

# From Electronic Monitoring to Artificial Intelligence

What it might mean for Probation Services

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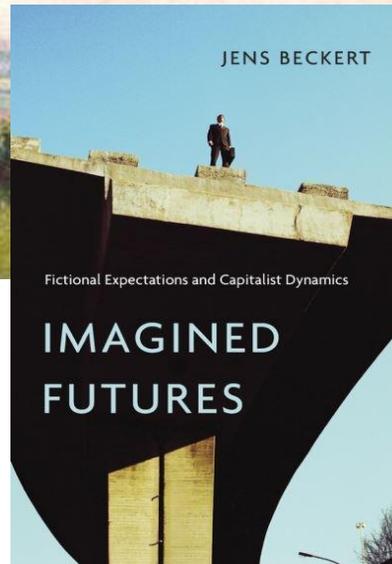
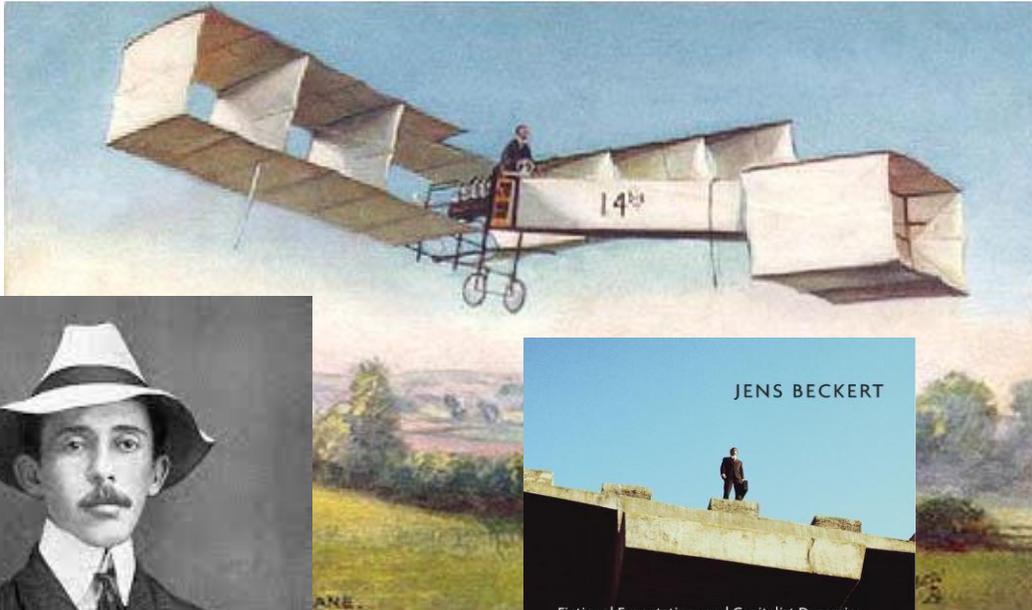
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# Hyping Technological Innovation

Alberto Santos-Dupont 1873-1932 - aeronautical engineer



- Believed the development of international air travel would, by connecting foreigners, and enabling mutual understanding, **bring about a more peaceful world.**
- **Absurd reasoning now**, but quite possibly plausible for a celebrity inventor to believe and wish for this in 1905.
- Ill-health, depression and recognition that **his aircraft designs had by then been used for military purposes** (bombing Sao Paulo in his native Brazil) prompted his suicide in 1932.
- *But of course*, air travel was/is AMAZING, just not with the consequences Santos-Dupont imagined. And aerial warfare got ever more TERRIBLE.

# EM, AI and ME (part one)

- 30 year+ interest in EM . Accidental beginnings . Initially hostile. Became pragmatically supportive in England and Wales in 1996.
- Commercially-driven EM is a **potentially dangerous surveillance technology** *but in certain minimalist forms* could address probation service's "control-deficit"
- The structure, culture and humanistic values of probation services would be a **vital normative constraint** on EM. I avoided "technological deterministic", "thin end of the wedge" arguments.
- The CEP – and its various sponsors – have been indispensable to my understanding of EM.
- I acquired some expertise in understanding processes and ethics of technological change in penal contexts. A significant, inter-disciplinary academic field – informing both macro and micro aspects of tech.

