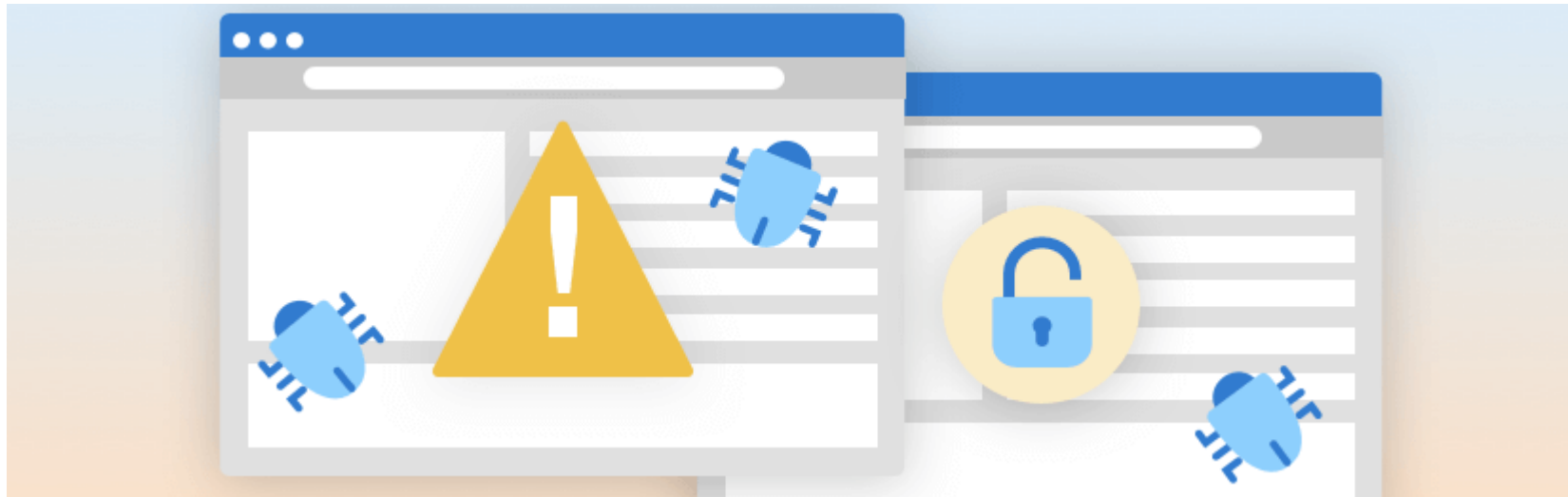# Bad Actors

Stephen Downes

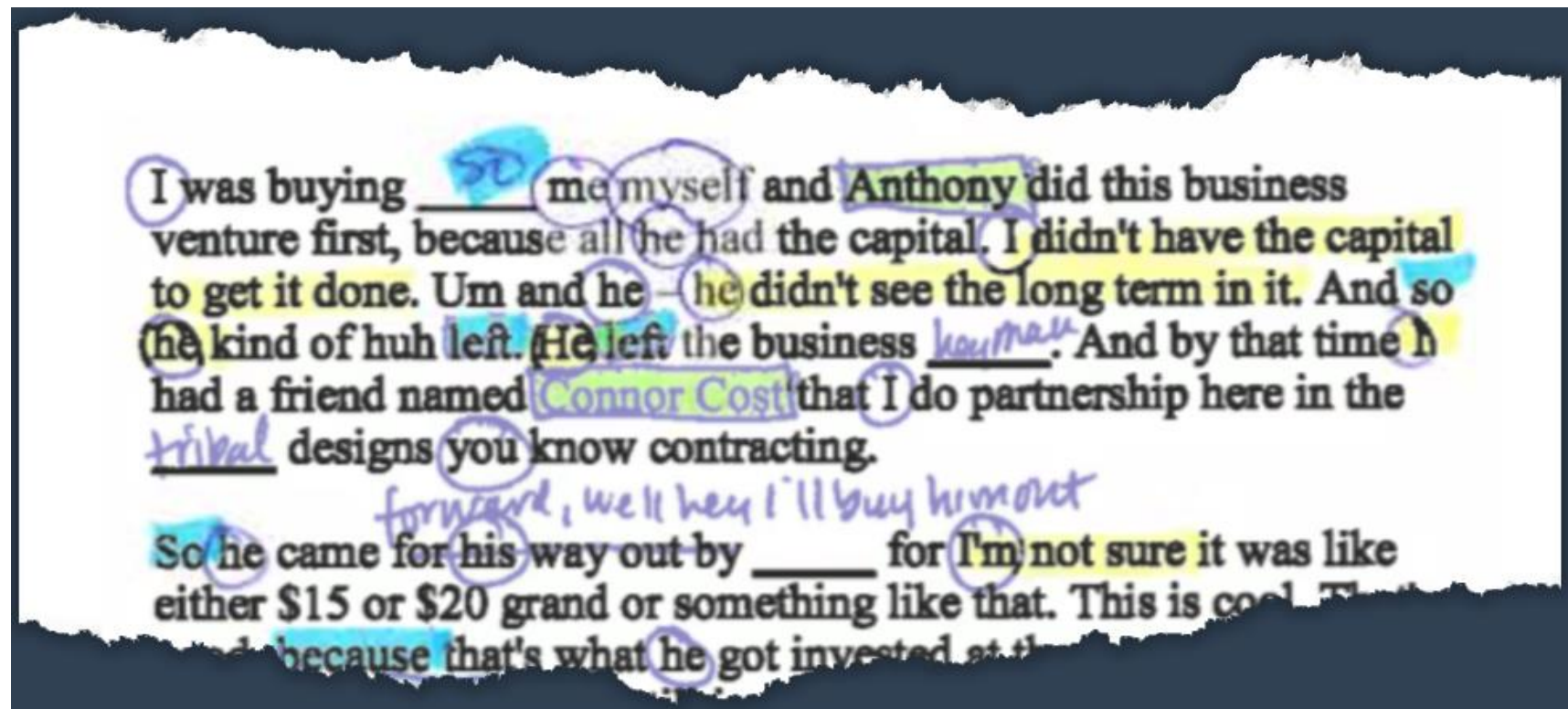November 1, 2021

Bad Actors

- The concept of the 'bad actor' is a person who uses a technology for illegal or immoral purposes.

- The definition of 'bad actor' can vary from culture to culture

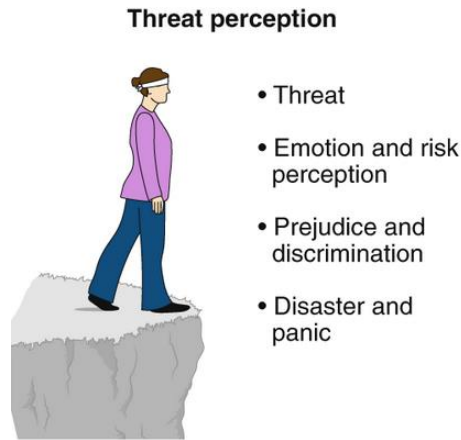- We will focus on bad actors in AI/analytics specifically

Title slide: https://www.govtech.com/security/bad-actors-have-adapted-well-to-the-pandemic-crisis.html

Misrepresentation

AI and analytics can be fraudulently used by pretending that they are able to do something they are not

Conspiracy Theorists

Threat perception

- Threat
- Emotion and risk perception
- Prejudice and discrimination
- Disaster and panic

