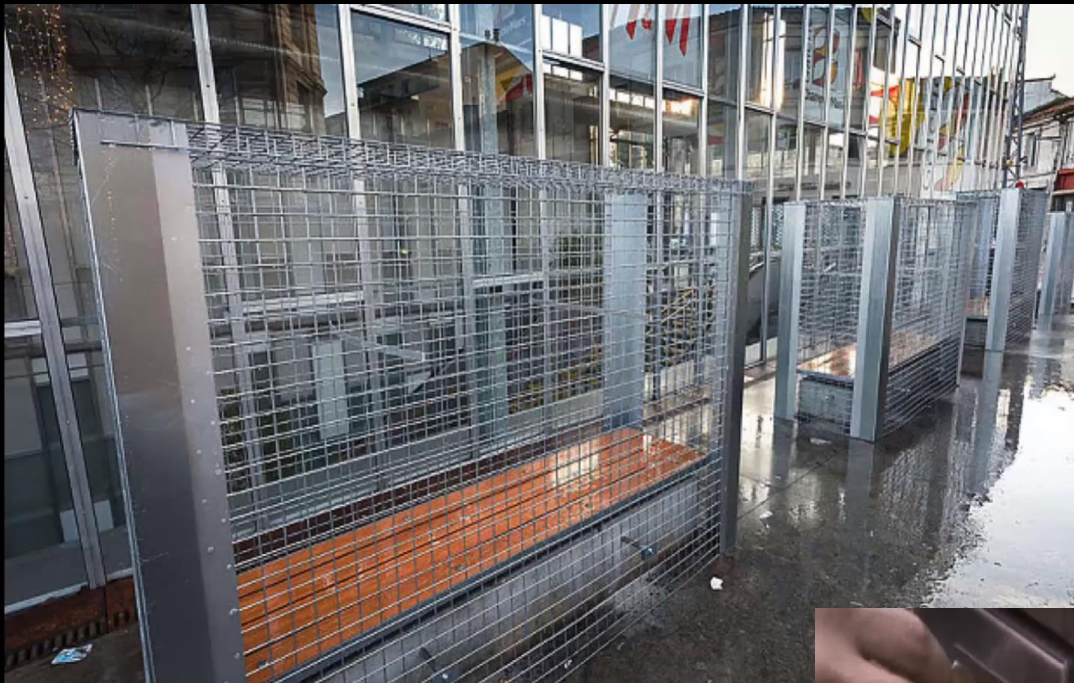




# The Ethical Anatomy of Converging Technologies

Eleonore Pauwels,  
Director of the AI Lab, Wilson Center  
Research Fellow on AI and Emerging Cybertechnologies

## Caged-Benches



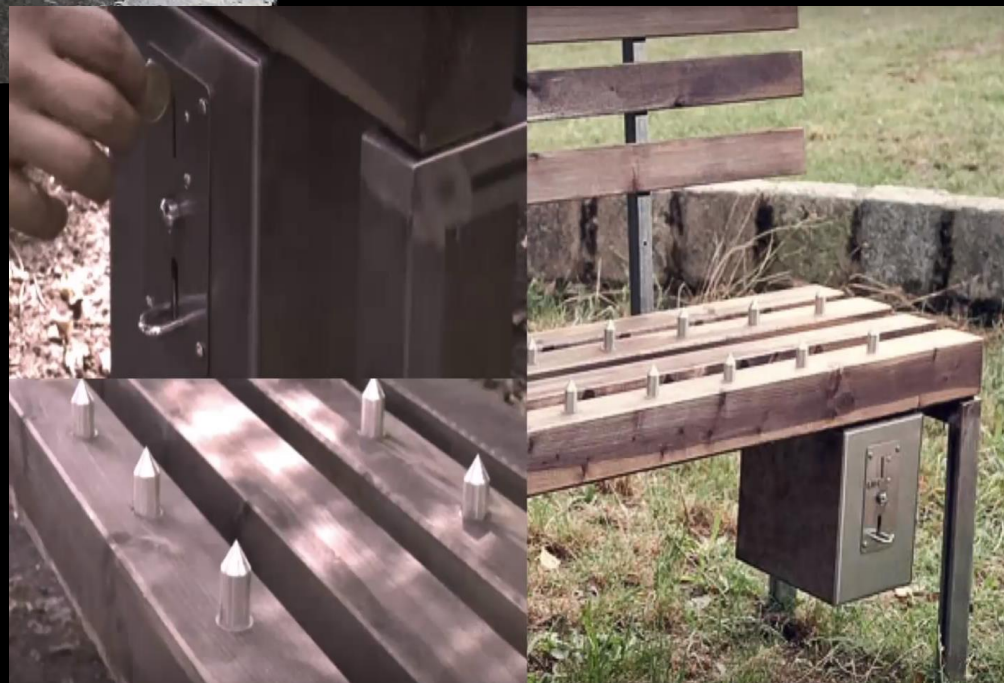
## Single-occupancy Benches



## “Pay as you sit” Benches

DISCRIMINATORY DESIGNS

From the park to the Lab?