# EM, AI and ME (part two)

**NO REGRETS** - there have been some good probation-based uses of EM. **BUT:**

- There have been some terrible, excessively punitive uses of EM – “e-carceration” is a real danger.
- *Probation values are not enough* to constrain & shape EM.
- EM has been a “stepping stone” to current debates on AI, but ....
- ..... there is far more at stake for Probation Services (as for public services more generally) with AI than with EM
- “Technological determinism” needs to be rethought in respect of AI.

# The AI Conversation is Everywhere

there is an agreed need for “AI literacy”



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- Geopolitical competition between US, China and Europe.
- AI will be central to prosperity, governance and security (cyber and military) in the coming decade(s).
- AI-ideals are filtering down to front line social agencies
- A key anxiety: an automated “world without work”, this time.
- Hype and over-enthusiasm about AI + risk of bias & discrimination
- Europe aims to set global ethical standards on AI use. **And it is.**

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# AI and “The Fourth Industrial Revolution”

- Manifesto from the [World Economic Forum](#) (2016) at Davos
- Business-led social transformation of western societies harnessing innovation in AI and biotechnology
- Maximising AI use is an obvious force for social good: AI is “the new electricity” (Andrew Ng) powering multiplicity of digital devices and platforms – central to the Internet of Things.
- Yes, AI poses risks and harms - but robust legal and ethical regulatory frameworks will resolve them - BUT **don't stifle competitive innovation.**
- Social **transformation will be disruptive** – but benign in the long run.
- FIR is an “imagined future” to stimulate and steer investment – and has influenced the thinking of European Institutions on AI

# What is AI? — complicated & contested & amazing

- AI – an umbrella term for computational processes which, using Big Data (sets) statistical analyses & algorithms can identify, patterns, connections, correlations, possible options, make predictions and/or recommendations. Sub types: **Machine Learning** **Deep Learning** **Neural Networks**
- Some algorithms (trained on datasets) can achieve set goals by mechanisms that become opaque to their creators (but can't set their own goals)
- AI performs cognitive tasks that mimic human intelligence, but without a sense of meaning or responsibility, or feelings (but can “read” human feelings)
- Can analyse data at a scale and speed that no human mind could emulate - in that sense AI is “better than human” .... and therefore capable of replacing people at certain cognitive tasks.
- A continuum? **Narrow AI** (now), **General AI** (later) and **Supercomputers** (?).
- Robots – (usually) embodied, mobile, task-oriented, internet-connected

# AI and Criminal Justice

Increasing connectivity within and across agencies – “digital justice”

- **Policing** – cutting edge of tech innovation/ public face of AI controversy in criminal justice: Surveillance databases cybercrime Predictivity Facial Recognition

The issue of algorithmic **bias regarding race and gender**. *Technical* resolution does not make AI ok

- **Prosecution and Sentencing** - overcome human idiosyncrasies with better information about risk and outcomes) and more consistent adjudications. Automate low level sentences – fines online
- **Imprisonment** Smart prisons – enable more rehabilitation, improve security . All-automated prison – stuff of science fiction, but feasible: think Amazon “fulfilment centres”
- **Probation (and Electronic Monitoring)** probation with (smartphone) apps location *and* biometric monitoring US NIJ pilot has linked EM and AI.

