



By Invitation

The AI robot therapist will see you now

With artificial intelligence pervading every part of life and chatbots available 24/7, will there still be a place for psychiatrists?



Chong Siow Ann

For *The Straits Times*

Pervasively, and often insidiously, artificial intelligence has infiltrated and woven itself into our lives.

We have AI customer service chatbots answering our queries; AI delivering our Google searches tagged with unsolicited curated ads; AI translating between languages; AI buying and selling stocks, writing corporate reports, and picking potential hires.

AI has enabled the flying of planes to the extent that the human pilot needs to be at the helm of an airplane for a few minutes per flight. AI plays chess and the ancient Chinese board game Go. In 2016, a Google AI program called AlphaGo crushed Go grandmaster Lee Sedol, then the world's best Go player and 18-time world champion, four games to his one. Lee retired a few years later, saying "AI is an entity that cannot be defeated".

AI is about machine learning and machines know only what they can learn from the vast seas of databases they ingest with stupendous and ever-increasing speed.

Its self-learning algorithms acquire and analyse new data and, based on those analyses, it seeks to improve itself and evolve; it also can make decisions and acts on them.

But AI does not "think" in the way that humans do; instead it looks for statistical correlation – linking up one event with another and to outcomes, but without the

coherence of explanation. That it does this with no preconceptions can be advantageous, as it may detect patterns that humans might ignore or not notice because the signs are too subtle.

And even in my own field of psychiatry, which in many ways is a uniquely human endeavour requiring emotional intelligence, self-awareness and sensitivity, AI has waded in enthusiastically.

AUTOMATED THERAPISTS

Digital mental health has become a multibillion-dollar industry awash with more than 10,000 apps, according to an estimate by the American Psychiatric Association, a plethora of applications offering guided meditation, mood tracking and therapies.

There is, for instance, Woebot, a therapeutic chatbot that uses AI to offer cognitive behavioural therapy, which is a common psychological technique used to treat anxiety, depression, obsessive compulsive disorder and even psychosis.

The Covid-19 pandemic has boosted the development of such automated therapists with the rising wave of social isolation and loneliness, depression and anxiety which is likely to strain if not flood and overwhelm a country's mental healthcare system.

There are other compelling advantages of such automated therapists. Human therapists can vary in skills and experiences, machines are invariably consistent and do not get stressed or exhausted by back-to-back sessions; and machines are indefatigably available 24 hours a day, seven days a week, and resistant to burnout.

And there is that hidden sense of shame and fear that people with mental health problems often harbour which can thwart them from seeking help, especially when they see stigma everywhere, including in therapy.

People tend to respond more willingly and frankly to bots, stemming perhaps from the perceived anonymity of telling something to a bot that can be pre-programmed to be blandly non-judgmental with its

responses.

Still, humans can develop dependency and attachment to a bot – especially to a physically embodied robot which can be remarkably life-like – even to the extent of being vulnerable to how the robot might react to them.

In a study, subjects who were instructed to tell a personal story to a robot were hurt when the robot turned away while they were talking to it.

But there is something troubling about relating to a robot as though it is a sentient being.

The person must allow himself for himself to be deceived regarding the true nature of this relationship, and complicitly attribute human feelings and attitudes to a robot that offers ersatz care and attention.

Rather fittingly ironic in this instance is the assertion by the Russian philosopher Mikhail Bakhtin that to deceive people is to turn them into objects.

HUMAN THERAPISTS

But therapy is not about confessing dark secrets and professing private pains; rather it is about the patient speaking to someone who can "push back", as Professor Sherry Turkle, a psychoanalyst at the Massachusetts Institute of Technology, writes in her book, *Alone Together*.

She argues that "when we talk to robots, we share thoughts with machines that can offer no such resistance. Our stories fall, literally, on deaf ears".

