Blackbox (n.) : a.) 3 pages of notes taken rather hastily by Tiffany Funk before the apocalypse

b.) A device which performs intricate functions but whose internal mechanism may not readily be inspected or understood; (hence) any component of a system specified only in terms of the relationship between inputs and outputs. (Also figurative.)

What is a Black Box?
(And why should we care?)

It's a(n)...

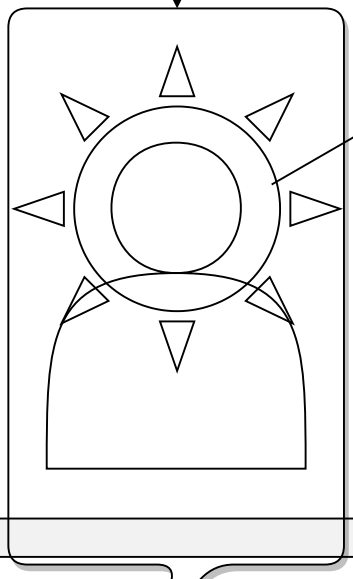
- algorithm
- transistor
- THE HUMAN MIND

"A black Box is homomorphic with a cybernetic system, because the latter has undergone a many-one simplifying transformation (which makes it tractable) without losing its key characteristic (of indefinability)." [2]

2. Stafford Beer, *Cybernetics and Management*, 1959.

"In principle, one needs no knowledge of the physics of the transistor in order to treat it circuitwise; any 'black box' with the same electrical behavior at its terminals would act in the same way." [3]

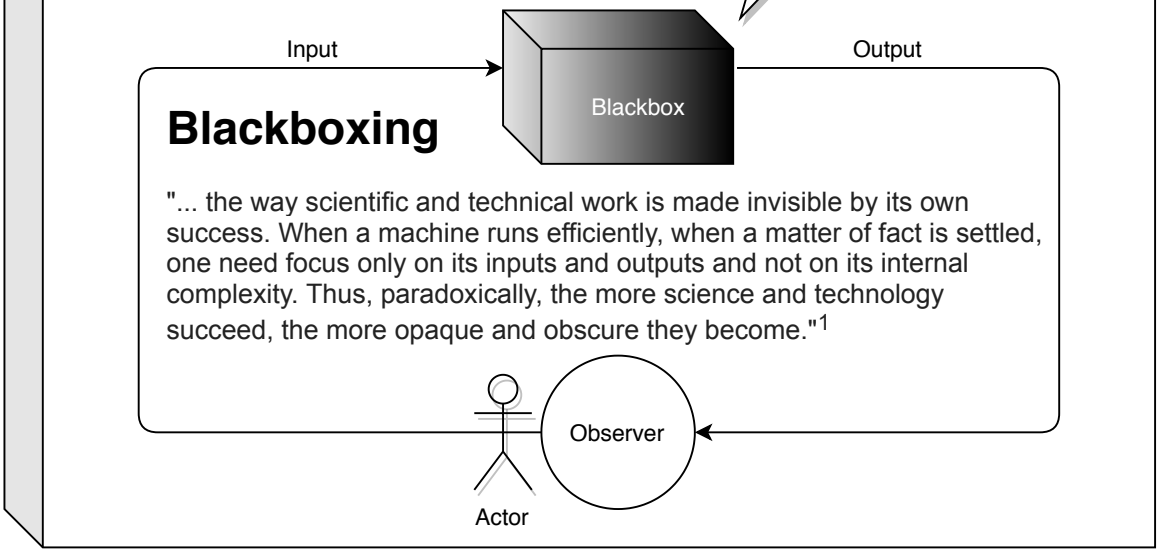
3. The Bell System technical journal (American Telephone and Telegraph Company), 1922–1983.

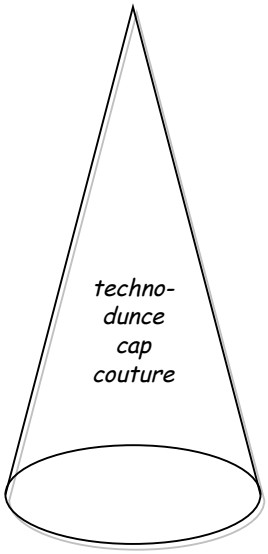


Well, yes, all of that, but...

