

APPLYING ETHOLOGY TO CURRENT ISSUES

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COMMENTARY

The connections between the scientific attempts to understand the world and the practical attempts to control it to our ends are well known. Currently what is more talked about is how technological capability emerges from scientific understanding. But of course the connection goes the other way too, scientific advances are inspired, informed and motivated by practical needs and skills. One need look no further than a central concept in Ethology, namely Darwin's natural selection, so named to contrast it with "artificial selection", better known as animal or plant breeding, which humans have done for millennia.

Medicine provides a clear example of this interaction. Curious clinicians have always looked at the consequences of their treatments in their attempts better to understand and help their patients. A "treatment" is after all a Tinbergian natural experiment where the clinician introduces a perturbation, the treatment, into the otherwise natural environment, internal and/or external, of the patient and assesses the effect. Engineering provides another example, bridge building has long been one of the frontier pushing technologies - which sometimes go a bridge too far and the bridge collapses, but much is learnt. Both these technologies are, like most areas of human activity influenced by powerful egos which can distort information, prolong inaccuracy and maintain dangerous treatments, or can push through advances.

What about Human Ethology? What are the practical issues that might motivate, inspire and influence it and what might it be used for.

In seeking to understand human behaviour, human ethology is in a crowded field. Not just psychology and the other social sciences, not just philosophy, literature and the Arts more widely, but also everyday cultural knowledge that all of us have and which enable us to function in society. This has at least three implications.

1. The danger of stating the boringly obvious

For a start there is a lot of knowledge already in our cultures, so human ethology has to be careful not to be banal and boring by stating what is common knowledge.

2. The first person perspective

But this knowledge, and this is the second problem, is in large part a practical knowledge for adapting to others, it helps us understand and communicate. It is mentalistic. In other words it takes into account the mental states of others, the "I" perspective, and not just the behaviour (third person perspective). We don't just adapt to bodies, we share minds. Each of us ascribes to others the same conscious agency that we ourselves feel.

We can extend this ascription to other species, although it becomes more difficult the more distant phylogenetically they are from us. We also extend it to inanimate objects and cartoon characters and latterly to robots. In all these, the ascription is metaphorical and the discriminating borderline with "real" seems to be part defined by what Mori (1971) has termed the "uncanny valley". This is the phenomenon where the likeability of robots increases with their similarity to humans up to a point of close similarity where they suddenly lose their likeability and are seen as uncanny, odd or weird. The mechanism of this is fairly obvious, namely that the observer flip flops between seeing the robot as a real person and seeing it as a robot. These two arouse very different behavioural repertoires and the resulting motivational conflict is subjectively experienced as confusing and unpleasant.

In this mentalistic stance we ascribe agency, subjectivity and moral value to other people, even though we also know we are just biological machines. People have struggled with this tension for centuries and invoked all sorts of ideas like the "human Soul", or "Free Will" or the ineffability of Consciousness, either to separate us from beings not like us, in particular, other species of animal by saying they do not have this ingredient X (e.g. a soul), or conversely, in the case of some religions, by ascribing subjectivity and moral value to animals and even plants.

This dilemma was well illustrated in the film *Ex Machina* (2015, written and directed by Alex Garland). A young programmer, Caleb, is flown to the mountain retreat cum laboratory of Nathan, the immensely wealthy owner of a huge IT company, who seeks to build human-like robots. He sets Caleb a kind of Turing test: at the end of a week, will Caleb treat a robot, Ava, as a conscious being with feelings? The difference from the usual Turing test is that Caleb *knows* the robot is not human. Still Ava passes the test. The conceptual sophistication of this film is this. We humans *know* we are machines, albeit biological, not electronic. Yet we still treat each others as conscious beings (Richer, 2016)

The point of this digression is that there are two stories to be told about human behaviour and that any application of human ethology needs to understand this dichotomy when trying to communicate with the wider public: we are biological beings but we also communicate with implicit subjectivity, and subjectivity is not something science can easily study, if at all. The failure to understand this dichotomy clearly is an important factor leading psychology to have such problems of replicability let alone coherence, and often to be seen as re-inventing the wheel.

Clinicians encounter these problems daily, they need simultaneously to observe the patient's signs (behaviour and other data) whilst also listening to what the patient is saying (the symptoms). But having some good ethological science behind clinical work can greatly increase its efficacy (Richer, 2014a, b). Attempts to communicate ethological ideas need to take into account ordinary intersubjective ways of thinking.

3. The moral question, manipulation or persuasion

A third issue is a moral one. In so far as the study of humans, ourselves, is scientific, it is removing moral value from individuals. (Which does not mean to say that research can be unethical, but only that the logic of science does not *itself* endow the object of study with moral value). The study of causes and effects and of mechanisms opens the way to manipulation rather than persuasion.

The broad issue is not new, individuals have always sought to manipulate others to their own ends. The Machiavellian Intelligence hypothesis postulates mechanisms for the evolution of the ability, albeit mentalistic ability, to influence others (Humphrey 1976; Byrne and Whiten, 1988; Whiten and Byrne 1997). But the advent of a sophisticated science of human behaviour bypasses mentalism and bypasses individual agency and "free will", and so opens the way to quasi deterministic manipulation. In the hands of unscrupulous people this becomes dangerously exploitative. The rise of many populist authoritarian regimes offers a chilling evidence of this.

