

Intelligence revolution

In 2016, Mark Zuckerberg's New Year's Resolution was to build a Robot Butler. While Artificial Intelligence (AI) and social media algorithms begin to influence everyday life in a big way, **Tom Pountney** identifies other means of getting a little AI help around the house

“I am putting myself to the fullest possible use, which is all I think that any conscious entity can ever hope to do,” sentient computer Hal 9000 told David Bowman in Stanley Kubrick's 1968 film *2001: A Space Odyssey*.

Emotion, independent thought process, art appreciation and an affinity for chess; Hal was at least 50 years ahead of its time.

Exactly how far ahead, we do not yet know.

Waking from the cold, dark winter of the twentieth century, Artificial Intelligence (AI), is beginning to evolve with frightening speed and, at last, the funding it deserves.

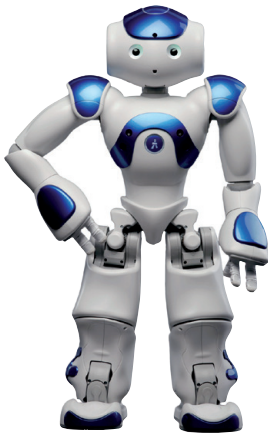
AI pioneer Ray Kurzweil, now Google's Director of Engineering, claimed in 2001 that we had arrived at the “law of accelerating

returns” – technically light years ahead of even Kubrick's wildest dreams; yet emotionally still behind.

Twelve months on from Zuckerberg's New Year's Resolution, and he is busy batting away accusations that ‘fake’ Facebook content swayed the US election result. Heavily involved in the clean-up operation is Facebook's Head of AI Research,

Yann LeCun, indicating that the question is how – and not if – AI will be utilised to combat fake news in the future.

The world still awaits an unveiling of Zuckerberg's robot butler but: “You can think of it kind of like Jarvis in Iron Man,” he wrote back in January, adding that the AI assistant could already do simple things like control the lights and adjust the thermostat.



“[That's] much to the chagrin of my wife, who can now not control the temperature because it is programmed to only listen to my voice,” he joked at a public Q&A in Italy. “One of the perks of being an engineer, is you can do that.”

Thanks to work with Facebook's AI team, the butler now has voice and face recognition capabilities, and is growing into more than just a biddable minion. It recognises when his US\$49bn boss returns home from a run and decides whether or not to make him toast. How can anyone possibly compete with a Zuckerberg/Jarvis dinner party? Below are a few alternatives.

A VERY 21ST CENTURY DINNER PARTY

The autonomous car is a good place to start. With hands-off conditional automation anticipated in the next few years, the 2017 Mercedes E-class (mercedes-benz.com) will get from office to dinner party front door (and park itself) while passengers fire off final emails. Just be on hand to take back control when prompted – until 2025 at least, when it is

Opposite page: Saviok's Relay (bottom), SoftBank Robotics' Claire (top), and Pepper (above) are 'real' R2DTs, while table-top assistants Jibo (opposite, centre) and Amazon Echo (left) create interactive relationships between man and machine



predicted cars will no longer need a steering wheel.

Upon arrival, Jibo (jibo.com) or Samsung's Otto (complete with HD security camera face recognition) will stop the dog barking with a friendly notification emanating from its owner's smartphone – Pavlov's response theory still applies. Google Home (madeby.google.com) or Amazon Echo (amazon.com) can take care of ambiance with lighting to set the mood. Jibo will read the kids a bedtime story.

Amidst the polite patois of dinner party parlance, one guest makes true 21st century small-talk with the host, “was it Viv, or Amy, that arranged this

delightful gathering?”

It could be the kind of throw-away line uttered at social functions for the last 100 years. Only ‘Viv’ (built by Siri (apple.com) and acquired by Samsung (samsung.com) in October 2016) and ‘Amy’ (a rival creation by New York start-up x.ai) are actually next-generation AI-powered personal assistants.