"What all too often is missing from the study of schooling is what happens in the 'black box' of the school itself."[4]

4. Peter W. Cookson and Caroline Hodges Persell, *Preparing for power: America's elite boarding schools*, 1985.





1. Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies*, p. 304

"What's in the box?" [7]

"The constitution and structure of the box are altogether irrelevant to the approach under consideration, which is purely external or phenomenological. In other words, only the behavior of the system will be accounted for." [5]

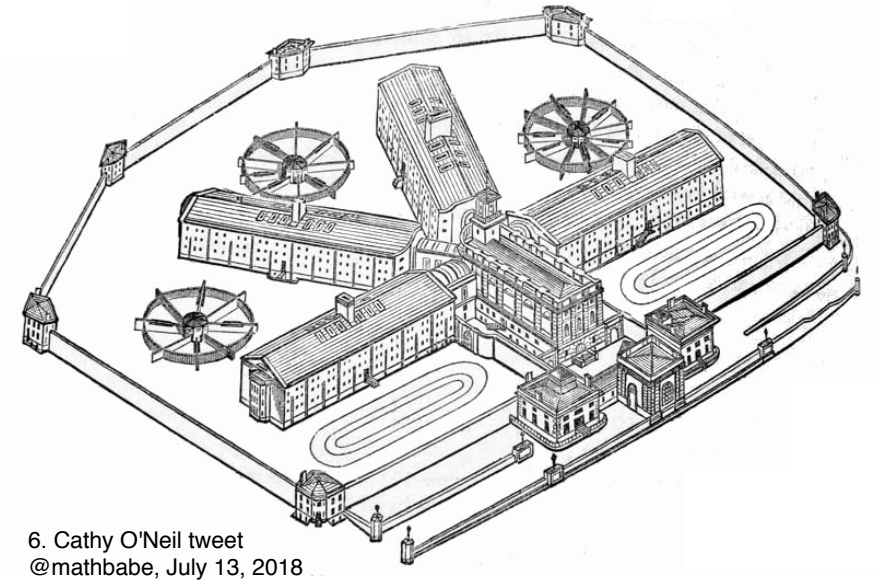
5. Mario Bunge, "A general black-box theory", *Philosophy of Science*, Vol. 30, No. 4, 1963.

Predictive Policing (n.)

mathematical, predictive analytics, and other analytical techniques in law enforcement to identify potential criminal activity through data on the times, locations and nature of past crimes, to provide insight to police strategists concerning where, and at what times, police patrols should patrol, or maintain a presence.

"A reminder that predictive policing and recidivism algorithms *predict the police* as much as they predict crime. If the police are biased, then the algorithms are too." [6]

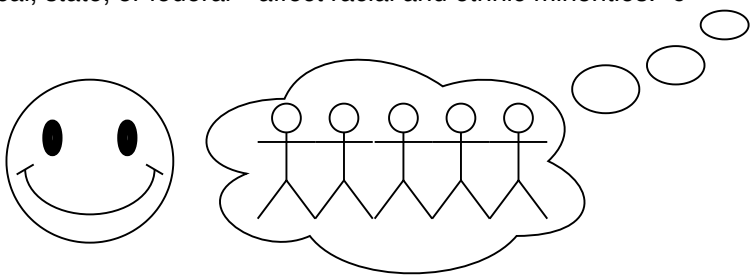
Isometrical perspective of Pentonville Prison, 1840-42, engineer Joshua Jebb.



6. Cathy O'Neil tweet @mathbabe, July 13, 2018

One in two American adults is in a law enforcement face recognition network.

"Across the country, state and local police departments are building their own face recognition systems, many of them more advanced than the FBI's. We know very little about these systems. We don't know how they impact privacy and civil liberties. We don't know how they address accuracy problems. And we don't know how any of these systems—local, state, or federal—affect racial and ethnic minorities." [8]



8. 2016 Center on Privacy & Technology at Georgetown Law, https://www.perpetuallineup.org/

7. Mills, *Se7en*, dir. David Fincher, 1995

Cybernetics (n.)

Official: "the scientific study of control and communication in the animal and the machine."