# Probation as a Platform?

data-driven mass monitoring, smartphone, tablet & tag based

- Automated risk assessment
- Assisted decision support systems
- Automated court report writing
- Online rehabilitation programmes .....
- ..... Inc Virtual Reality learning
- Expanding EM (inc Biometrics)
- Chatbot supervisors (dialogical AI, using speech recognition)
- Organisational and interactional services could/can be digitized. Prototypes exist. Why/When/How?
- Context: normalizing AI in public services generally
- Underresourcing human services to justify incremental automation
- Stigmatising & shunning of “offenders”, as people undeserving of human concern, fit only for the attention of (and regulation by) machines

# European Institutions and the Ethics of (AI) Optimization

..... What's not to like?

- European institutions want “trustworthy AI” based on legal regulation, ethical demands and technical robustness.
- Ethics are notionally grounded in familiar Human Rights – respect for human autonomy, dignity, equality and fairness.
- AI-informed systems will **augment, not replace** - a “**human in the loop**” will remain as arbiter of (most) machine decisions, to ensure legitimacy & limit AI.
- Equality and fairness must be encoded in the operation of AI systems, ideally at the design stage – **to avoid discrimination and bias**
- Promote adaptive **AI literacy** everywhere – aim for more than a merely technical understanding
- AI is an inevitable good that should be optimized: **ONLY THEN** do ethics kick in.

# The Old Story: **Virtue vs Power**

- **Ethical Statements are vital, but politics & power cannot be evaded**
- European institutions see AI technology as **neutral**, to be used self evidently for good (and optimized) .... or ill. It isn't.
- **Complex technology is never neutral** - it changes social possibilities, in foreseeable and unforeseeable ways, & serves vested interests first.
- “Human in the loop” augmentation may be a convenient, reassuring & temporary myth. **Which humans? How many? For how long?** Certain occupations/workforces may well shrink in size and influence.
- Ethical AI could still disrupt/transform/abolish probation as we know it.
- The neglected question: what preserves “the human” in an AI world?

# Getting Human Rights Wrong

- “Consumers, citizens and service users have a **human right** to **cost-efficient** public services. Therefore, if automated services are more **cost-efficient** than human services, it would be right and proper to dispense with/reduce reliance on the human element”
- ... and a digitally connected public is okay with this.
- Ethical reasoning like this could undermine public services as we know them.... In the name of **progress**, of course.
- This equation gives too much moral weight to cost efficiency, and ...
- Underestimates a) the moral worth of authentic personal care; b) what meeting human needs requires in the context of vulnerability & trauma, and c) what concerned (and trained) people can do to inspire and empower positive changes in behaviour

# AI and The Moral Imagination

effecting social justice, reducing harms & promoting human flourishing

- If AI is the answer to probation's needs, what was the question, and who asked it?
- Would an honest, objective account of what 21st century probation services most need to improve ..... prioritise AI?
- AI is what's on offer, framing the future: social justice is not.
- Who is setting the agenda? Qui Bono, ultimately?
- Yes, engage in sector-specific ethical debate
- “**Just AI**” requires tests of **Necessity** and **Proportionality** in the it application to public services.
- Apply **the precautionary principle** to complex technologies, if only because of unexpected consequences.
- Ascertain the **Bigger Picture** of AI
- **There are moral actors** in immoral organisations who don't see the Big Picture or the worst coming.
- **AMAZING** & **TERRIBLE** can co-exist

# Conclusion: Let Probation be Probation

in an AI-infused Europe, for as long as possible

- Probation has roots in a humanistic, non-technological tradition, and should stand back from “technology first” solutions. Celebrate the human.
- Don’t optimize or maximise AI in public services (inc probation) – avoid “the ethics of optimization” for as long as possible.
- Affirm existing people-centred, evidence-based effectiveness of probation (including best practice in minimalist EM)
- More generally, in broad cultural alliance, affirm the best of human capabilities in the face of “invasive technification” (Thanks, Dr Nagenborg)
- **AI hype** may be excessive; change on the ground may be slow and patchy.
- **A skeptical/agnostic position** on AI in probation is morally defensible while we wait to see how an AI-driven world looks and feels, and whether the positive outweighs/balances the negative. **Think about social media .....**