

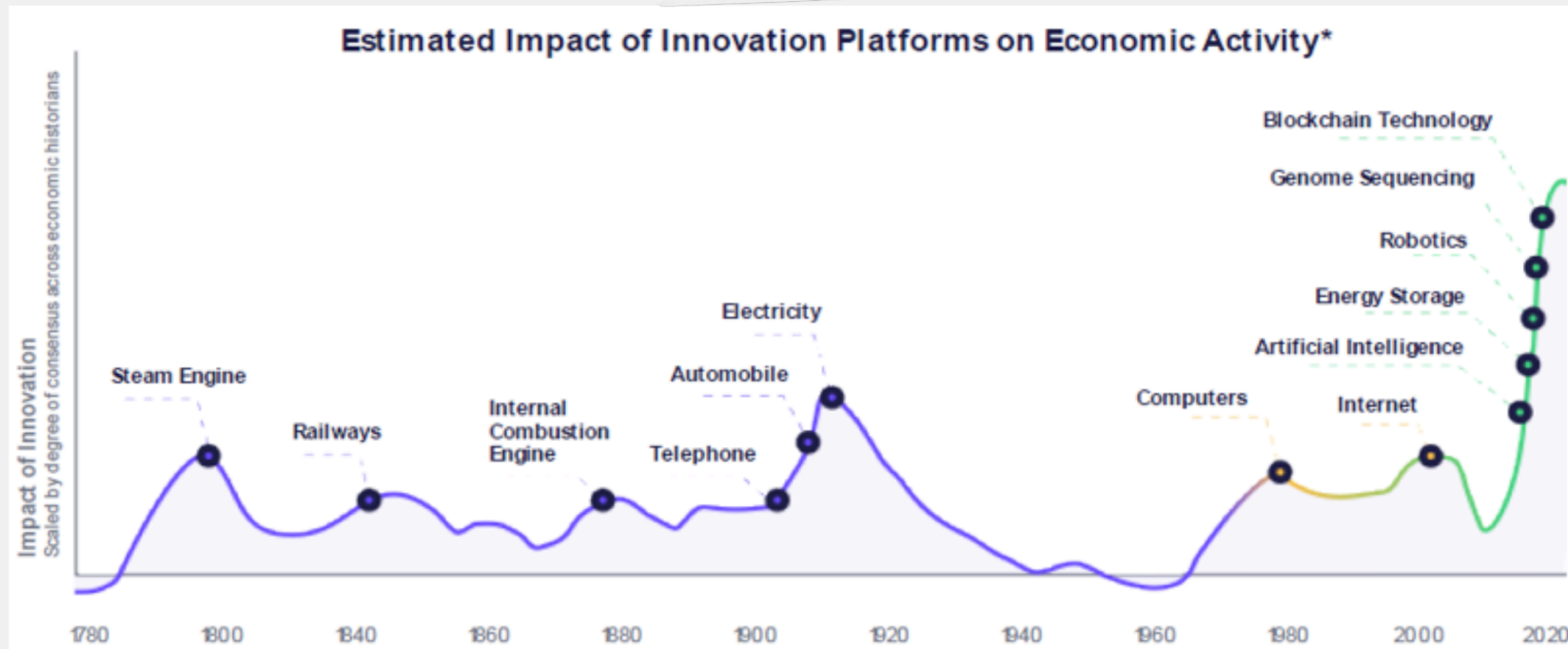
CONCEPTS, ETHICAL ISSUES AND RESPONSIBILITIES