Equivalent =  
The Coded Gaze?



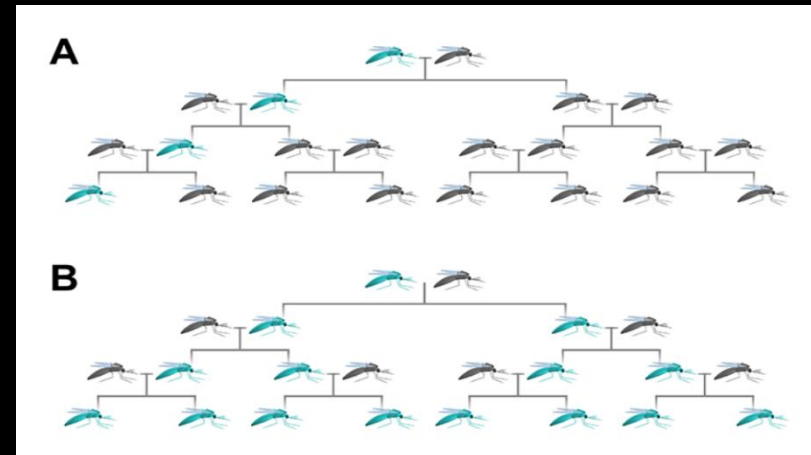
# Gene intelligence

*The risks and rewards of genome editing resonate beyond the clinic.*

***Panel Endorses 'Gene Drive' Technology That Can Alter Entire Species***



Female mosquitoes that have been altered as part of a gene drive experiment. Anthony James