There are two kinds of defence against this. One is strong ethics and strong regulation as exists in the medical and other professions. By contrast authoritarian rulers try to dismantle any checks on their power. The other is free flow of information, if people know the science they are not open to manipulation in the same way (MacKay, 1960; Richer 2016).

But that is usually not enough. Most people take no notice of science and simply live their everyday lives. So for them it is as if the science had been kept from them. The profile of Trump voters in the USA or Brexit voters in the UK shows the group to be of lesser education and advantage. So populist examples already exist, hiding in plain sight, that the manipulation of sufficient numbers of a population can be done with the aid of sophisticated understanding of how people make choices. More checks on this need to be developed.

Spreading ethological ideas

Outside the professions, one example of applying ethology and injecting ethological ideas into current debates is simply to offer ethological views on issues. One of ISHE's founders, Irenäus Eibl-Eibesfeldt did this with some of his books such as "The Biology of Peace and War". Professor Robert Hinde, of Cambridge University's Zoology department, wrote, amongst much else, "Why Gods Persist". Perhaps most famously Richard Dawkins whose Chair in Oxford was entitled The Oxford Simonyi Professor for the Public Understanding of Science, wrote numerous popular books, not least "The Selfish Gene" and "The God Delusion". And there are many authors who offer ethological or at least evolutionary ideas in their books.

One of ethology's most influential figures, Niko Tinbergen, in his later years, wrote, with his wife Lies on autistic children. At about the same time, he gave the 1972

Croonian lecture to the Royal Society in London. I drew upon this in a letter to the UK newspaper The Guardian, on 19th January 2018. It was a response to a piece a few days before on creativity. I wrote:

Rufus Norris is right to emphasise the importance of creativity, and not just in the Arts but in science, industry and other areas of life (*Why are we squeezing creativity out of our schools? 17 January*). In his 1972 Croonian lecture to the Royal Society Niko Tinbergen argued for the importance of schools developing curiosity and creativity in children. He set this in the context of accelerating cultural evolution increasingly outpacing genetic evolution, leading to many stress diseases, but also requiring faster adaptation to new changed environments. The early practice of confident exploration, play and creativity develops this vital ability. Tinbergen said curiosity flourished in an environment of security and that the balance between cooperation and competition had shifted too far towards competition. Many teachers try to practice this as much as they can for the benefit of their pupils, they would be helped if government policies supported rather than undermined and excessively stressed them.

Thus I tried to weave ethological ideas into current issues. Another example is a further Guardian letter (14-1-19) which the newspaper entitled "Psychological processes at work in Trump and leave leaders". It read:

Gary Younge's excellent piece on the similarities of Trump and the Brexiters (*Trump and the Brexiters must own the mess they lied us into. January 11th*) is a reminder of the similar underlying psychological processes at work. The pattern is clinically well known and exemplifies one response to attachment insecurity seen first when children are less than two. The possibility of showing this response is built into our species after millennia of evolution. That response is called the ambivalently insecure strategy and the child is essentially thinking (unconsciously), "if I keep my parent's attention on me I shall be safe and won't die". Because young children without caretakers die, the child becomes attention seeking by demanding ("do what I want!") or whinging ("poor little me"). When stressed, the child is egocentric and their perceptions of others are distorted by their emotional needs. As time goes on, this often develops into bullying of weaker people and claiming victimhood when firmly confronted ("it's not fair, you're being mean to me"). The distorting of reality develops into lying. Such people, when in this state, find it difficult to be objective or to cooperate, and they try and control others to their own ends. This frequently leads to their groups fracturing (Trump administration, UKIP) or to them being surrounded by cowed "yes men".

The treatment of such behaviour in children is a mixture of the adults trying to develop rewarding interactions and relationships to boost the child's security, self esteem and confidence to cooperate and be objective, with the implicit message that they will always be welcome, whilst at the same time being uncompromisingly firm on some issues. The adult is more powerful. The EU,

more powerful than the UK, is to be congratulated for taking this generous approach to the insecure behaviour of the Brexiters and to those who have, almost Stockholm syndrome like, been panicked into being Brexit supporters.

A more recent letter to the Guardian (26-12-19) was in response to a piece on social media

John Harris' piece (*A real period of reflection? 23rd December*) on the dearth of quiet reflection and empathetic conversation especially in the social media, exemplifies a long standing distinction in Zoology between two sorts of communication in many species: loud and quiet. Loud communication is information poor, and benefits the sender and so deceit is common. Quiet communication is information rich, honest and also benefits the receiver. Quiet communication is seen more when sender and receiver have interests in common, such as parents and children, members of the same family or group, believers in the same values, and so on.

The more atomised a society, the less it will use quiet communication. Social media, each contributor isolated in front of their screen, inexorably moves towards loud communications. This is the antithesis of what helped make our species successful - cooperating in groups, developing culture - and of what helps make societies or nations successful.

Here are small examples¹ of trying to apply ethological thinking to current issues and inject them into the public realm. In line with the three points mentioned, they attempt to add new ideas or at least a new synthesis into the debate, they embrace the two modes of thinking, scientific and mentalistic/everyday, and offer ideas to add to readers' defences against being manipulated.

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¹Expressing my own views not necessarily ISHE's

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