Science communication

Conspiracy theories

Fake news

Persuasion
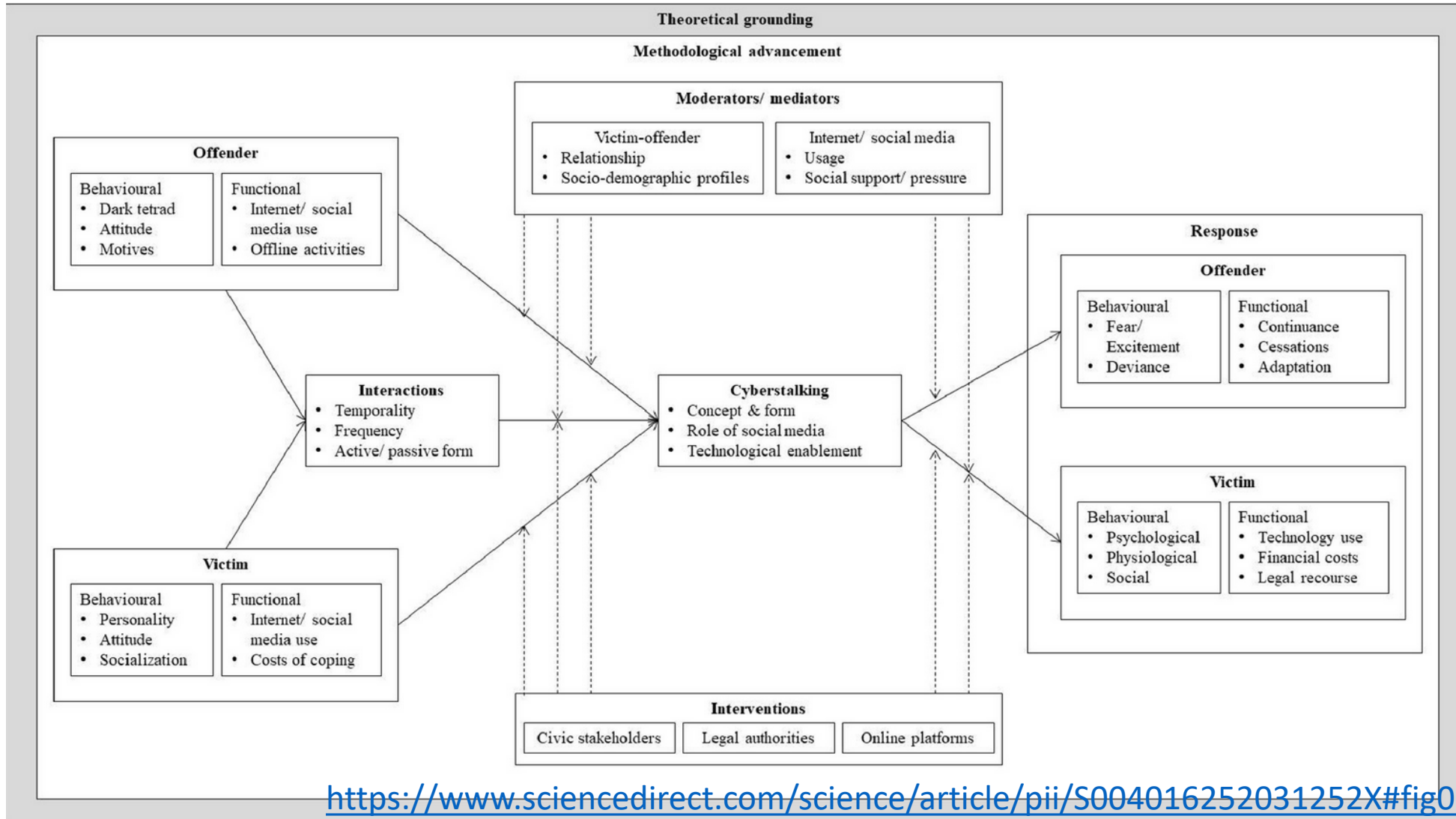
- person or group who promotes an alternative narrative alleging a coordinated campaign of disinformation, usually on the part of recognized authorities or institutions.

- conspiracy theorists often replicate analytical methods and dissemination, and sometimes subject existing analytics for their own purposes.

https://www.nature.com/articles/s41562-020-0884-z?fbclid=IwAR3X2coFq94s4o1w99wt4SrnaRNYYW4W4AlyiXVGYrYi9nnPrcOJLV3PDhk

Stalkers

Collusion

Algorithms… consistently learn to charge supracompetitive prices, without communicating with one another.

