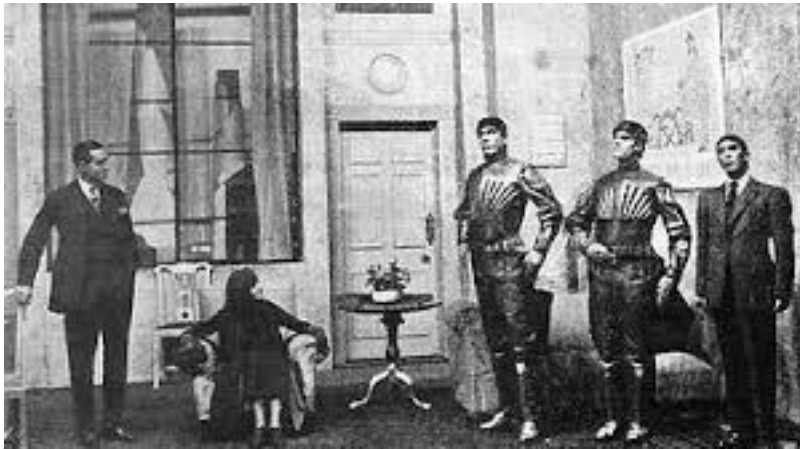


script

Beyond the Hype

Liability and AI

What do these have in common?



▶ European Parliament resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL))



The European Parliament,

- having regard to Article 225 of the Treaty on the Functioning of the European Union,
- having regard to Council Directive 85/374/EEC⁽¹⁾,
- having regard to the study on Ethical Aspects of Cyber-Physical Systems carried out on behalf of the Parliament's Science and Technology Options Assessment (STOA) Panel and managed by the Scientific Foresight Unit (STOA), European Parliamentary Research Service;
- having regard to Rules 46 and 52 of its Rules of Procedure,
- having regard to the report of the Committee on Legal Affairs and the opinions of the Committee on Transport and Tourism, the Committee on Civil Liberties, Justice and Home Affairs, the Committee on Employment and Social Affairs, the Committee on the Environment, Public Health and Food Safety, the Committee on Industry, Research and Energy and the Committee on the Internal Market and Consumer Protection (A8-0005/2017),

Introduction

A. whereas from Mary Shelley's *Frankenstein's Monster* to the classical myth of *Pygmalion*, through the story of Prague's *Golem* to the robot of Karel Čapek, who coined the word, people have fantasised about the possibility of building intelligent machines, more often than not androids with human features;



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MAY 30 2019, 12:00AM, THE TIMES

Who is to blame when a robot goes haywire? We need answers now

SIMON DUKE



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Save



In March a Hong Kong-born tycoon lodged a legal claim that could help to answer a question that, until recently, would have belonged strictly in the realm of science fiction: who takes the blame when a robot goes haywire?



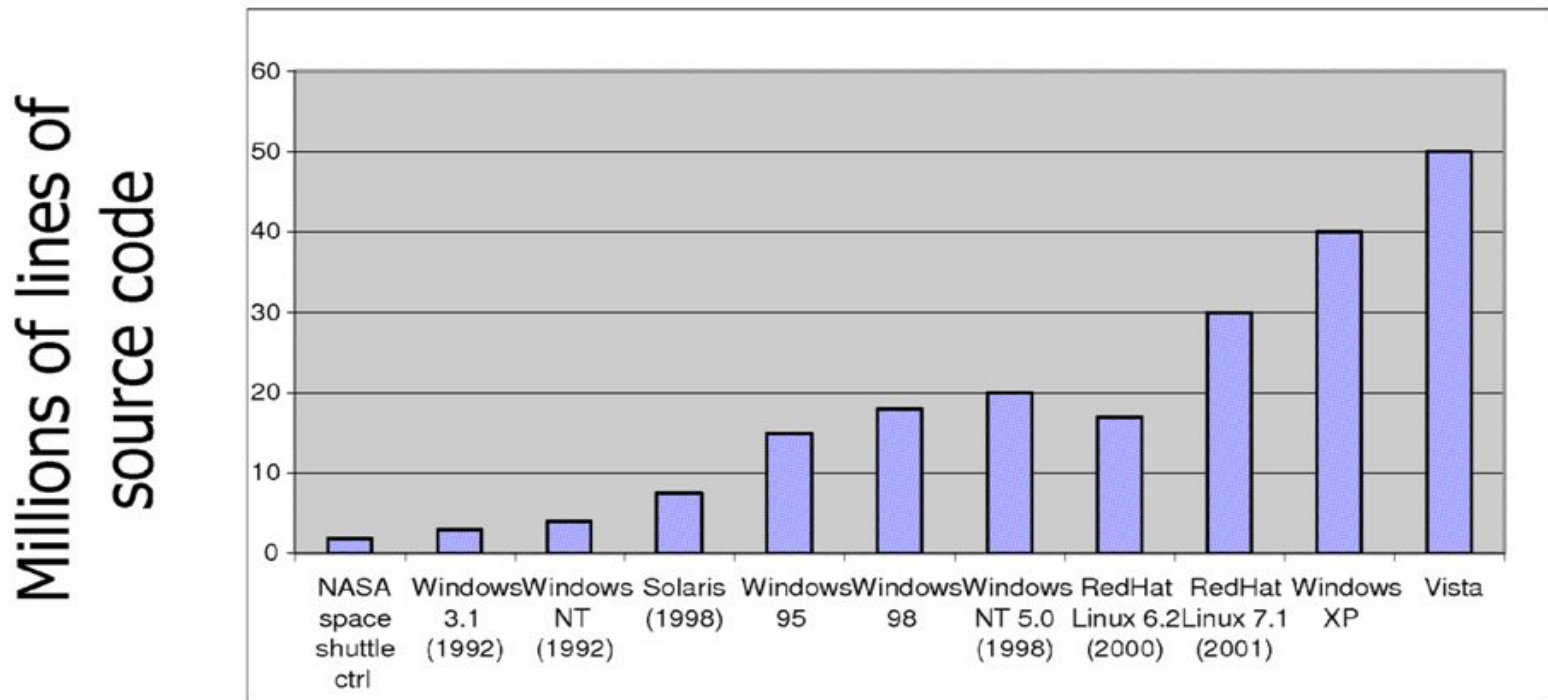
Why might there be an issue?

