

# **Policing and the end of the professions**

**Rick Muir**

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# Technology is transforming the world of work

- Between [9%](#) and [47%](#) of current US jobs are at risk from automation (Carl Benedict Frey and Michael A. Osborne (2013) 'The Future of Employment: how susceptible are jobs to computerisation?')
- The rise of computer-controlled equipment was in the twentieth century a risk to routine labour (jobs that can easily be broken down into discrete tasks and coded)
- Now however **non routine** work is at risk because of increasingly capable machines which can break down ever more tasks, enabling them to be coded and acted upon autonomously

# Why is non routine labour at risk?

- **Non routine cognitive labour** is under threat because of the rise of big data, which means that patterns can be detected by algorithms across huge data sets, enabling machines to think in ways that surpass human capabilities (they can think on a larger scale and they lack human biases). Sensor technologies are bringing in more data and advanced user interfaces mean that computers are more responsive to human requests. Algorithms can now make the kind of subtle judgments that previously only human beings could or at the very least can be powerful aids to human decision-making
- **Non routine manual labour** is at risk because of advances in robotics. Enhanced sensors and manipulators mean that robots can now manage tasks such as driving autonomously in busy traffic that were previously considered the preserve of human drivers.

# The end of the professions?

- Many of the professions, long thought immune from technological replacement, are now considered under serious threat (Richard Susskind and Daniel Susskind (2015) [The Future of the Professions](#))
- The professions (law, medicine, architecture etc) are a solution to the problem of limited understanding. The professions act as gate keepers to maintain, interpret and apply practical expertise.
- In a technology based internet society there are other solutions to the problem of limited understanding that are cheaper, less forbidding, higher quality and more transparent and empowering. Many problems could increasingly be solved autonomously or with non specialist users connected to increasingly capable devices and systems.
- We are in the foothills of this social transformation

# Examples

- **Law:** in family and civil cases online dispute resolution may be increasingly preferable to a court case. Online solutions may seep into high volume less serious areas of criminal law.
- **Medicine:** patients increasingly able to manage their own health connected together and monitored by intelligent systems.
- **Education:** more people signed up for Harvard's MOOC in a single year than have attended the actual university in its entire 377 year history.

# Policing: prospects for automation and innovation

*Just as policing now sees itself as a profession, we may be heading towards a post-professional world in which increasingly powerful IT, increasingly capable and pervasive devices and increasingly connected human beings mean we can cut out the professional experts to solve the problems we face.*

