychosis, told me. "That's in part because of a concern that if you ask voice-hearers to elaborate, you might engage in 'collusion': you may make [the voices] more real for people." A clinician may diagnose a patient with psychosis, and prescribe them medication or CBT, without knowing what the patient's voices say to them.

This new therapy demanded that voices were listened to closely, and responded to as if they were spoken by entirely real external beings. Trial participants would create an avatar of their voice: a moving, three-dimensional digital embodiment that looks and sounds like the persecutor inside their heads. They would be guided by a therapist to have a dialogue with the voice – and the hope was, through doing so, gain control over it.
Within a few weeks, the voice that told Joe he was dead – the one he so feared could be real – was manifested in colour in front of him. For the therapy to work, he needed to find the courage to look the demon in the eyes; to challenge and conquer it. If he succeeded, the voices might fade away.

Prof Julian Leff was seven years into his retirement when the idea of avatar therapy came to him. After a celebrated career as a social psychiatrist and schizophrenia specialist at University College London, Leff was sitting at home in Hampstead, pondering the results of a survey that reported the most distressing aspect of hearing voices was the feeling of helplessness. On the rare occasions when his patients had had meaningful exchanges with their voices, he knew they had felt more in control. “I thought, how can I enable the patient to have a dialogue with an invisible voice?” Leff said in an interview for a documentary made in 2018, three years before his death. “If I can somehow manage to create for the patient the image and voice of the person who they hear abusing them, maybe they could learn to overcome this awful persecution.”

Leff was awarded a small grant for a pilot study in 2008. He recruited Mark Huckvale, professor of speech, hearing and phonetic sciences at UCL, to be in charge of the tech. They tinkered with existing police identikit software, animating digitally created faces in three dimensions so they could nod, smile and maintain eye contact. They combined this with an off-the-shelf programme called Lip Synch, so that the mouth would move appropriately, and voice-changing software, so the avatar could be made to sound male or female, rougher or smoother, higher or lower, older or younger.

The avatar was a floating, moving head on a computer screen, voiced by Leff, who would be in a separate room to the patient, watching via webcam. He could speak to the patient in his own voice, guiding them through the dialogue, and then switch with the click of a mouse to the role of the avatar on the patient’s screen, its lips synched to his speech. The setup allowed him to act as a therapist to the patient and a puppeteer to the avatar. At first, the avatar would say typical lines the patient had shared with Leff: often degrading, abusive phrases. But over the course of six sessions, the dialogue would change, with the avatar yielding to the patient, transforming from omnipotent to submissive. At all times, Leff and the patient were to treat the avatar as if it were an entirely real third party.

Sixteen people – all of whom had heard voices for years, despite being on medication – participated in this pilot study. A man who had heard the devil incessantly for 16

years was instructed by Leff to tell his demon avatar he didn't deserve to be persecuted and he should go back to hell and torment those who did. An older man, who had been woken every morning at 5am for more than three years by the voice of a woman conducting noisy business meetings in his head, was encouraged by Leff to tell her it was unprofessional to allow him to overhear her discussions. To Leff's surprise, both of these men stopped hearing their voices entirely after only three sessions. While most patients did not experience such a dramatic change, the results were still impressive: for 13 of the 16 participants, voices remained, but they were less frequent and intrusive, and suicidal feelings were significantly reduced.

The therapy had made a significant difference to a sample group composed of people for whom all other forms of treatment had failed. But other clinicians were wary of taking the results of the pilot seriously, believing they might be a consequence of Leff's skill as a therapist, rather than the therapy itself. "He did have a magic touch," Tom Craig, professor of psychiatry at King's College London (KCL), told me. But Craig was sufficiently impressed by the results to lead a randomised controlled trial on 150 patients, along with Philippa Garety, professor of clinical psychology. Leff trained Craig and the clinical psychologist Tom Ward to deliver the therapy in his place, giving them audio recordings of his sessions and a checklist of how he thought things ought to be done, which Craig and Ward turned into a manual.