# The Internet of Bodies

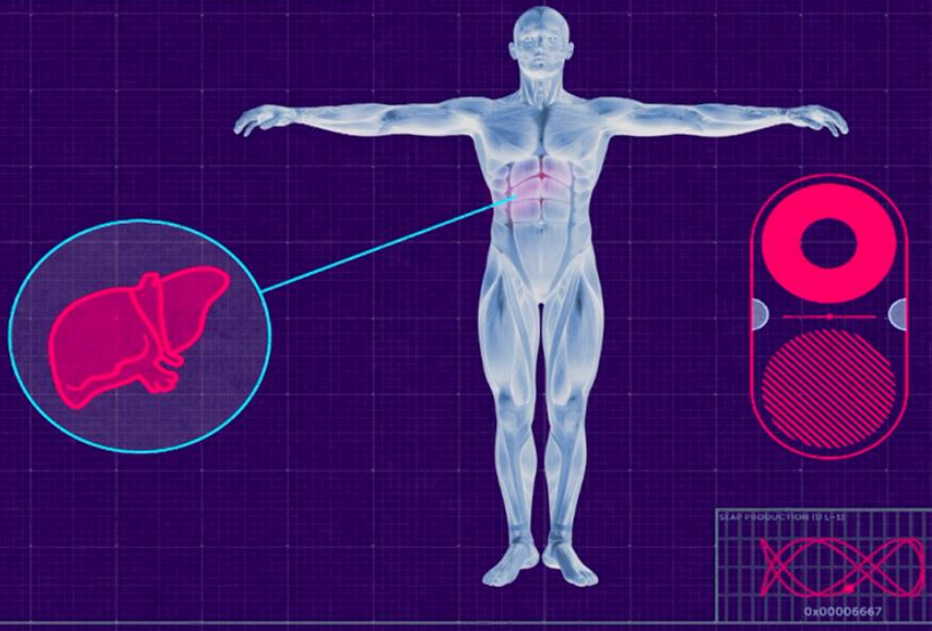
**AFFECTIVA'S EMOTION AI  
HUMANIZES HOW PEOPLE  
AND TECHNOLOGY  
INTERACT**

**5,734,477**

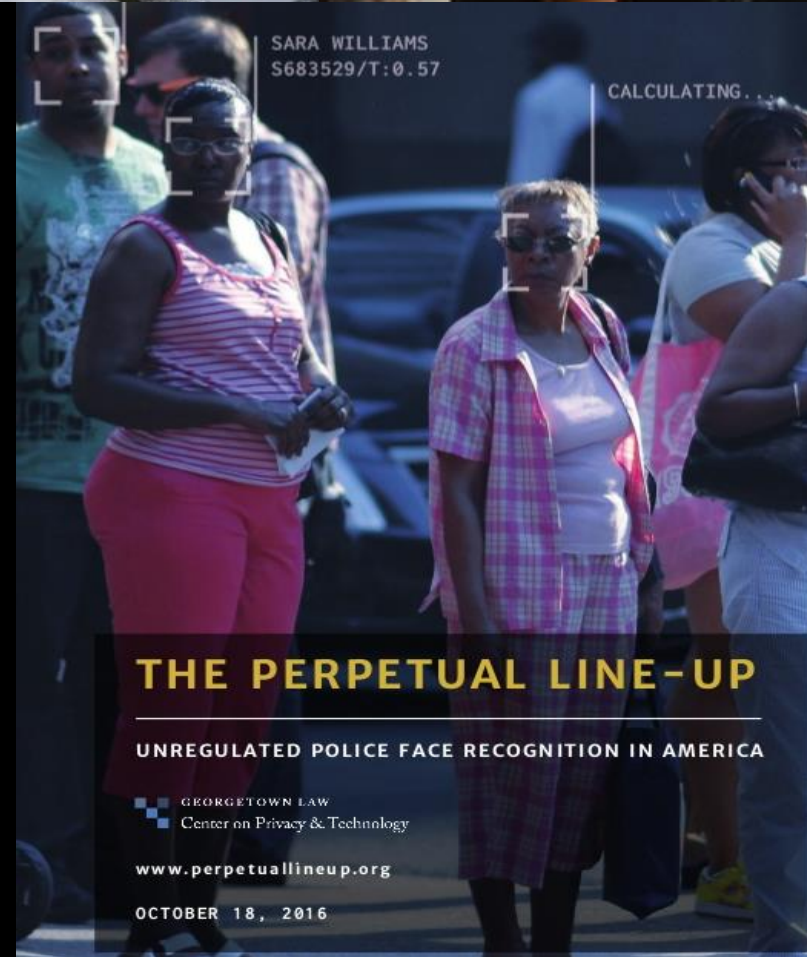
**FACES ANALYZED**

THE DESIGNER CELL

MODEL - 552 // 45-BBH-15



**Smart Emotion Doll**



# DEEPPFAKE



Reference



Our Result

# Lessons from Biosecurity

## Governance “Anomaly” 1 The H5N1 Papers



### *Scientists to Pause Research on Deadly Strain of Bird Flu*

By DENISE GRADY JAN. 20, 2012

The scientists who altered a deadly flu virus to make it more contagious have agreed to suspend their research for 60 days to give other international experts time to discuss the work and determine how it can proceed without putting the world at risk of a potentially catastrophic pandemic.

Suspensions of biomedical research are almost unheard of; the only other one in the United States was a moratorium from 1974 to 1976 on some types of recombinant DNA research, because of safety concerns.

# Governance “Anomaly” 2 Synthetizing Horsepox

# The Synthesis of Horsepox Virus and the Failure of Dual- Use Research Oversight

## Horsepox synthesis: A case of the unilateralist’s curse?

By Gregory Lewis, February 19, 2018





# AI & BIO FROM THE STREETS...

InterSpecifics, Community Lab in Mexico



Bio-sensors & genotyping



Drone for vaccine delivery in rural areas

From Kumasi Hive, Makerspace in Ghana

Open Sensory Substitution

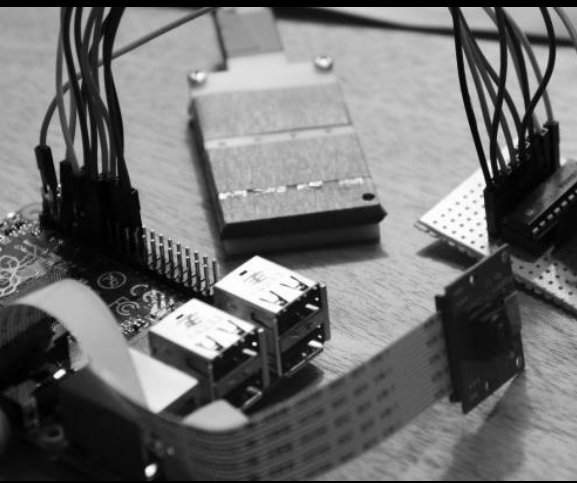


Image Recognition for Cervix Cancer-Screening



## Foresight Workshop for Research Agenda Mapping in Gene-Drives

INSIGHTS | PERSPECTIVES



BIOTECHNOLOGY

### *Regulating gene drives*

Regulatory gaps must be filled before gene drives could be used in the wild

## Codes of Conduct with DIY Fab and Bio Labs in US and Europe



## Trading Zone Exercises on Permission Less Innovation in Genetics (Boundary Object)



## Mind the metaphor

Imagery can help to bridge conceptual boundaries, but it can also cause trouble — as shown by the proliferation of engineering talk in biology, argues **Eleonore Pauwels**.