“The people have spoken...
...the bastards”*

(*US Political Candidate Dick Tuck on his 1966 Election defeat)
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Lessons for Robotics from Brexit & GMOs

(*US Political Candidate Dick Tuck on his 1966 Election defeat)
After Brexit, you feel angry, powerless, sickened that your life has been turned on its head by nameless others?

“Democracy forces us to try on each other’s clothes. I would have carried on ignoring the unhappiness of much of the country…. but I can’t ignore this”

Ian Leslie Blog on Brexit
What’s this got to do with Robotics?
It’s about the changing expectations and influence of society and the ‘death of deference’!

It requires a change in the approach of research ...as well as everything else
The latest buzzword for this is

Responsible Research and Innovation
## Mapping RRI

### HOW?
- Anticipate
- Reflect
- Engage
- Act

### WHAT?
- Public Engagement
- Gender
- Science Education
- Open Access/Science
- Ethics
- Sustainability
- Governance
- Social Justice/Inclusion
- Inclusion
- Moderation
- Deliberation
- Modularity & flexibility
- Subsidiarity
- Adaptability
- Capabilities
- Capacities
- Institutional entrepreneurship
- Culture of transparency, tolerance & rule of law

### WHY?
- Social benefits & impacts
- Ethical issues
- Environmental benefits & impacts
- Cultural benefits & impacts
- Economic benefits & impacts
- Stakeholder Participation
- Governance & accountability
- Openness & Transparency

### EPSRC/FRIICT Framework
- European Commission Principles for RRI
- ResAgora Principles for RRI
- MATTER Principles for Responsible Innovation

### Common language in papers & frameworks
- Growth
- Trust/Public acceptability
- Solve grand challenges
- Avoid bad impacts
- Collective good
- Meet needs
- Accountable science
- All voices considered
- For and with society
- Collaborative
- Participative
- Anticipate negative impacts
- Sustainable
- Not just about money
- Respect diverse views
- Values sensitive
- Safe & ethical by design
- Evidence based
- Anticipatory governance
- Openness as standard
- Inclusive
How are these interpreted for Robotics & AI?
Learning through lessons from the past

Brexit & GMOs provide useful learning for Robotics
Protests are often a proxy for other issues

- Brexit was about views and lives being ignored, marginalised, powerless
- GMO about abuses of corporate power, environmental degradation, human hubris
- Both reflect feelings of ‘things’ going beyond our control and understanding
- All reflect a nostalgia for ‘simpler’ times
Relevance for Robotics?

- Robotics is often about humans relinquishing control - what are the implications of that?

- Roboticists have a reputation for being in thrall to the technology - are we forgetting people?

- What we can do scientifically and what we should do for humanity’s good - are they the same?

- Hubris is at the heart of every story about robots gone bad. Beware!
Hype breeds distrust

- Hype & hyperbole on all sides resulted in distrust & disengagement
- Hysteria made it hard to tell information from the misinformation (GM, Nano, Synbio & Brexit)
- Lies, damned lies & statistics are unmasked but too late? (Brexit)
- Not engaging (GM) leaves a communication vacuum allowing misinformation to take root
- Quick soundbites ‘Take control’ ‘Frankenfoods’, dominate if alternative vision is not clear & personal
Lessons for Robotics?

- Careful what you promise vs what you deliver (Prof Richard Jones ‘Economy of Promises)

- Hype vs reality damages confidence of investors, funders as well as public (lesson from Nanotech)

- Resist hyperbole

- Communicate your vision clearly, authentically & early
The issues are real

- Brexit - immigration, unemployment, inequality, fear are real and in plain sight

- Concerns about corporate power, environmental release & food system re GM are widely shared

- They just weren’t thought of as important *enough*

- There weren’t enough existing mechanisms to demonstrate concern, protest & opportunities to influence

- Ignoring concerns destroys trust
What issues are you perhaps ignoring?

- Robots replacing jobs?
- Taking the humanity out of caring?
- Use and misuse of your research down the line?
- Problems with the AI behind the robot?
- Is ethics of use beyond your responsibility? Drones in combat; implications of autonomy etc
Are the benefits real?

- GMO didn’t focus initially on benefits to user - more about the great tech & benefits to business
- Remain camp for Brexit focused almost totally on fear of leaving, not benefits of remaining
- Both thought there was a one theme answer
- Both were so sure of their rightness they forgot to consider alternatives
- What if others don’t even agree it’s a benefit?
Lessons for Robotics?

- What is the real benefit of your work for people and which people, who will be disadvantaged?

- Balance of vision & evidence (don’t forget social and cultural benefits & risks)

- How do you know users think it’s a benefit too?

- You might not know best. Don’t be cocky
To summarise!

- Think yourself into other people’s clothes
- Really listen to concerns & respond
- Ensure a benefit for people, not just fun science
- Think carefully about what might go wrong and how you might prevent it
- How will you demonstrate trustworthiness?
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