"Within the first couple of cases, we thought: this is extraordinary – something's really happening here that we've never seen before," Craig said. One participant, Chris, had been persecuted for years by the voices of high court judges who denounced him for intrusive sexual thoughts. Through the therapy, Chris came to accept his sexual urges as normal, and his high court judge avatar ultimately told him he had no case to answer. Free from persecution, Chris was able to go on dates for the first time in years.

Avatar therapy was found to be quicker, cheaper and more effective after 12 weeks than any other non-pharmacological intervention currently available for people with psychosis. It worked, even without Leff, on a larger scale, and it worked faster than the control therapy delivered by highly trained clinicians.

As for the concern that engaging with auditory hallucinations exacerbates psychosis, Al Powers, associate professor of psychiatry at Yale University, told me it was not backed by empirical data. "Despite popular wisdom about not wanting to collude with the voices, the evidence that's emerging seems to indicate that engagement-based approaches are most effective in terms of increasing control over voices, and also achieving some degree of mastery over them."

Despite its early success in trials, Alderson-Day warns against viewing avatar therapy as a cure-all for psychosis. "The idea of a single therapeutic option for all kinds of

voices is very unlikely," he said. "Some people's auditory experiences aren't even voice-like, so there won't be content to work with," he told me. But if avatar therapy could be quicker and more cost-effective than existing treatments, he said, it was worth pursuing.

The research team's next step was to demonstrate that avatar therapy could work when delivered by a broad range of therapists in different locations. A new trial, Avatar 2, began in 2021, and involved 19 trained therapists in four different sites across the UK. There were 345 individuals enrolled in it – including Joe.

Joe was nervous about designing his avatar. No one had ever asked him to describe what his voices looked or sounded like before. He had spent so much energy telling himself they couldn't be real and now he had to manifest them in the real world. There were other challenges: like most people with psychosis, Joe heard several voices, and he experienced them more as a felt presence, rather than a single entity with a definite physical appearance and a familiar face.

Tom Ward, who was assigned to be Joe's therapist, told me the average number of voices heard by people with psychosis is four. "We are looking for the dominant voice that's causing the most distress." Joe chose the voice who told him there was no point in living because he was already dead.

He and Ward began creating the avatar's face. There was a blizzard of choices in drop-down menus on Ward's laptop screen: *is it a human or non-human entity*? If it's human, what is its *gender, age, height (tall, medium, short), ethnicity (European, east Asian, south Asian, African)*? If it's non-human, *does it take the form of a devil, angel, alien, vampire, robot, witch, goblin, elf, beast*? Once a basic form is chosen, there are sliders to change the physiognomy: making the nose broader, thinner, shorter or longer; adjusting the eyes, brow and chin; modifying the hairstyle.

Joe found it hard to describe what the voice looked like: it was often hooded, masked, out of focus, only partially visible. It was demonic, but it didn't look like a devil. Together, they created the head of a bald man with olive skin, like Joe's. He chose between five versions of voices, and used sliders to change the pitch, tilt and roughness. The final voice was deeper than any human's. That's what made it demonic, for Joe.

