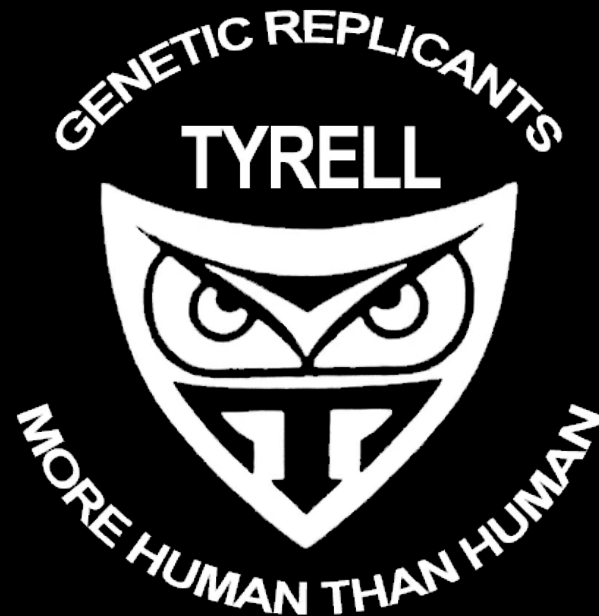


REGULATING THE TYRELL CORPORATION: COMPANY LAW AND THE EMERGENCE OF NOVEL BEINGS



INVESTIGATORS

Sarah:

- Company Law
- Corporate Governance

David:

- Moral Philosophy/ Ethics of biotechnology and consciousness/ Neuroscience
 - Artificial Intelligence
 - Ownership of novel consciousnesses
 - What makes beings significant to the law?
-

THE QUESTION

- To determine:
 - **Whether company law can, or should, be the primary means of regulating novel beings, and by extension their potential wide-ranging societal impacts.**
- Challenges for law posed by emerging technologies liable to give rise to morally significant beings
- Untapped area of legal and philosophical scholarship
- Three key areas:
 - **Defining Status**
 - **Development**
 - **Operation and Disposal**

