Data as Representation

Framing Critical Data Studies

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https://ontoligent.github.io/talk-data-as-representation

What is Critical Data Studies?

> Critical Data Studies is an emerging, interdisciplinary field that addresses the ethical, legal, social, cultural, epistemological and political aspects of data science, **big data** and digital infrastructures.

Purdue University

> Critical Data Studies (CDS) explore the unique cultural, ethical, and critical challenges posed by **Big Data**.

Iliadis, A., and Russo, F. 2016. "Critical Data studies: An Introduction". *Big Data & Society,* 3(2).

Big Data

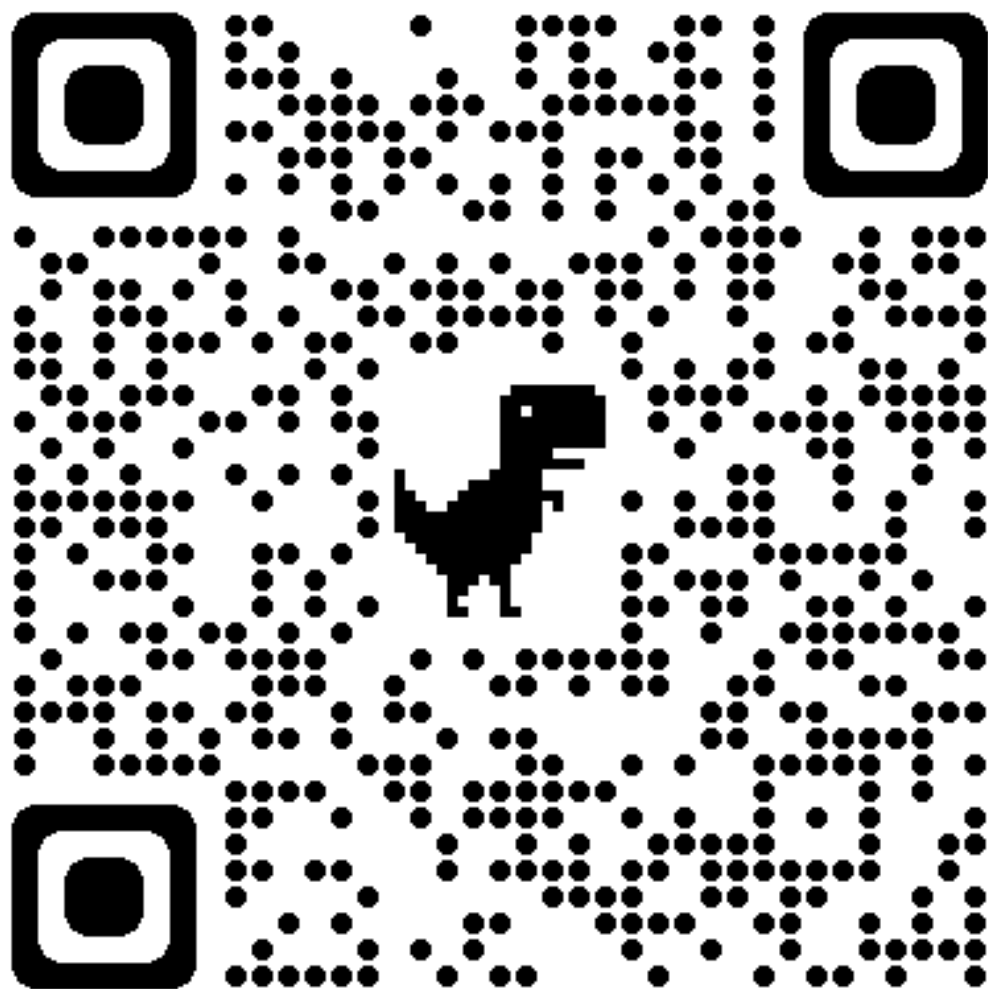That we live in the era of "big data" is a **commonplace**

- In fact, it has become a tired **meme**

Commonly understood as a purely **technical** idea

- 3D data, 4$^{\text{th}}$ Paradigm of Science, etc.

But: It also means something like Big Science or Big Pharma

- i.e. **Big Data-Science** …

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Big Data Science

For example, this usage is typical in the media:

> It seems that the markets are as much in love with "Big Data"—the ability to acquire, process and sort vast quantities of data in real time—as the technology industry.

> The first Big Data initial public offering hit the market last week to roaring approval. Splunk Inc., which helps businesses organize and make sense of all the information they gather, soared 109% on its first day of trading. Big Data, big price.

Big Data's Big Problem: Little Talent (*WSJ*, April 29, 2012)

Here Big Data is a **synonym for Data Science**

Big Data and CDS

CDS focuses on Big Data from this dual perspective

- As a kind of **technology** — 3D (Volume, Velocity, Variety)
- As a kind of **institution** — built around data

Here, I'd like to sketch out an **anthropological framework** for studying how these levels **interoperate**

- Presented as a series of **propositions**

1 Society is Relational

Society is built out of **relationships**, not individuals

- Relationships have a basis that **precedes so-called rational action**
- In contrast to **methodological individualism**

At least we can agree that **relationships are foundational to society**

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Relational Dyads

By relationship, I mean relational **dyads** —

> `male/female`, `parent/child`, `consumer/producer`, `labor/capital`, `student/teacher`, `doctor/patient`, `us/them`, `I/thou`, etc.

Each specifies **complementary traits** and **expected behaviors**

2 Social Relations are Mediated

Social relations are **mediated** by forms of **representation**

- Language, writing, ritual, money, etc.
- These literally are **social media** (a term coined in the 19th c.)

Relationships are **constituted** by these media

- Both their forms and their contents
- E.g. orality and specific myths

3 Media Enable Scale

Different **media forms** are associated with different emergent **social orders**

- **Large-scale societies** (states) require **writing**
- The liberal democratic **nation state** emerged with the **newspaper** (~18th c.)
    - Not causal, but **systemic**
- Democracy runs on **public opinion**, which is represented by the **media**

4 Data is a Social Medium

Now, Big Data means that data has become a **dominant social medium**

- Finance, commerce, labor, education, romance, etc.

Therefore, it is bound up with **emerging social (and cultural) orders**

Reintermediation

The trend over the past three decades has been the progressive **reintermediation** of social relations

- Within the **economic** and **private social** spheres
- Most recently, **Web3** is the idea that government itself will be replaced by data (Blockchain)
    - a society without trust

Nearly every significant social relationship is now mediated by data

- This is **historically singular** — and recent

Data mediates both as **social agent** and **cognitive form**

- This is a very big deal

Significance

It is not simply that we have become **dependent** on the Big Data economy

Or that Big Data is **disruptive**, or **biased**, or **spying on us** . . . all of which are important

It is means that there are **system-level changes** taking place right now

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At the level of **sectors**

- Education, medicine, banking, etc.

At the level of **political economic orders**

- Akin to Polanyi's *Great Transformation*
- Akin to the rise of the nation state

But since society is built on relationships, we can empirically study these systemic phenomena **on the ground** by investigating mediated social relationships

- Ethnographically
- Statistically
- From a "business" perspective ...

Example: Medicine

We can study the `Patient-Doctor` relationship locally

- As it is **reintermediated** by the data
- Once doctors catch on ...

Or we can study the emergent effects of this on medicine itself

- Will we have hospitals?
- Where and how will medical decisions be made?
- What does the Ubering of medicine mean for healthcare as a system?