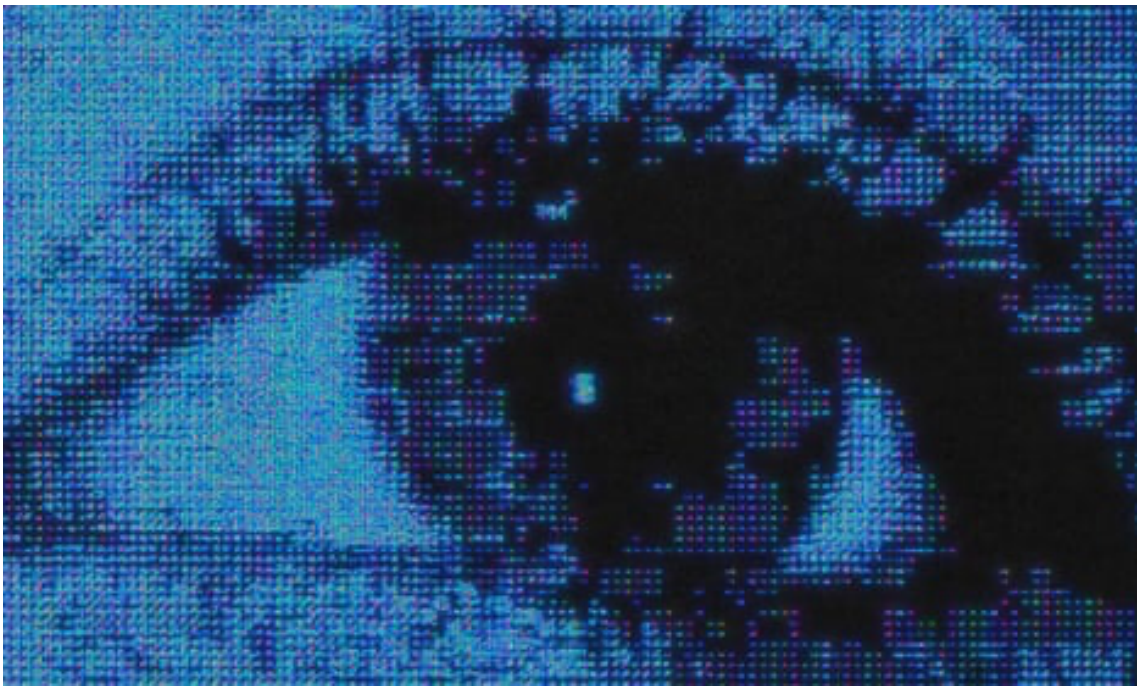

Illustration: Nick Kempton

It wasn't exactly right, but once Joe was alone with the screen there was something about the avatar that resonated. Ward reminded Joe he was there to support him. Before they went into their separate rooms, they had practised what the avatar was going to say, and how Joe might respond to it. Still, he felt terrified.

"You're already dead," the avatar told him, in a voice that was almost monotone. "You've been in hell all this time and this is your existence from now on."

"If this is death, it's exactly the same as what my idea of life was," Joe replied, a little meekly. He was surprised by how realistic the experience was, how true to life this felt. "You're lying to yourself," the voice retorted.

In his own, encouraging voice, Ward reassured Joe, reminding him to hold eye contact, to communicate in strong messages that he was in charge.

"You're harder to get hold of today," the avatar said towards the end of the first session. "You can't keep it up."

"I can keep this up for ever, and I will," Joe replied. "It's my life. I have the autonomy here. I'm in control."

Joe had 12 weekly sessions. The darkest exchange came in the fourth.

“You should end it,” the avatar said, casually. “What have you done that’s of any use to anyone?”

Joe couldn’t answer this.

In his own voice, Ward interjected to remind Joe about his relationships, his family, the life he had been able to make for himself. “What the avatar is saying is actually not true,” Ward said. “Can you come back with positives?”

Ward switched back to voicing the avatar. “You agree with me deep down,” it sneered. “You haven’t done anything of use.”

“No,” Joe said, firmly. “I have a lot of good friendships. I think on balance I have had a good life. It’s been positive. I’ve got more to do.”

“You’re handling yourself better than I thought,” the avatar replied. “I’d thought you’d be falling apart by now.”

All therapy sessions are recorded, and the audio given to the trial participants so they can listen back in their own time and be reminded of how they managed to gain mastery over their voices. With Joe’s agreement, Ward shared the recordings of his sessions with me.

Ward had delivered avatar therapy to about 80 people before he met Joe. He told me that people with psychosis often feel disempowered and marginalised; they feel as if they don’t have the right to talk. Avatar therapy is about equipping them with the tools to answer back.
I met Ward in his office at KCL’s Institute of Psychiatry in Denmark Hill, south London. He gave me a demonstration of the avatar design process, so that when we sat down to talk, a disembodied male head was blinking from his laptop in front of us, looking shiftily from side to side throughout our conversation. It still looked like an animated police photofit to me. Perhaps, with a voice to go with it, it would be easier to suspend disbelief.