- Complexity and “black boxed-ness”
 - Lots of code,
 - from different sources
 - Combination of code and training data
 - Opacity of the neural network
- Autonomy and break of causal chain

But then again....

Operating System – the future?

All this leads to Increasing Software Complexity



<http://www.informationisbeautiful.net/visualizations/million-lines-of-code/>

Puts all this in perspective

1: Operating Systems Overview

22

Complex Networks

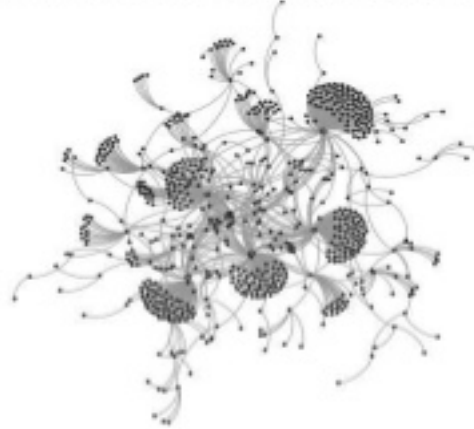


Example of **small-world property**

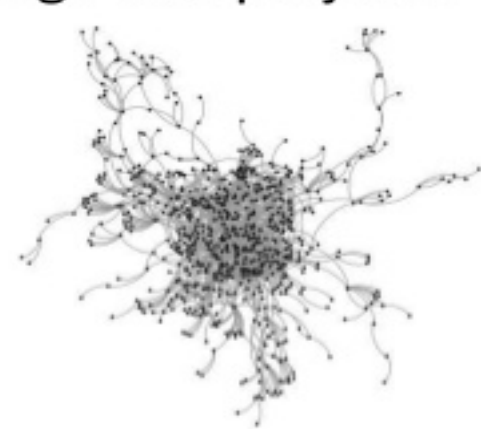
- *Bugzilla* collaboration networks in large OSS projects



(i) GENTOO (February 2006)
nodes = 550, *edges* = 810



(j) KDE (January 2011)
nodes = 711, *edges* = 853



(k) ECLIPSE (January 2010)
nodes = 738, *edges* = 1069

M. Zanetti, E. Sarigol, I. Scholtes, C. Tessone, F. Schweitzer. A quantitative study of social organisation in open source software communities, 2012

- But maybe that's also a chance to get it right this time round?



Autonomy?