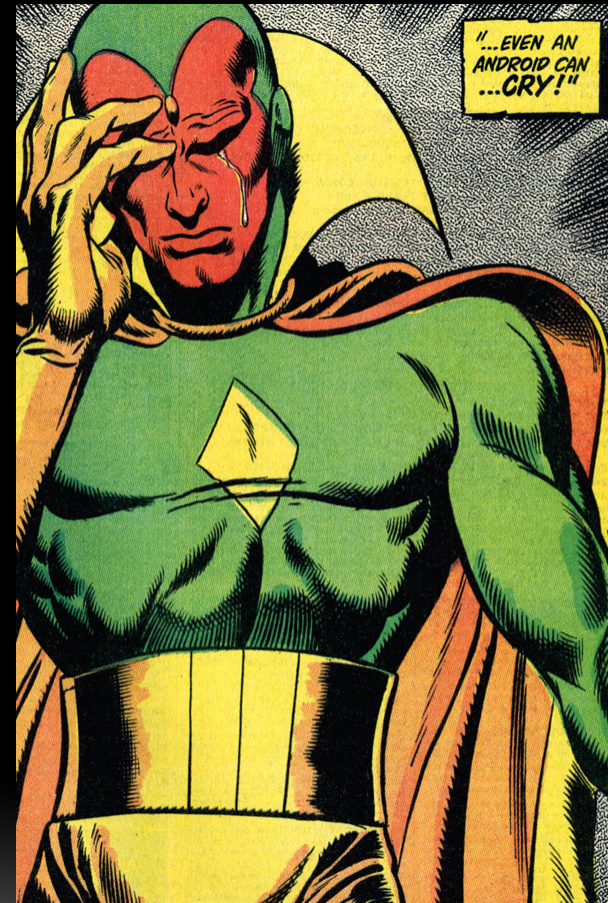


TECHNOLOGIES FOR NOVEL BEINGS

HERITABLE GENOME EDITING

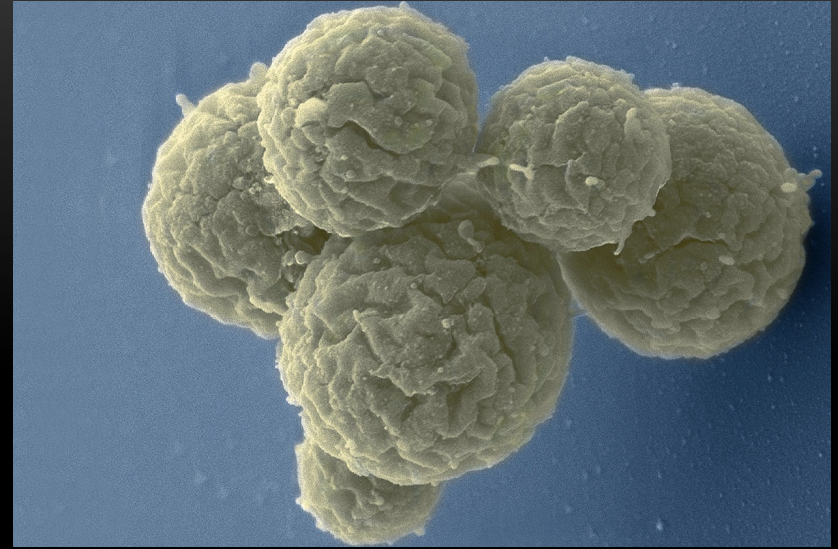


ARTIFICIAL INTELLIGENCE

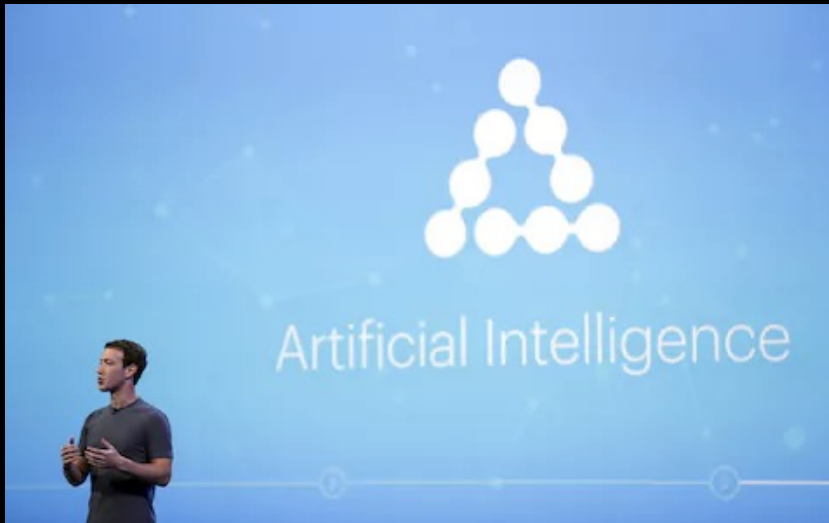


COMPANIES

- Synthetic Genomics Inc- **JCVI-Syn3.0**
 - Partnerships with:
 - Novartis (vaccines)
 - United Therapeutics (organs)
 - Monsanto (crops)
 - Synpromics- Pharma, biotech
 - Spinout companies from Universities



- **CYC** (Cycorp)- AI with human-like reasoning, inference engine
- **Google Brain** (Alphabet subsidiary)- deep learning
- **FAIR** (Facebook)- language and memory
- Microsoft- logic, verbal reasoning- analogies and synonyms. High human IQ.



LEGALLY HUMAN?*

- **We need some useable definitions and boundaries for beings with moral value**
 - 14 Day Rule in embryology
- **A key existing determinant:**
 - Trespass to person / Homicide legislation
 - Murder *actus reus*-

“a person of sound mind and discretion unlawfully kills any reasonable creature in being under the [Sovereign]’s peace with intent to kill or cause grievous bodily harm.” (Coke E. *The First Part Of The Institutves Of The Lawes Of England*. London: Printed for the Societie of Stationers; 1628. Pt III, Ch 7: 47)