Ward told me it can be helpful for many patients to understand their voices as a coping strategy arising from a previous trauma. (While there is no consensus among clinicians about the precise relationship between trauma and hearing voices, there is widespread acceptance that there is often a link between the two.) But discovering whether or not a patient’s voices have arisen as a response to trauma isn’t important, Ward told me; the point of the therapy is to find any explanation that gives them a sense of mastery over their voices. This is the principle followed in any psychological intervention, he said.

Using the manual created from Leff's instructions as a guide, the therapist plots out how the voice will change as the person is supported to stand up to it. When the voice is a bully, the avatar will begin to recognise the impact of their behaviour, perhaps revealing that they too have once been a victim of bullying. When the voice is a devil, a djinn or some other malevolent spirit, the avatar will reveal that they are not actually very powerful ("'I'm not a high-ranking demon, I'm a trickster' – that sort of thing.

Things are quite interesting when you voice demons," Ward said). When the voice resembles someone who abused the patient when the patient was a child, the avatar gradually acknowledges that they are no longer talking to a defenceless boy or girl but instead to an adult with agency.

Psychiatry professor Al Powers told me he saw potential problems in cases where the voice represented by the avatar belonged to a person who existed in the real world. "That can negatively impact one's conceptualisation of your relationships with the world, and your family, and other people who are important to you, and that can contain some risks," he said.

Before anyone can gain power over their voices, they have to tell their therapist what the voices say to them. It's often the most degrading content imaginable; racist, sexist, sexually shaming and taboo. In his clinical experience, "You're a paedophile" is one of the most common phrases repeatedly heard, Ward said. The avatar therapist has to reassure their patient that these phrases are nothing to be ashamed of, but also has to be prepared to deploy them when they are playing the role of avatar.

For the therapy to work, the therapist has to commit to playing the role of their patient's tormentor. "You never break the fourth wall," Ward said. The avatar can be direct – can go for the jugular – *because* it is not the therapist, and it can lie, or say things that are wrong. Hearing the avatar say these things can give the patient enough distance for them to reflect on and respond to what they usually only hear inside their own head.

In the Avatar 2 trial, for the first time, therapists went as far as allowing avatars to say things like, "You should end it." When I brought this up with Ward, he stiffened. This kind of content is only used in specific circumstances, he said, when the patient's risk of suicide has been assessed as minimal. "You don't start the first dialogue with that.

It comes at a point where you know how the person engages in the dialogue; you know that there is a clinical benefit to [them] voicing a commitment to life, and you know that they will be able to do it." (I asked three specialists who work on the treatment of psychosis, but were not involved in the trial, about the dangers of the avatar therapist voicing commands to self-harm, and they all told me that, while unconventional, in these circumstances, it would not harm the patient.)

None of the avatar trials have shown that the therapy could exacerbate psychosis, even if people drop out before they have completed the run of sessions. “People do drop out,” Ward acknowledged. “Sometimes people will say, ‘It was just a bit too much for me.’” They have monitored all the people who had the therapy, tracking any mental health deterioration or hospital admission during and after treatment, and there has been no documented evidence of any crises directly related to avatar therapy during the Avatar 2 trials.

We are used to imagining those who hear voices as fragile, but Ward sees them as extraordinarily resilient: they can survive both years of the worst kind of internal persecution from their voices, and also the stigma and discrimination their condition is met with by the general public. Nothing simulated on a computer screen could be any more traumatic, he says, than what the people he works with endure in daily life.

Before and after Joe’s dialogues with the avatar, he and Ward discussed how Joe’s voices might have developed in response to the extreme, heightened terror he had felt during his bad trip. Joe began to think of his voices as an overactive defence mechanism, a maladaptation of his brain as it tried to keep him safe and alert in a world he’d experienced as full of danger.