Confused? Just worry about table-place arrangement politics – before Zuckerberg's butler arrives and puts its ‘foot’ in it.

Amazon's Alexa (alexa.amazon.com) will select appropriate background music, but it may also be worth showing off the latest in levitation technology; the ➤





Mag-Lev Audio turntable (kickstarter.com) and storm cloud speaker (richardclarkson.com).

It is also levitation, not AI, that steals the show at dinner (until Zuckerberg's 'Jarvis' arrives anyway). As demonstrated on Australia's baking reality TV show, Zumbo's Just Desserts, Adriano Zumbo has developed a Willy-Wonka-inspired floating cake.

Culinary Director of Restaurant Development at Starr Restaurants, Erik Battes, started to experiment with levitating dishes in 2014 at Morimoto (morimotonyc.com) on New York's 10th Avenue.

Roll out a floating dessert and guests might go a little quiet. Perhaps that's the cue to hit the games room and get pitch-side for the ball game (nextvr.com) or don the virtual reality headsets (samsung.com, vr.google.com or oculus.com) and enjoy a game of post-dinner Assassin's Creed Empire (assassinscreed.ubi.com).

A great night had by all – snapchat, Facebook live, periscope, chatbot and slack captured it all and told the world. A 3D-printed piece of pie to go in the take-home goody bag and Jibo will unlock the gates.

Whatever next? A gold-plated DJI Phantom drone (drone-world.com) looking after photography for the evening? That was so 2016.

Above: 2008 film WALL.E is about a small waste-collecting robot, not dissimilar to Charley (right) who is now offering room service at luxury residences on the Santa Monica Boulevard in LA

AI: THE REALITY

Sydney-based investment kingpin, Hamish Douglass, refers to 2016 as the 'tipping point'.

Douglass, whose Magellan Group manages nearly US\$30bn in assets globally, was specifically reacting to an event on 19 March 2016 when AI beat a *Go* (ancient Chinese game) World Champion. No machine was ever supposed to master *Go*. In chess, for example, there are 20 possible opening moves; *Go* has up to 360.

AlphaGo, a computer program developed by Google DeepMind (deepmind.com), won four of the five rounds it played against World Champion Lee Sedol, eclipsing the 1997 victory of an IBM computer over Chess Master Garry Kasparov. "The breakthrough with AlphaGo is that it is a self-learning algorithm that learns from raw data," Douglass told his investors.

"AlphaGo taught itself to play by playing itself 30 million times", he added, and Google boasts it is no one-off, as the new generation

THE WORLD'S FIRST PERSONAL SERVICE ROBOT: CHARLEY

Ten Thousand, the Santa Monica Boulevard luxury residences that opened in January 2017, are offering the services of Charley; a robot butler. Charley can deliver packages, food and drink from concierge to any apartment in the 40-storey Beverly Hills premium property. Operating the lift, avoiding obstacles and plugging itself in to charge, Charley also comes complete with a secure compartment so there is no risk of anybody stealing another resident's delivery. All those who move into the building will be given special iPads allowing them to order items and receive them without leaving the unobstructed views of the Hollywood Hills. livetenthousand.com



so different languages, Pepper is the product of the robotics arm of Japanese conglomerate SoftBank (ald.softbankrobotics.com). He is also complimenting human expertise in UAE banks and hospital waiting rooms.

While hands-on father Zuckerberg spends his week raising a young child, running a mile every day, building a robotic butler – and running Facebook – not all business magnates have that much spare time. Until Zuckerberg's butler is available to purchase, an army of dinner-party AI assistants and super-gadgets may have to do. ■

of AI algorithms can perform a wide variety of involved tasks 'straight out of the box'.

AI is also entering healthcare, banking and retail. Pepper the robot can be found enhancing customer experience and collecting feedback in two San Francisco Westfield shopping malls. Dancing, playing games, taking selfies and teaching one of