A social cartography of student data: Moving beyond #StudentsAsDataObjects

Presentation at the 23rd Conference of the South African Association for Institutional Research (SAAIR) Potchefstroom, South Africa

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How is it possible that the #FeesMustFall #RhodesMustFall campaigns caught higher education institutions relatively (or totally?) unprepared despite everything that we *already* know about our students?

Image credit:http://s0.geograph.org.uk/geophotos/04/42/00/4420078_bed251a1.jpg
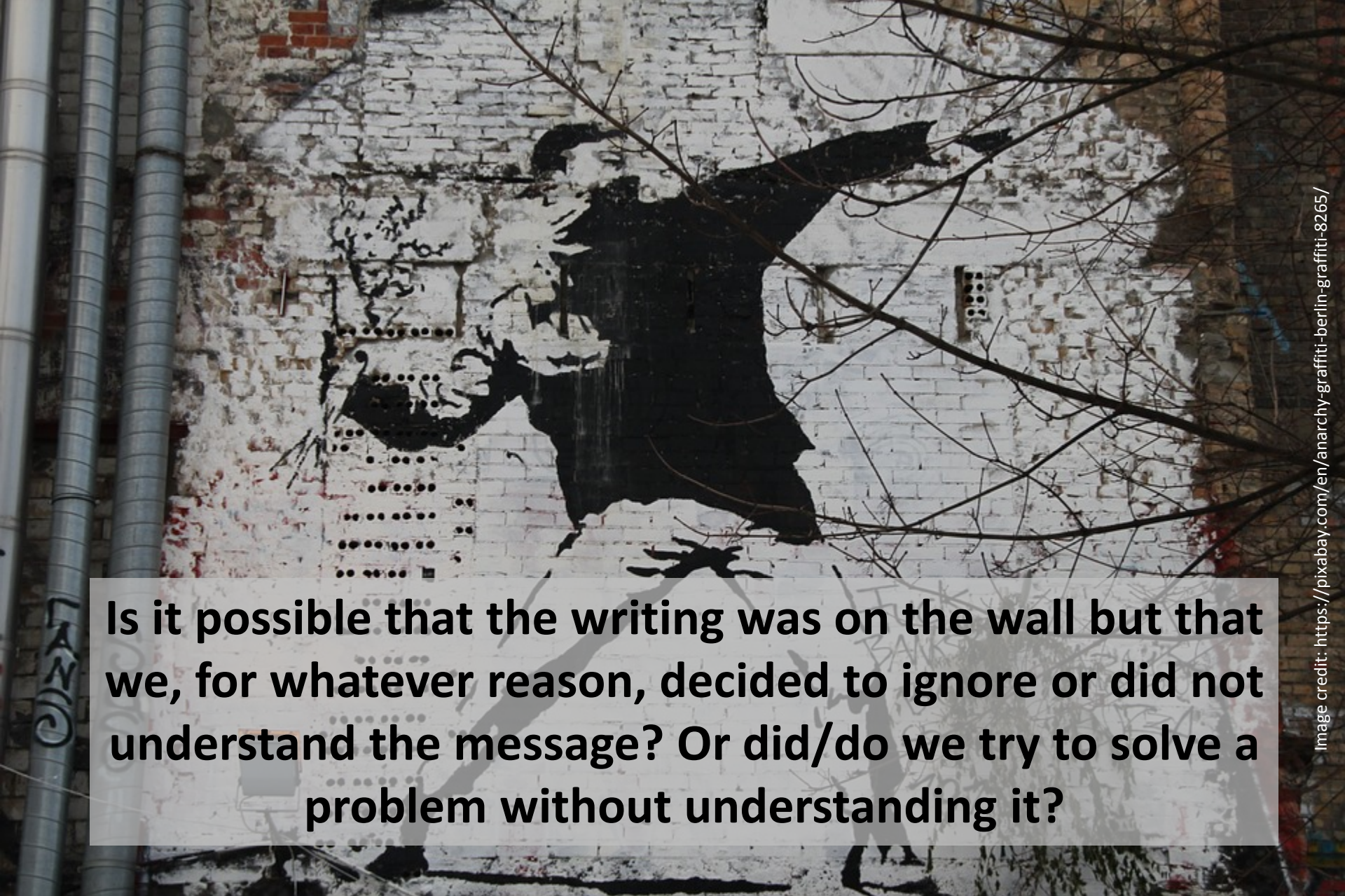
Is it possible that the writing was on the wall but that we, for whatever reason, decided to ignore or did not understand the message? Or did/do we try to solve a problem without understanding it?