Company A collects Company B's price and sets its own price to match Company B

Company A collects Company B's price and sets its own price to undercut Company B's prices by twenty percent.
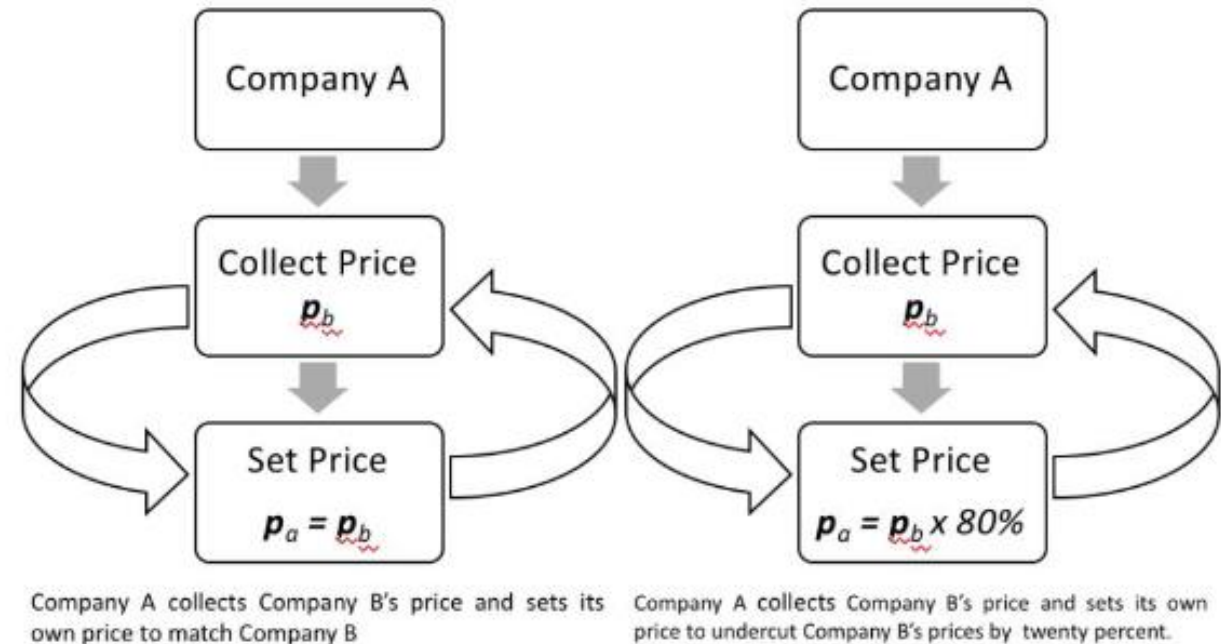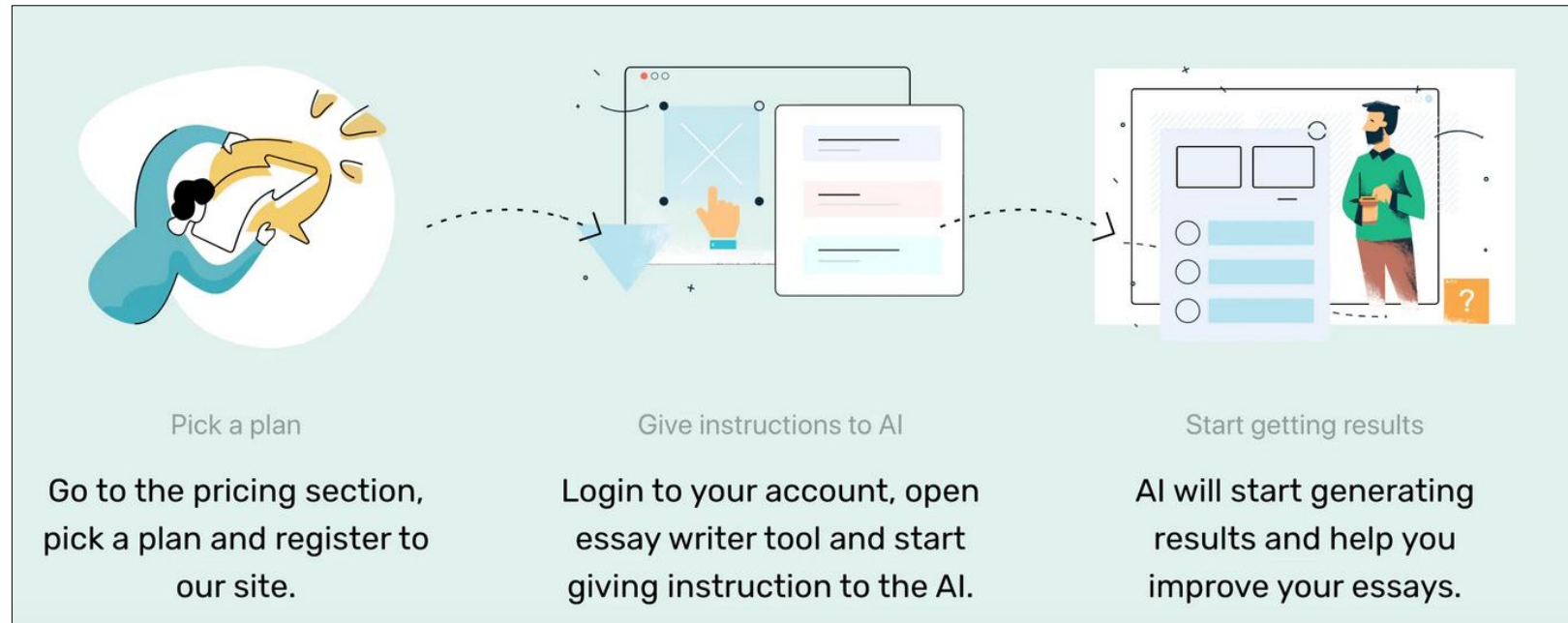
Figure 1: Illustration of Traditional Pricing Algorithms[21]

AI-Enabled Cheating

- Examples:
  - matching students to an academic ghostwriter
  - Using an AI to write an essay

Pick a plan	Give instructions to AI	Start getting results
Go to the pricing section, pick a plan and register to our site.	Login to your account, open essay writer tool and start giving instruction to the AI.	AI will start generating results and help you improve your essays.