To do that "pushing back" as therapists, we need empathy and imagination; and with the judicious use of our own personal experiences of pain, failings and losses, as well as our clinical knowledge, we can view, feel and

While it is unlikely that we will end up with that cliched science fiction version of a techno-dystopia dominated by machines with their algorithms, and where humans are just data, we do need to think of AI's wider impact and implications... As AI becomes more ubiquitous in our lives, would it stunt our emotions and empathy, and hollow out our connections to each other? And would we prefer relationships with robots over humans?

understand the vicissitudes of our patients' lives from their perspective.

And we are ever attentive to that drop in their gaze in mid-sentence, the falter in their voice, that moistening of their eyes, that sudden stillness in their posture – and to take all that in and to suss out that gap between what is said and unsaid to guide our own behaviour towards them, and somehow convey to them our concern, acceptance and care despite whatever flaws and vulnerabilities they might think they have.

There is also that phenomenon of transference, which occurs when patients redirect feelings from past relationships – usually of their earliest parental and sibling relationships – towards the therapist.

In certain types of psychotherapies, the occurrence and subsequent identification and interpretation of these transferences are crucial.

It is highly unlikely, if not improbable, that a machine could be reminiscent of a patient's significant past relationships and arouse those latent emotions, let alone be able to identify and interpret them to the patient.

That said, it is not surprising that most psychiatrists would be sceptical that AI is able to do the job as well as they do.

In a 2019 global survey of psychiatrists across 22 countries, only 4 per cent of the respondents thought it was likely that AI would make their jobs obsolete.

The authors of the report, however, were far less sanguine and wrote scathingly that the psychiatrists were "overvaluing their skills and/or underestimating the rapid pace of progress" and are therefore "ill-prepared" for the AI juggernaut heading their way.

DEALING WITH A.I. GENIE

The reality in most healthcare systems is that clinicians have very little time to interact with patients, appointments are hard to get, and patients could be seen only at longer intervals than should be the case, if they are seen at all.

Proponents of AI argue that, if anything, AI can help doctors focus on the human elements of medicine, rather than getting bogged down with the minutiae of history taking, collecting data and making sense of it, and coming up with the diagnosis and treatment plan. AI would rationalise the process, making it more efficient, productive, cost-effective and, yes,

more machine-like.

But going down that path has its risks: it could change the nature of our work. AI-generated recommendations may carry a false authority that would override expert human judgment, and the incremental ceding to AI could result in intellectual laziness and the consequent diminution and loss of expertise and competencies, or we may not even bother to attain these knowledge and expertise in the first place.

The AI genie is already out of the bottle, and we are at the cusp of a sweeping technological revolution. In healthcare, AI will doubtlessly lead to new discoveries, upend conventional wisdom and disrupt current practices. I do not know how it would affect my field and how with the increasing encroachment, AI would affect human perception, cognition, interaction, emotions and consciousness which lie so much at the heart of psychiatry.

With time, AI will be helping us to look after our children, our sick and elderly. It will play a major role in our education and search for information, maintaining law and order, powering our economies and dictating how we play.

While it is unlikely that we will end up with that cliched science fiction version of a techno-dystopia dominated by machines with their algorithms, and where humans are just data, we do need to think of AI's wider impact and implications.

In 2018, former US Secretary of State Henry Kissinger asked in his think piece in *The Atlantic*: "How is consciousness to be defined in a world of machines that reduce human experience to mathematical data, interpreted by their own memories? Who is responsible for the actions of AI? How should liability be determined for their mistakes?"

Other than the obvious point that we need to exert control and impose the relevant philosophical and ethical parameters, these are existential questions on our very humanness – on what makes us who we are as individuals and the future form of our human society.

As AI becomes more ubiquitous in our lives, would it stunt our emotions and empathy, and hollow out our connections to each other? And would we prefer relationships with robots over humans?

stopinion@sph.com.sg

• Professor Chong Siow Ann is a senior consultant psychiatrist at the Institute of Mental Health.