Unofficial: An earnest apology for inevitable nuclear holocaust

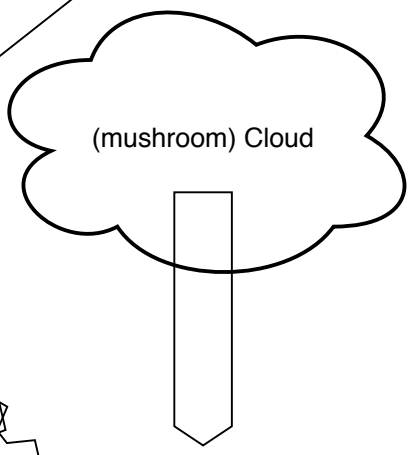
SORRY, FOLKS!!

"Now that [Norbert Wiener] associated cybernetics with the power of cataclysmic weapons, he tried to push cybernetics away from the military arena because of its deadly efficacy. Either way, for Wiener and many colleagues, the association of cybernetics with its wartime origin was forcefully and deeply inscribed in the cultural meaning of the new science and its machines." [9]

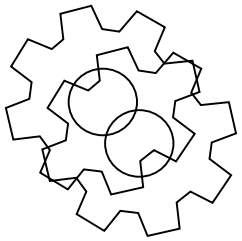
Back to black boxes:

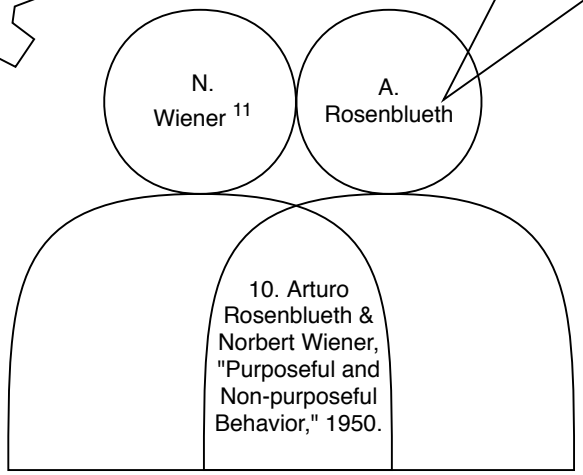
"In the course of characterizing the enemy pilot's actions and designing a machine to forecast his future moves, (Norbert) Wiener's ambitions rose beyond the pilot, even beyond the World War. Step by step, Wiener came to see the predictor as a prototype not only of the mind of an inaccessible Axis opponent but of the Allied antiaircraft gunner as well, and then even more widely to include the vast array of human proprioceptive and electrophysiological feedback systems. The model then expanded to become a new science known after the war as "cybernetics," a science that would embrace intentionality, learning, and much else within the human mind. Finally, the AA predictor, along with its associated engineering notions of feedback systems and black boxes, became, for Wiener, the model for a cybernetic understanding of the universe itself. This paper is an exploration of that expansion. In it, I will be backtracking from the widest ontological claims of cybernetics into a collocation of vacuum tubes, resistors, and condensers designed to replicate the intentions of a hidden enemy pilot." [10]

9 & 10. Peter Galison, "The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision," 1994.



"We believe that men and other animals are like machines from the scientific standpoint because we believe that the only fruitful methods for the study of human and animal behavior are the methods applicable to the behavior of mechanical objects as well. Thus, our that, as objects of scientific enquiry, humans do not differ from machines." [10]





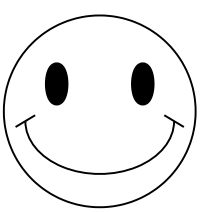
11. "In 1950, soon after finishing his cybernetics manifesto *The Human Use of Human Beings*, Wiener drafted an impromptu article on a subject ostensibly far removed from his primary interests in feedback control and information theory. It was a radical plan to redesign American cities in an attempt to solve problems of industrial concentration and urban congestion that he believed made them vulnerable to atomic attack." The City as Communications Net: Norbert Wiener, the Atomic Bomb, and Urban Dispersal, Robert Kargon and Arthur Molella, 1994.

yes.

or:

invest in your own trans-oceanic cable!!

"Increasingly investment and ultimately ownership and control of the cables used to transport information across the world is moving away from telecommunications operators. One example is the increased investment in and ownership of trans-oceanic cables by application and service providers, or platforms, such as Google, Facebook, and Microsoft. Another is the strategic investment in undersea cables by nation states as part of a geo-political cyber strategy." [12]



12.

https://digitalfreedomfund.org/internet-drift-how-the-internet-is-likely-to-splinter-and-fracture/

http://www.submarinecablemap.com

https://internethealthreport.org/2019/