*when tools make evident
unsolved societal issues*

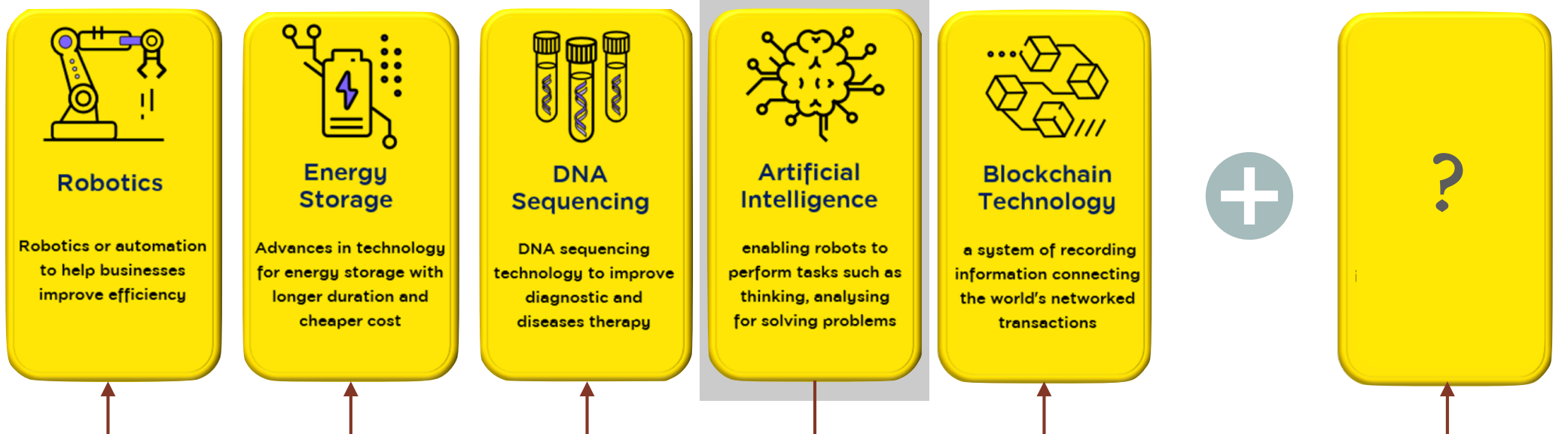
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*Eugénio A. M. Rocha
DMAT - Univ. de Aveiro*





Source: ARK Invest, Nikko AM as of Jan. 2021



AI is just **ANOTHER TOOL**?

- Ethical implications come from the **actions made on a moral context** being independent of tools use
 - Regulating “good/bad” it is not easy (social defs)



Oldest stone tools pre-date earliest humans

By Rebecca Morelle
Science Correspondent, BBC News

They were unearthed from the shores of Lake Turkana in Kenya, and date to 3.3 million years ago.

They are 700,000 years older than any tools found before, even pre-dating the earliest humans in the *Homo* genus.

The find, **reported in Nature**, suggests that more ancient species, such as *Australopithecus afarensis* or *Kenyanthropus platyops*, may have been more sophisticated than was thought.



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21:58 London Bridge
Van driven southbound for first time

22:06 London Bridge
Multiple injuries and fatalities as van driven southbound into pedestrians

22:05 London Bridge
Van driven northbound, performs U-turn at north end of bridge

22:07 Borough High Street
Van crashes, occupants exit armed with knives and head for Borough Market

22:15 Borough Market
Attackers stab multiple people in pubs and restaurants

22:16 Stoney Street
Attackers shot dead by police

London Bridge Attack: 7 Killed, 48 Wounded; 3 Suspects Shot Dead by Police

Convicted murderer hailed as 'hero' in London Bridge attack

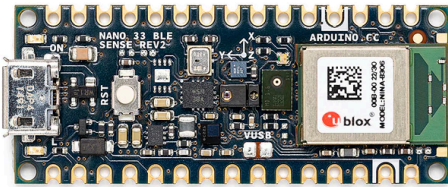
Man convicted of killing woman, 21, joined others to stop terrorist who went on knife rampage

© BBC 2019 04:00 am

LONDON: One of the men who helped to stop the London Bridge terrorist from killing more people was once a killer himself.

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➤ EdgeML

➤ 6 x 6 mm



€10

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- But the correct use may help anonymization