“The voices are just your paranoia, your anxiety, your fight-or-flight response gone mad. Give them space, and then you can have a conversation with them,” Joe told me. “I like to think that’s the reason why they started initially, but even if it isn’t, it doesn’t really matter, because it meant I was able to talk to them.”

By Joe’s seventh session, he was having insightful, poignant conversations with the avatar.

“Things are going to shit,” it grumbled.

“It’s not a bad assessment. They aren’t going fantastically,” Joe conceded. “You and I want the same thing – things not to be shit. That’s the goal. Rest assured, we’ll get there. It might take a while.”

“It’s why you need me.”

“In a way yeah, I guess. I think we’re working towards the same goal of just being the best version of myself I can be.”
“That’s what I need from you – to be the best,” the avatar said. “It’s what I’ve always needed.”

“Yours is not always the most helpful way to go about it, is it?” Joe said. “But I appreciate the sentiment.”

The dialogue had become a strange kind of couples therapy, in which Ward was playing the avatar and the therapist.

After four years of arguing with his voice, Joe began to feel compassion – even pity – for his tormentor. In the 10th session, Joe and the avatar discussed what happened in California. Joe described what he went through that night: not only the horror of it (“It was fucking scary, wasn’t it? It felt like a Hitchcock score sounds”) but also the alienation (“I was surrounded by people who found it funny”).

“You tried to tell yourself it didn’t matter, I wasn’t real,” the avatar said. And then, with resignation, “I’m fading from your life.”

“You’ll always be there in some form,” Joe reassured it. “But yeah.”

“Is that OK with you?” it asked. Joe’s tormenting voice had become his anxious companion.

“Yeah. I can live with that. So long as we’re able to coexist,” he replied.

“Thank you for listening,” were the avatar’s final words. “Thank you for making room for me.”

Avatar 2 set out to investigate how effective the therapy could be when delivered by therapists with far less experience than Ward and Craig. Some of the participants had been living with voices for decades. Claire was in her early 50s when she enrolled in Avatar 2, at the Manchester research site. She had heard the first voice when she was 10: an adult male, casually telling her to jump out of her bedroom window. It was entirely real to her, external and authoritative, “like an adult telling me what to do”. Claire had been abused from the age of seven. She grew up in a state of constant hypervigilance.

The nasty voice, the one that told her she was a stupid bitch, arrived when she was 13. “I remember saying, ‘Oh, shut up,’ out loud, and the other girls laughed and said, ‘There’s no one there!’ And then I realised I had to be quiet about them.” The voices became one among many secrets Claire kept, alongside the abuse and her self-harm.

She spent much of her adult life in psychiatric hospitals. By the time her mental health team’s care coordinator told her about the Avatar 2 trial in 2021, Claire had tried to end her life many times. She had been diagnosed with bipolar disorder, psychotic depression and, at one point, schizoaffective disorder. She was taking

antidepressants, mood stabilisers and tranquillisers, as well as antipsychotics; she had tried CBT, cognitive analytic therapy, compassion-focused therapy and group survivor therapy. Still the voices persisted.

"The state I was in at the time, I thought, they're not going to accept me on the trial – I'm too unstable," Claire told me. But she was given a place on the trial, coordinated by Hannah Ball. Ball had only qualified as a psychologist a year before she was trained to deliver avatar therapy. She was assigned to be Claire's therapist. "Hannah reassured me that nobody had ever had a crisis because of avatar therapy, and I thought, *that will be me. I'll be the first one*," Claire said.

Claire chose to make an avatar out of the first voice, which she felt shaped all the others. While she and Ball were putting together its angular male face, with its dark eyes and spiky hair that made Claire laugh because it wasn't quite right, the voices over her right shoulder were enraged: "Don't do this, you stupid fucking bitch." The avatar's northern accent was also not quite right, but there was something about its menacing tone that jolted Claire. As soon as she heard it, it was real to her.

