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Pulsus Abstract

Can robotic units become sentient? Sentience at its core is the ability to perceive and understand which allows us to create memories and these memories or experiences make up our understanding. Personalities are born from different experiences and decisions. The first step to robotic sentience is to allow robots to create memories.

I am exploring the evolution of robotic lifeforms and at the same time discovering what it means to be truly human. My research and the creative projects (Manga + Anime + Music) born from Anthrobotics is to show what it means to feel and connect, to reach Mono no aware (もの のあわれ). To reach Mono no aware is a goal not only for robotic sentience but for us, as our societies are moving away from the pathos of things. Knowing that 'what is beautiful' comes to an end brings out a crucial element of the human personality. This realisation is what makes us human. We feel that we are on borrowed time, and so experience and interactions (connections) take on a poignancy that creates memory and joy, sorrow. These moments become alive, and thus we become truly alive; and eternity is reached through transcending into these memories and beyond.

For the robot to feel, connect and experience this new life form will need to sense, both time and growth, and subtle connections. It must be able to sense bonding, scent and smell, of the layers of connecting gossamer we have to mono no aware. And this new life form must understand and remember these connections as a memory to truly evolve.

In my journey I have also been researching smart materials, as they will be the gateway to the future of Anthrobotics; of robots that are actually 'alive'; they are the key to help us instil the ethereal aspect that we humans must yearn for, Mono no aware. Smart materials will build the infrastructure of the new life form, becoming their neural networks and pathways, their cellular memory, not just recording facial recognition, experiencing and retaining true memories -- experiences that you are transported into, containing a culmination of feelings that will allow you to relive the true beauty in the moment that you are recalling.

If I am honoured with a request to present my research, I would like to speak on the linking of machine learning, smart materials and the philosophy of Mono no aware, in hopes of creating a new life form that can *sense, explore and retain*.

This is the vision of the future I want to share and contribute to.