

ROOTS AND MODELS

One of us comes from dance, the other from robotics, and you would be forgiven for thinking immediately about the YouTube films created by Boston Dynamics. But what connects us is our concern that human-ness is losing ground to machine-ness. To partly address this, we organised a workshop in January 2023 which posed the question: “How can the Arts and Humanities Shape our AI Future?” Our intention was for an open and unstructured discussion unrestrained by our preconceptions, which was the gratifying outcome. We thought it would be interesting to post the same question to ChatGPT which was much hyped at the time and present its suggested answers to the workshop participants. The artificially generated answers were worthy but uninteresting, being bereft of insight or originality. In contrast, the workshop was variously frustrating, exhilarating, challenging and reaffirming. Six hours with two dozen people together in a room reminds us of how human we are. (1)

Roots of Meaning

Of course, beyond the hype and with some understanding of the algorithms at work it is unsurprising that ChatGPT's responses lacked originality. Large language models (LLMs) rely on the probabilistic selection of the next most likely word given a previous sequence of tokens. This produces output which can appear or sound meaningful. However, this conjuring trick disguises the fact that no person intended to convey something meaningful through these utterances. Although meaning can arise in the mind of the reader, the writer or speaker does not exist. They are effectively erased. Creativity gives us another way of peering under the hood of ChatGPT. One definition of human creativity is the ability to adapt to new situations. Limited by the probabilities of previously observed sequences, LLMs can never create novelty through linking concepts in a way that has not been seen before.

The output seems intelligent though. This is a problem. Although the algorithms rely more or less on repeating the more or less obvious, this appearance of intelligence is enough to fool people into assuming an originating intent. Just as three dots arranged in a triangle is enough to trigger our ability to recognize that most potent signal, a face, so our evolution as animals that thrive and survive through communication predisposes us to confuse words that appear to fit the pattern of intelligent communication with an originating person (who is not there). Words are only a transmission medium, a way to convey meaning from one person to another. Artificial language reduces the human part of this relationship by half, exploiting the other half through our own capacity to be confused about what intelligence is.

There is also the semblance of creativity, as a tiny seed of an idea, a recipe for a cupcake, seems to be all that is needed to produce a blog post or an essay. But we must constantly remind ourselves that the source of creativity lies in our being a body, inseparable and indivisible from the mind. Body/minds are perfused with bacteria and fungi that mediate and enable our communication with our biotic environment and with each other, existing in a web of mutualistic and adaptive interactions, networked through these multimedia communications with their fellows and embedded in their evolutionary history. Another aspect of being body/minds, is that although some of our utterances express logical thought we are moved to express this, and feel the truth of this, from embodied emotions, feelings and intuitions which inform our beliefs and values. Values need a body! Values require 'skin in the game' (pinning meaning to truth in a way which artificial agents cannot replicate), and since ethics and morality require values this suggests that any notion of artificial ethical agents, or of Truth emerging from ChatGPT and its progeny, is mistaken.

We are not a model

In addition to being the roots of meaning, embodiment has more to offer us in this discussion about human-ness losing ground to machine-ness. We don't have a body, as a matter of possession, we are a body. This means we continuously experience a flow of sensation that corresponds to an environment to which we constantly adapt. This flow of sensation is not abstracted or differentiated into something else. That is until the experience is translated into some kind of description. In some areas of human-centred research, this operation of description serves to generate an abstraction in order to arrive at categories of bodily representation, for example anatomy.

Some areas of philosophy and anthropology work on translations of experience that resist this instrumentalization. However, in general this work is side-lined by the persistence of ways of thinking that permeate human-centred research in many data-driven technology fields, such as human computer interface design and robotics. These fields, and others, rely on being able to do more than translate, but also to categorise and model human experience as something else. And these fields appropriate the senses (cameras that can see, devices that can feel, bots that hear and speak, etc.) in such a way that we are rapidly losing the distinction between humans and non-humans (machines).

We are losing sight of being a body, it is being erased here as well. Not just as the missing half of communication, but as a consequence of anthropomorphising (attributing sense in more than one way) to our technology. Some argue we should stop referring to technology as something that thinks and feels. Google "embodied AI" and the results point toward work in robotics. What might this be doing to our ability to see humans as different from machines if we so easily mix things up like this? More cause for confusion. To counter this,

we should dedicate more attention and research into what is untranslatable about experience, what cannot be abstracted and categorised.

We both learned Tai Chi. Scott learned the long form Hwa Yu Tai Chi in Boston in the 1980s and stopped practising it after a few years as his dance training included similar ideas related to sensing the connectedness between inner and outer spaces, through movement. Matt has been practising for 30 years. For him this has been a continuing journey of discovery to find out how to move with power and balance. As he puts it, "Tai Chi is about hitting people very hard and not falling over. Experiencing oneness as a hymn to the beauty of the world is a useful by-product of this!"

Dance and other movement practices are often considered to occupy territory that is both ephemeral as well as ineffable. So, it is interesting and important to consider how movement practices are taught or transmitted. This nearly always involves language in communicating the basic movements and gestures, there are manuals and video tutorials, people speaking, labelling, evaluating, describing. As the practice evolves, in some cases these verbalising aspects recede or perhaps disappear, but the ideas remain. These ideas have not been captured and translated (as information) into experience, they are part of it. One can easily find videos on-line showing Tai Chi masters teaching techniques such as push hands, a two-person training practice in which one person attempts to unbalance the other in a form of competitive relaxation. Learning Tai Chi goes from the outside inwards. Seeing the form and hearing the teachers' words gives us clues on the movements we should make, songlines of the routes we should travel. The real learning happens through introspection; there is one optimum way each body can achieve a goal with power and balance, and the journey towards this depends on developing the sensitivity to perceive the dynamic relation of all the muscles, joints and fascia and the ability to command them individually and in concert. This is learning with the body, of the body; cryptic, hidden, and only shareable through imperfect metaphors and touch. Lacking a human body, a robot could only do something that *looks like* Tai Chi.

For many people, LLM's semblances of intelligence and creativity and our confusion about sensing machines, may be enough to make it seem like AI has arrived. We see something disturbing in this. Having created a virtual world, we have created machines to pollute it, flooding the infosphere with noise designed to be indistinguishable from truth, but with no humanly embodied and rooted guarantee of usefulness, veracity or sensemaking. Ersatz truth, brummagem goods, shoddy cloth, to borrow the language of a previous era when mass production churned out low quality substitutes for artisans' output. Relying on these tools in our time also has the possibility to displace jobs and disrupt economies, with a new era of mass-produced replacement for thought and for creativity. There are those who might argue that quality of life in this era is better than the last, but other current factors suggest we have reached the limits of this way of thinking.

Just like the arts and crafts response to industrialization, or the slow food response to mass produced convenience foods so carefully crafted to satisfy our evolved desires while contributing to a public health epidemic, we sing the praises of a new Romanticism that promotes human-ness and respect for nature and paying attention to the irreducible, immeasurable and indescribable (except perhaps poetically) aspects of experience. It is time for slow thought that is also listening to the gut. There are other ways of knowing, other ways of being rooted in a place, living in a community and respecting the non-human, that are being side-lined by machine-ness. We are not alone in thinking this. So, let's come together to experience the untranslatable. It is time to dance!

(1) [Arts and Humanities Shaping the AI Future Report](#)