*Will policing be immune from this?*



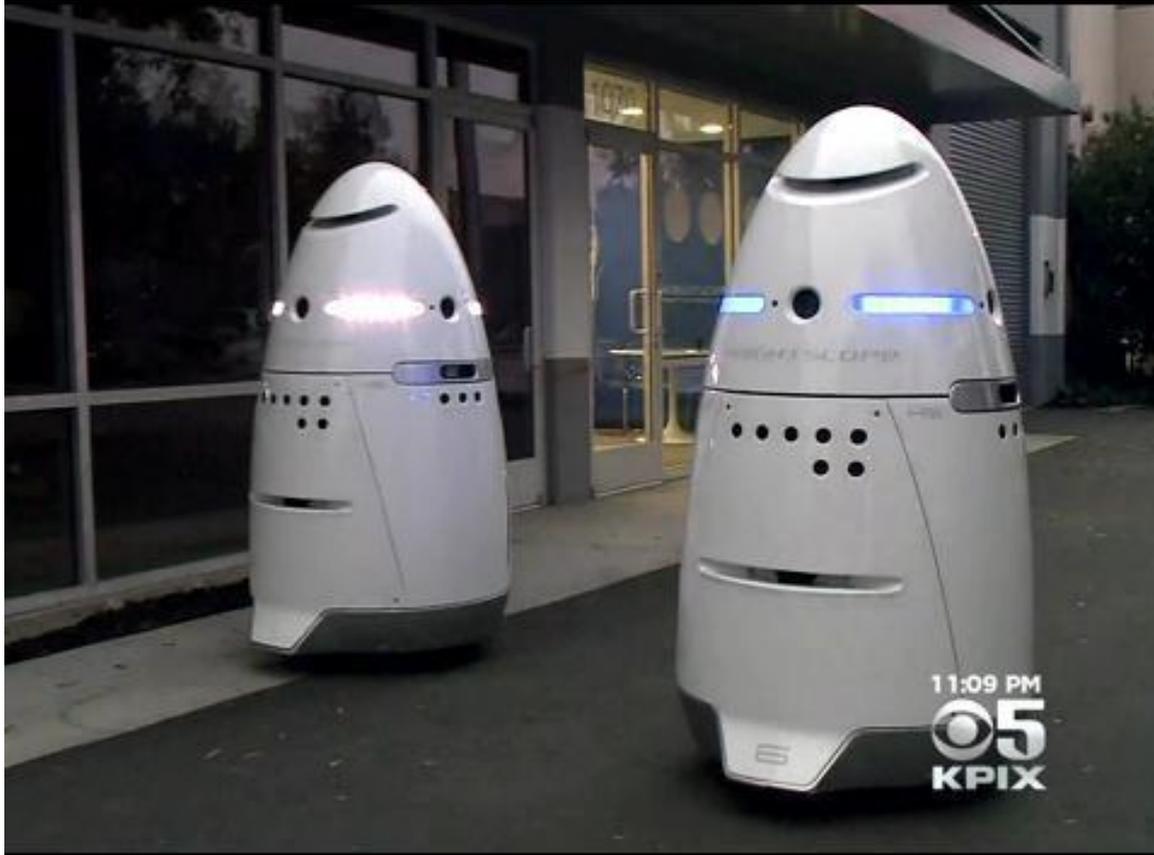
## **Robocop**

From sci fi to reality?



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## Robocop

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# Breaking down the work

- We need to define those problems that the police have traditionally been required to solve and assess whether these could and *should* be solved by increasingly capable systems and machines
- “Policing is the process of preventing and detecting crime and maintaining order.” R I Mawby (2008) ‘Models of Policing’ Handbook of Policing
- Automation = technology is deployed to supplement the traditional model
- Innovation = technology produces a transformation that creates an alternative to the traditional model

Tasks	Automation (supplement )	Innovation (replace)
Crime control		
Visible deterrence	YES - CCTV connected to intelligent systems	YES - robot traffic cops
Community liaison	YES - social media	NO - requires social intelligence
Develop community knowledge and analyse intelligence	YES - big data, predictive policing	YES - the end of the police analyst
Respond to calls for help	YES - automated call handling/dispatch	NO - complex perception/manipulation task, requires social intelligence
Sensitive communication with victims	YES - analytics to provide more informed conversation	NO - requires social intelligence
Surveillance	YES - police directed drones	YES - autonomous drones
Conducting investigations	YES - body worn video, intelligent systems help to collate and analyse evidence	NO - complex perception task and interviewing suspects/victims requires social intelligence
Arresting suspects	YES - analytics lead to informed action	NO - moral decision making
Stop and search	YES - analytic aids	NO - social intelligence, moral decision making
Preparing crime reports and case files	YES - voice recognition could aid entirely automated process	NO - need officer input
Administrative processes	YES	YES
Attending and giving evidence in court	YES - virtual courts	IN SOME CASES - online dispute resolution
Gather, record, analyse intelligence	YES	YES
Enforce traffic rules and laws	YES	YES
Deal with lost/found property	YES	YES
Order maintenance		
Keeping the peace at the meetings, gatherings, events	YES - ways of designing in crowd management	NO - requires social intelligence
Diffusing volatile situations	NO - requires social intelligence	NO - requires social intelligence

# How susceptible are the police?

- Frey and Osborne (2013) gave policing the following rankings among jobs susceptible to computerisation in the next 20 years (US), where 1 is the least susceptible and 701 the most susceptible:
  - first line supervisors of police and detectives 18
  - police patrol officers 167
  - criminal detectives and investigators 246
  - police, fire, ambulance dispatchers 298
  - traffic and rail police 322

# Why is policing less susceptible than other roles to automation?

- **Complex perception:** policing is a generalist occupation requiring deep and broad human perception, exposed to highly unstructured data.
- **Manual dexterity:** policing requires an ability to respond to unexpected events in a physically agile way.
- **Social intelligence:** policing requires a deep understanding of human heuristics and an ability to relate to and communicate affectively with other people. The police are less effective when they are not trusted by the community and trust generally requires a human relationship.
- **Moral capabilities:** this is not simply about being able to distinguish right from wrong and being able to justify this distinction with reference to a higher principle (which one *might* be able to code), but also the capacity to take responsibility for moral judgments. We want another human being to have reflected upon, agonised over, decisions that matter and have moral weight. Technologies could help push out human biases, but for morally important decisions we want a human being to take responsibility.

Thank you

**[RICK.MUIR@POLICE-FOUNDATION.ORG.UK](mailto:RICK.MUIR@POLICE-FOUNDATION.ORG.UK)**