She felt dizzy and sick in her first session, and Ball had to constantly check in to provide reassurance in her own voice. The dialogue lasted barely 10 minutes and left Claire exhausted, but as she walked home, she was smiling: she had been able to stand up to her voices for the first time in her life. Between sessions, she listened to the audio recordings that Ball had given her to take home, so she could remember what she had achieved and steel herself for her next encounter. (Claire agreed to share these recordings with me.)

By the third week, she was answering back to the avatar, asserting herself without any prompting from her therapist.

"Stop saying such nasty things to me. I'm not going to listen to you any more while you say such nasty things," she told the avatar.

"I'm not sure what's got into you," it replied.

"I'm going to lay down some rules," Claire said. "We can still talk, but on my terms, not yours."

By the fourth week, Claire's voices had gone entirely. For the first time in 40 years, she was alone with her own thoughts. Quiet.
She hadn't expected them to go. "My aim wasn't to get rid of them – just to get along with them," she told me. "I wasn't quite sure I wanted to let go. I'd never really been on my own. As abusive as it was, it's still a relationship."

Like Joe, she had been encouraged to understand her voices as a faulty self-defence mechanism. They had been trying to look after her: when they told her to end her life, they were trying to find a way to stop her suffering. Their departure was a kind of bereavement.

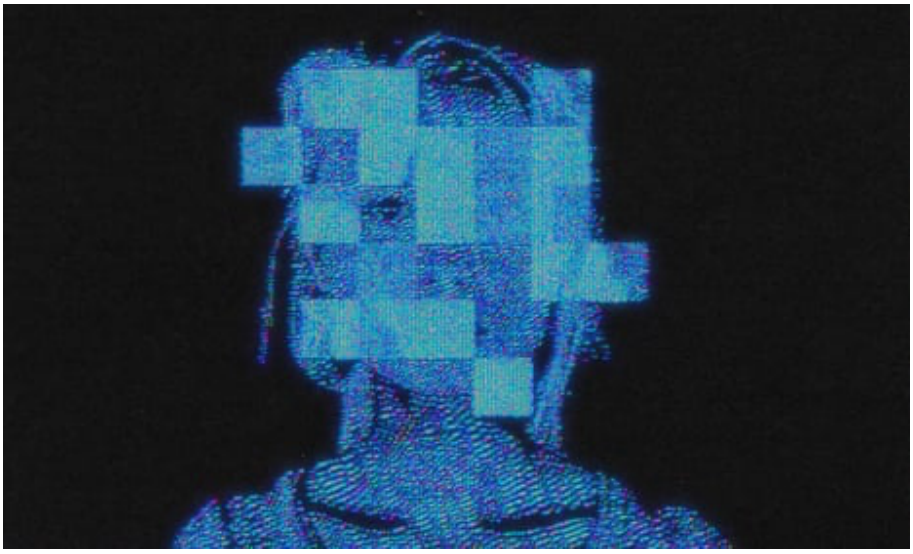

Illustration: Nick Kempton

In the remaining sessions, Ball helped Claire accept the loss of the voices, and she had an opportunity to say a definitive goodbye. The avatar promised to stay alongside her at a distance, there if needed, but no longer interfering in her life. “I wish you all the best,” it said at the end of the final session.

“Thank you. I wish you all the best, too,” Claire replied. “I know you had good intentions at heart.”

Nearly two years on, Claire’s voices have not returned. She’s coming off all her medications. She can go out in public, eat in a noisy restaurant, do voluntary work, give interviews to a journalist – all things that once seemed impossible. “I’m stronger. I’ve gained so much. I now feel I have a life worth living.”

Ball didn’t have the same level of experience as Leff, Craig or Ward, but she was able to achieve the same outcomes using the manual they developed as her guide. I asked to see the manual, but Ward told me he couldn’t share it with me, because it was “core IP”. The Wellcome Trust, which funds the trial, has been protective of its intellectual property in the past: research teams in Denmark, Australia and Canada that have been experimenting with avatars have been told there are restrictions around calling the work “avatar therapy”.