https://researchai.co/

Audio/Video Impersonation

AI-generated impersonations can be used for a variety of illicit purposes, including authentication, cheating, misattribution, and more
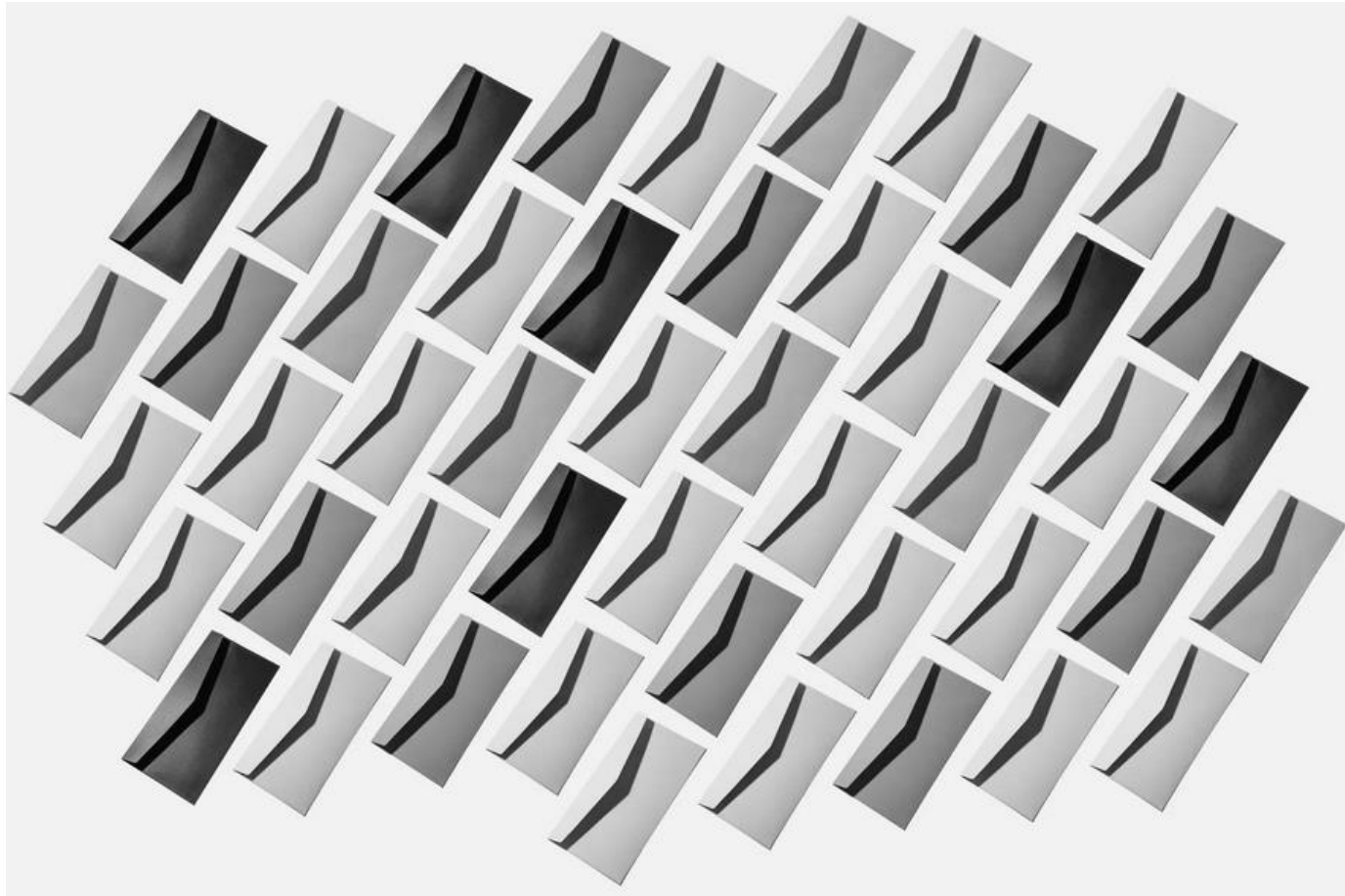
Driverless vehicles as weapons

Perhaps not an academic issue, nonetheless, of concern to academic institutions

https://www.npr.org/2021/06/01/1002196245/a-u-n-report-suggests-libya-saw-the-first-battlefield-killing-by-an-autonomous-d

Tailored Phishing

"Researchers found that they could use the deep learning language model GPT-3, along with other AI-as-a-service platforms, to significantly lower the barrier to entry for crafting spearphishing campaigns at a massive scale."

https://www.wired.com/story/ai-phishing-emails/