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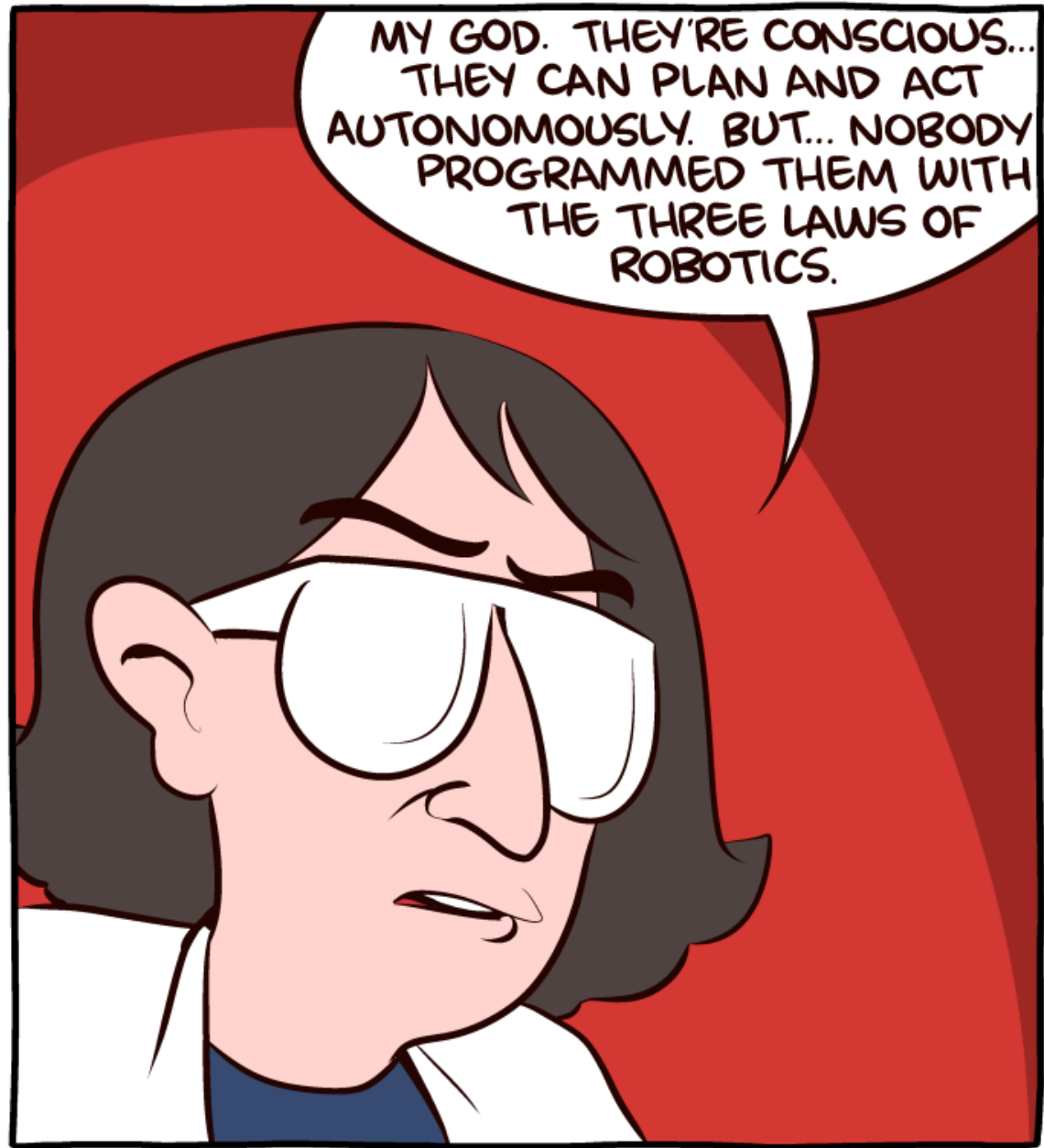


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SMBC-
comics.com



Dr. Cohen decides that all humans must die.



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So....only business as usual?

- Not quite
- Changes to the law of evidence and procedure
- Change to laws on data preservation and curation
- Changes to the insurance regime
- Changes to standards of required care



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Evidence and procedure

- Consumer protection and non-discrimination laws: post factum analysis
- Disclosure of code – lessons from IP law?
- Expert evidence: who counts as expert?
- Explainable AI for delict law? (cf GDPR)



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Data curation and preservation

- Already for FinTech under Mifid: “snapshot” of data and code
- “black box” from aviation industry?
- Post-event reporting/monitoring (as with medical drugs?)



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(mandatory insurance regime)

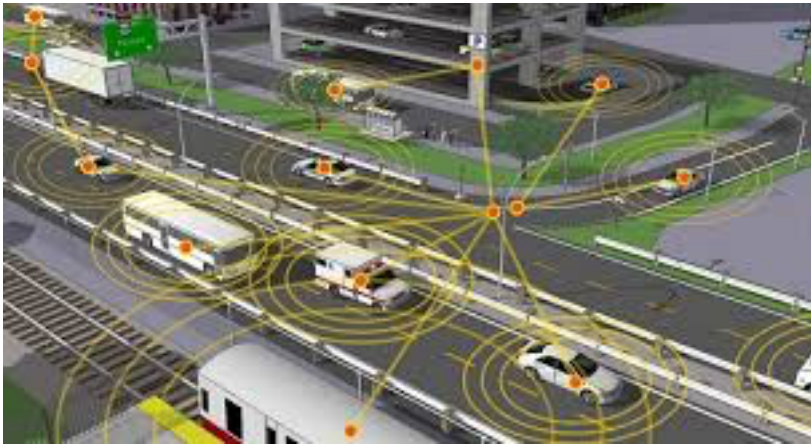
- Where can insurance companies leverage their power best?



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- How many AIs/robots do you see?



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- What happens to unowned AIs?
- How long is an AI “the same” AI (updates, patching, learning)



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The end.....