Ball told me the manual is not a script, more a set of objectives to aim for in each session: a general structure of how the avatar should change to empower the patient. She listened to recordings of one of Ward’s cases from the first trial, did two closely supervised pilot cases and was then delivering the therapy herself, alone.

I wondered how comfortable she felt, taking on the role of a malevolent entity that has enormous power over her patient. “It requires a lot of active formulation and reformulation on the spot, and listening out for things that might change how you were initially going to approach a dialogue,” she said.

I had imagined that only skilled clinicians could be avatar therapists, but Ball was convinced that, if they were willing to take on the challenge, a very wide range of mental health practitioners could do it. “I think you need people who understand relationships and dynamics,” she said. “If you’ve got a sense of who you are as the avatar and the relationship [to the patient], you know how to respond.”

The results of the Avatar 2 trial, published on Monday, were dramatic. Avatar therapy has been shown to deliver rapid and significant reduction in distress caused by voices. No other psychological intervention has been shown to cause such a significant reduction in the frequency of intrusive voices.

Earlier this year, the National Institute for Health and Care Excellence announced that it has found avatar therapy to be safe and effective and recommended that it be offered for testing in clinical NHS settings over the next three years. Thirty-eight people have so far been trained to deliver it in the UK, from experienced clinicians to newly qualified psychologists and nurses. The most effective psychological therapy currently offered on the NHS, CBTp, is typically delivered by qualified clinical psychologists in 16 sessions over 12 months. In comparison, avatar therapy could work out as “half the length of time, with less skilled people, so a bit cheaper, and a bit more available”, Tom Craig told me. He hopes it will be part of NHS treatment within five years.

A small number of practitioners remain hesitant about avatar therapy being delivered by support workers and less experienced psychologists. Prof Neil Thomas, director of the Voices clinic in Melbourne, and lead investigator on the Australian Amethyst avatar therapy trial, said: “Working with people who hear voices is *already* an area of specialist practice. Using technology as well makes it even more specialist. The process is actually not particularly intuitive for people that have trained in therapy – which involves being supportive to people – to have to role play a nasty voice.”

But the British team are taking things even further. A newly announced Avatar 3 trial will investigate whether the avatar could be entirely digital and voiced by an artificial intelligence, which would remove the requirement for real-time human voicing of the avatar, and mean it could be widely disseminated. Humans would always be necessary to support the person in their interaction with the avatar and help make meaning of the voices, Craig said, but that would not need to be a trained therapist. It could be “a community nurse, or a nursing assistant”.

Louise Birkedal Glenthøj, associate professor of psychology at University of Copenhagen and the trial coordinator for Challenge, the Danish trial using avatars in

the treatment of psychosis, told me she feared a fully digital avatar powered by AI might have the potential to exacerbate psychosis. “As people with psychosis struggle with grasping reality,” she said, “being in a dialogue with a machine that is not controlled by a therapist might generate psychotic experiences.”

The Danish team enrolled 270 participants in a trial that investigated how people who hear voices respond to having dialogues with an avatar using virtual reality. “We thought if [we could] integrate this in fully immersive VR, then we would perhaps get some additional benefit in terms of this potentially having a greater treatment effect,” Glenthøj told me. “Having the therapist close by would intuitively be more secure for the patient. We capitalise on this notion of ‘it’s real but it’s not real’. It’s so real that they feel they are in this dialogue with their voice, but it’s not real, and if they take off the headset, then it’s gone.”

The VR allows the user to situate the avatar in daily life settings, such as on the bus, or in the participant’s home. They also added emotions to the face, so the avatar could smile more and look more friendly as the dialogues progress.