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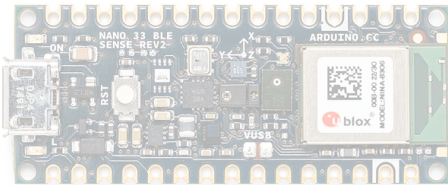
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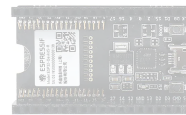
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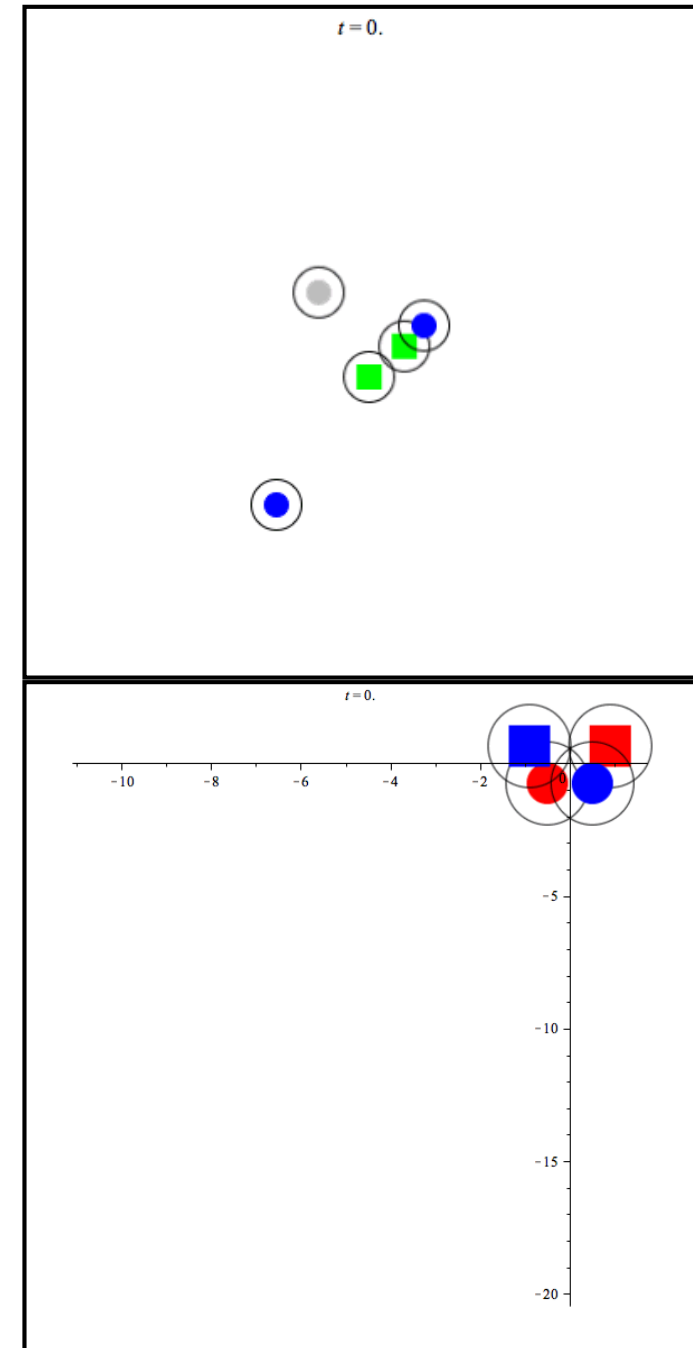


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- Regulating all “uses” is going to be quite difficult
 - But the correct use may help anonymization
- Some AI applications are by herself disruptive



- Gottman Method - Predict Divorce >90% acc
- EDOs + AI - Group (inter)Relation Behaviour



REGULATION

The European Parliament and the Council are currently discussing two important new laws that aim to improve algorithmic decision-making' transparency and explainability:

- **AI Act** — apply to all AI-based services (presented in Apr/Dec 2022):
 - MAIN CORES: **lawfulness, fairness, and transparency.**
- **Platform Workers Directive** — regulate AI management tools.

The AI ACT (e.g. prohibited AI practices)

- The text extends to private actors **the prohibition on using AI for social scoring**. Furthermore, the provision prohibiting the use of AI systems that **exploit the vulnerabilities** of a specific group of persons now also covers **persons who are vulnerable due to their social or economic situation.**
- Classification of some AI systems as **high-risk.**

RESPONSABILITY

- **AI Act** — The FLT requirement rule:
 - **Fairness:** New algorithms and a topic under study [“definition”];
 - **Lawfulness:** Will (always) be quite difficult;
 - **Transparency:** Interpretability and (global/local) explainability is under study [“true”].

Academia has a strong responsibility to define and propose good practices and applications.

SOME DISCUSSION QUESTIONS

- Since limits/borders are difficult to determine, how will we define the **limit (fair) human augmentation** by technology means?
- Since AI can imitate some human actions (quite) well, in the future are we also requiring **humans to comply with FLT**?
- Fundamental Science is slow to acquire and consolidate.
Technology and Society are changing quite fast nowadays.
So, is the current **Educational System Model valid** in the long run?
 - Substantially increase of Technical Courses (*e.g. architecture, digital assets production, scientific literature review, social communication and marketing*);
 - (*I believe that*) Every scientific area should have (also) a Technical Course, in spite of the current variety of MSc Courses and PhD grants in projects' context.