- Modern research into animal intelligence puts the lie to much of this

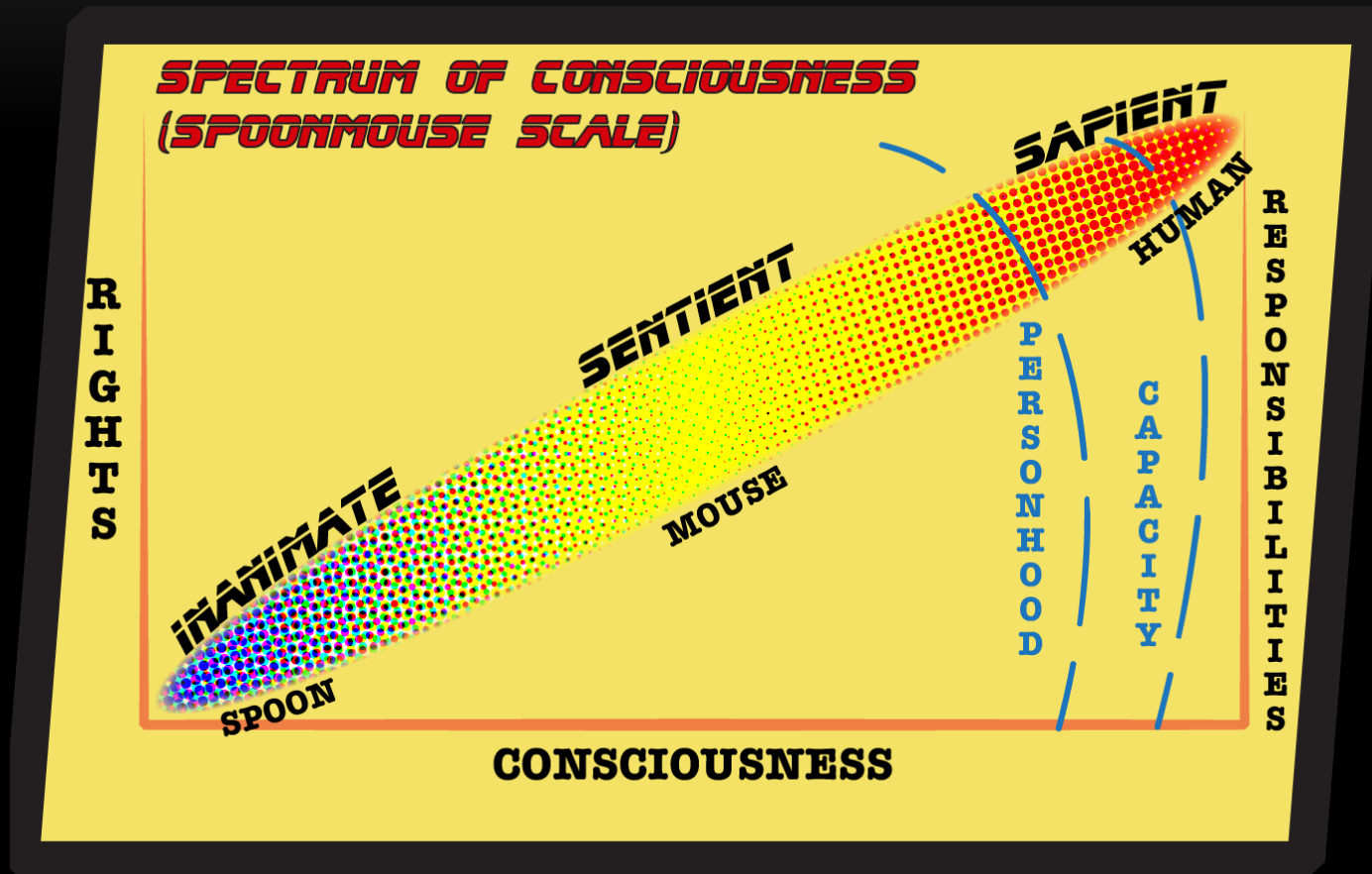
* Lawrence DR, Brazier M. ‘Legally Human? The Status and Challenge of Novel Consciousness in Law’ *Medical Law Review* 2018. 26(2)

SYMPOSIUM 1:

REGULATING INTELLIGENCE: THE CHALLENGE OF CONSCIOUSNESS IN NEW FORMS OF LIFE

- **Nathan Emmerich** (Trinity College Dublin)
 - Flights of Imagination: The Uses and Abuses of New Forms of Consciousness in Fiction.
- **Benedict Douglas** (Durham)
 - I'm sorry Dave, I'm afraid I can't do that.
- **Joshua Jowitt** (Newcastle)
 - Aping Personhood
- **Paula Boddington** (Oxford)
 - An ethic of persons, without the person. Some thoughts about methodology in approaching ethics for AI
- **Daniel Tigard** (Tulane/ Vienna)
 - Artificial Moral Responsibility: How We Can and Cannot Hold Machines Responsible
- **Miranda Mowbray** (Bristol)
 - Legal status criteria for AI: let's not give rights to malware
- **Ilke Turkmendag** (Newcastle)
 - Making sense of Robotic Collective Consciousness
- **Richard Mullender** (Newcastle)
 - Artificial Intelligence as Cognitive Capital: a Qualified Deontological Analysis

CONSCIOUSNESS AND COMPANIES



BROAD CHALLENGES

- **Personhood**
 - philosophical
 - legal
 - **Corporate/
Electronic**
- **Legal
responsibility**
 - Lords Select
Committee on
AI (2018) [HL
100]



SO WHAT?