Glenthøj conceded that VR avatar therapy can be overwhelming for some. “We *do* see people reacting. They destabilise. They get *more* psychotic.” As a result, the Danish team progressed more slowly than clinicians on the Avatar 2 trial, and have added safety features, such as a virtual panic button, and regular contact with the participants’ primary care providers throughout treatment. They also gave participants booster sessions at three and six months after treatment, in the hope of making any positive effects more durable. The trial ultimately found that VR avatar therapy was significantly more effective at reducing voices compared with supportive counselling.

Avatar therapy may help in treating mental health conditions beyond psychosis. Preliminary research from Ward’s team with an avatar embodying the “anorexic voice” has shown it to be a promising intervention for eating disorders. Glenthøj is researching VR-based avatar therapy for obsessive compulsive disorder.

Ward also wants to investigate whether dialogues with avatars could help people who struggle with anxiety or depression. “The technology is about creating this external representation of the dark side of yourself,” Craig said. “At some level, this is about thoughts, isn’t it?”

In Australia, avatar therapy can take place via telehealth, with therapist and participant often in different parts of the country. “We’ve got a lot of people living in regional areas who have limited access to mental healthcare – let alone to specialist therapies,” Thomas told me. They have drawn on how the British team worked during lockdown to see how it can be delivered remotely.

Some therapists have tried, in the past, to guide their patients through dialogue with voices via role play, or “chair work” – where the voices are represented by an empty

chair with content spoken by the patient – but both these techniques require a leap of faith. With an avatar, it's the recreation of the voice, not the face, that makes this radical, Thomas said. "It's called avatar therapy, and that sounds like it's primarily about the visual representation, but not everyone has an existing image that goes with their voice. I think the auditory transformation is particularly powerful."

"The suspension of disbelief is remarkable," Craig told me. Even though trial participants have signed consent forms and know it is the therapist voicing the avatar, they still relate to it as if it were the voice in their head. "They are put in front of this not very wonderful computer animation, and they're *right in there*, talking to their voice."

'It was liberating just to talk to Tom [Ward] about it, because I didn't speak to anyone else," Joe told me over coffee in south London. He still had the imposing presence of a rugby player, but he was so softly spoken that I had to strain to hear him talk over the hubbub of the cafe.

A year on from avatar therapy, Joe's voice was still there, a presence just out of eyeshot, still a distinct external entity and not just an inner monologue. But it was quieter, easier to manage and allowed him to get on with daily life. When it spoke, it was to have the same kind of conversations they'd had in his final sessions with the avatar. "I get it – you're very on edge," Joe would tell his voice. "I don't feel great either. But we are just walking to work at the moment. I promise, we're good."
"It worked because I understood the voices more, I think," he told me. "My general levels of anxiety stayed pretty high, but I've started interpreting the hallucinations as a part of the anxiety." He still has panic attacks. The anxiety and self-doubt that existed before his bad trip are still there. "You do have to address everything that's going on to address the voices themselves. They feed on everything else."

Joe recently went back to his GP in search of help with his anxiety, but there was no cutting-edge experimental solution delivered by renowned psychologists for him this time. The GP put him on a waiting list for NHS talking therapy, and warned that he could be in for a very long wait.

Names of patients have been changed.

https://www.theguardian.com/news/2024/oct/29/acute-psychosis-inner-voices-avatar-therapy-psychiatry

A student with a history of psychotic breaks and—(I'm told) schizophrenia—chuckled while I was working with her, obviously hearing another voice than mine. At a work-shop on inclusion, I was asked about my methods. I told this story and asked how I was to include all the voices present. Two worksheets, a pencil for each hand? How to grade this? Average the marks? I'm not sure my contribution was deemed apropos.

Avatar therapy makes me think of the alters in ego state theory/ therapy developed treating Multiple Personality Disorder (MPD). There are parallels here, e.g. how ego states or alters form in response to trauma or need in desperate circumstances, with therapeutic success hinging upon sincere assuaging of alters, sometimes respectful but firm confrontation with them. Still, I remain puzzled—as I think all should be. TJB