The Science and Fiction of the Antibiotic Apocalypse
“Imagine a world in which even the slightest scratch could be lethal. Cancer treatments, including chemotherapy, and organ transplants are no longer possible. Even simple surgery is too risky to contemplate, while epidemics triggered by deadly bacteria have left our health services helpless.

It is science fiction, of course—but only just.”

—Rob Mckie, “Antibiotic Abuse: The Nightmare scenario”

*The Guardian* (2016)


Big Take Aways

1. A specific take about AMR as a phenomena, concept, idea in public and professional circulation, and as the subject of one mobile game—Superbugs

2. More broadly, an expanded and disrupted way of understanding biomedicine:
1. Summary of what the humanities are and what interdisciplinary humanities on science and medicine looks like
2. Brief refresher on the science of AMR
3. Representations of AMR in popular culture and news media: apocalypse
4. Consider the incomprehensible scale of AMR as a “hyperobjects”
5. Think AMR’s (factual) history
6. Look at AMR’s science fictional present and future
7. Ask Why we should think critically, relative to the points above
The Humanities

Simply: The study of how human expires is processed and documented; how we have created and are created by our world

History, English, Art History, Philosophy, Religious Studies, Classical studies, Comparative Literature, Film Studies

Cross over with social sciences:
Archaeology, Anthropology, Communications, Law and Linguistics

Interdisciplinary studies:
Medical/health Humanities, America Studies, Africana Studies, Environmental Humanities, Women and Gender Studies,
Terms

**Antibiotic Resistance**: Bacteria’s ability to withstand or evade drugs designed to kill them

**Resistome**: Collective pool of antibiotic resistant genes bacteria contribute to and draw from

**Hyperobjects**: entities so massively distributed in space and time that they cannot grasped in their expansiveness or experienced directly
Resistance (2015), Sergey Mokritskiy (dir)
99,000 deaths per year US

700,000 deaths per year globally

10,000,000 dead per year, by 2050

No new antibiotic classes since 1987

Why use Hyperobjects to think about AMR

1. Acknowledges the resistome as a material fabric that connects diverse ecologies and human/non-human assemblages (fancy word for a collection of things);

2. Decenters the tendency toward narrowing the scope of antibiotic resistance to the clinic and individual patient

3. considers the bioethical challenges that stem from thinking of antibiotic resistance at a temporal and global scale.
'Dickensian diseases' are making a comeback in the UK

By Jack Guy, CNN

Updated 11:06 AM ET, Sat February 2, 2019
Some Characteristics of Hyperobjects

- Viscosity
- Non-locality
Superbugs affords us a unique opportunity to observe the convergence of popular culture with the history of medical science.

- It mediates a change in medical metaphors
- The game defamiliarizes AMR’s history & present
- This prompts us to consider an inter-relational model of balance versus war
“We used to think a certain way about antibiosis and pathogens. *And then we changed the future.*”
- Hannah Landecker (2015)
- *Superbugs* allows the performance of AMR rather than showing or telling

- To “read” *Superbugs*, we must consider
  1. Narrative
  2. Visual Aesthetics
  3. Mechanics/Algorithmic Logic (interactivity)
Narrative Conflict between Players & Bacteria
Near Death
Drug-resistant infections are already responsible for more than half a million deaths globally each year. This toll could exceed 10 million each year by 2050.
Not finishing a course of antibiotics after we start feeling better can leave the most resistant bacteria alive to grow and spread.
Applying Antibiotics
Research Lag

Not finishing a course of antibiotics after we start feeling better can leave the most resistant bacteria alive to grow and spread.
Scorched-Earth Pharmacology
Balance
Now What?

- Personal
- Medical
- Pharmacological
- Ethical
- Political
- Cultural
Primary Sources


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Questions?