- These new beings create challenges for regulation and policy (responsibility, liability, ownership, employment)
- We would be guilty of a great moral failing were we to neglect to provide protection to creatures capable of suffering as we (or animals) do.
- It is important to ask, on a societal level, whether we want to continue to permit companies to self-regulate in this area.



POINTS OF INTEREST

- **Defining status**
 - Analysis of legal status for novel beings for the purposes of regulation. *Symposium 1*
 - **Development:**
 - Whether the drivers of public companies (i.e. shareholder primacy) are appropriate drivers of morally significant technological development.
 - **Operation and Disposal:**
 - Who or what entity is responsible for the lifespan of the potential being, its deployment, and ultimate fate.
-

EVENTS

- **Jan 18: Roundtable** (London) for invited stakeholders, advisory board
 - Establish primary concerns
 - **April 27: Symposium 1** (NCL) for roundtable participants and other invitees identified at roundtable
 - Defining consciousness for legal status
 - **June 12: Symposium 2** (NCL)
 - Development
 - Operation and Disposal
 - Lack of direct legislation
 - **Oct 25/26: Conference** (London) for invited speakers, open attendees
 - Addressing core questions, future work
-

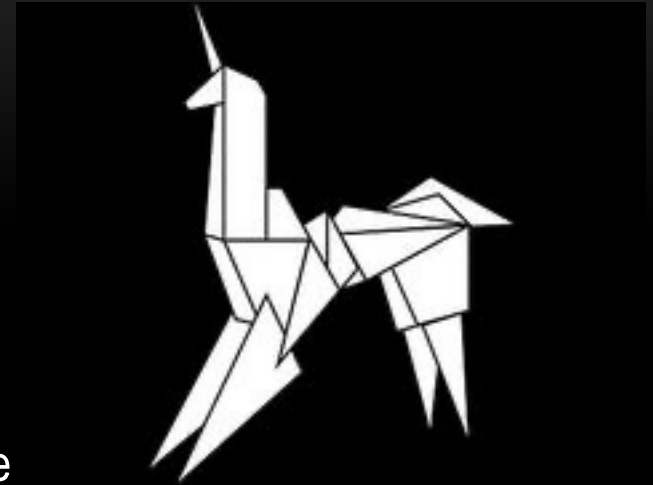
OUTPUTS

- Peer reviewed research articles (3-6) including solo and co-authored
- Possible edited collection/ special issue
- Establishment of new and unique network
- Future funding application



FUTURE

- Broad project
- Only the first steps
- Implementation is a major hurdle beyond our scope
- Future significant funding project to expand the concepts set out this year
 - Fully conscious AI- capacity
 - Legal ramifications



MATERIALS

- Parliament, House of Lords (2018) AI in the UK: ready, willing and able? (HL 2017-2019 (100)). London: The Stationery Office.
- Companies Act 2006
- European Parliament Committee on Legal Affairs. Draft Report With Recommendations To The Commission On Civil Law Rules On Robotics (2015/2103(INL)). Brussels; 2016
- Gillick v. West Norfolk and Wisbech AHA [1986] A.C. 112
House of Commons Science and Technology Committee. Report on Robotics and Artificial Intelligence. London, 2016, HC145
- National Science and Technology Council Committee on Technology. Preparing For The Future Of Artificial Intelligence. Washington D.C.: Executive Office of the President; 2016.
- Lawrence DR, Brazier M. 'Legally Human? The Status and Challenge of Novel Consciousness in Law' Medical Law Review 2018. 26(2),
- Lawrence DR, Palacios-González C, Harris J. Artificial Intelligence: The Shylock Syndrome. Cambridge Quarterly of Healthcare Ethics 2016, 25(2), 250-261.