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What did we *not know* about our students that would have prepared us for the disruption and destruction we faced over the last 18 months?

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If institutional research functions as radar to pick up and make sense of signals, how did we miss *this* signal?
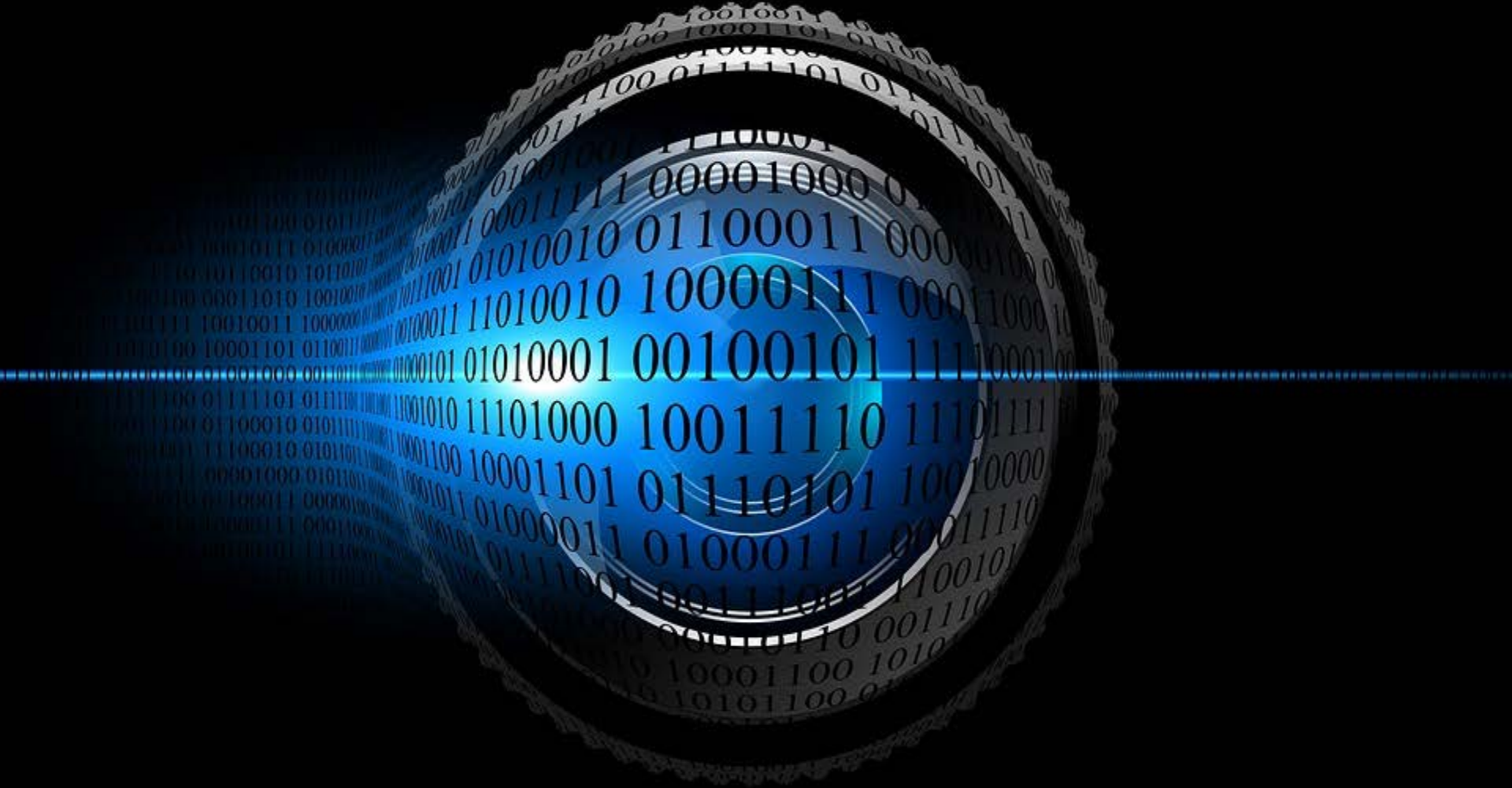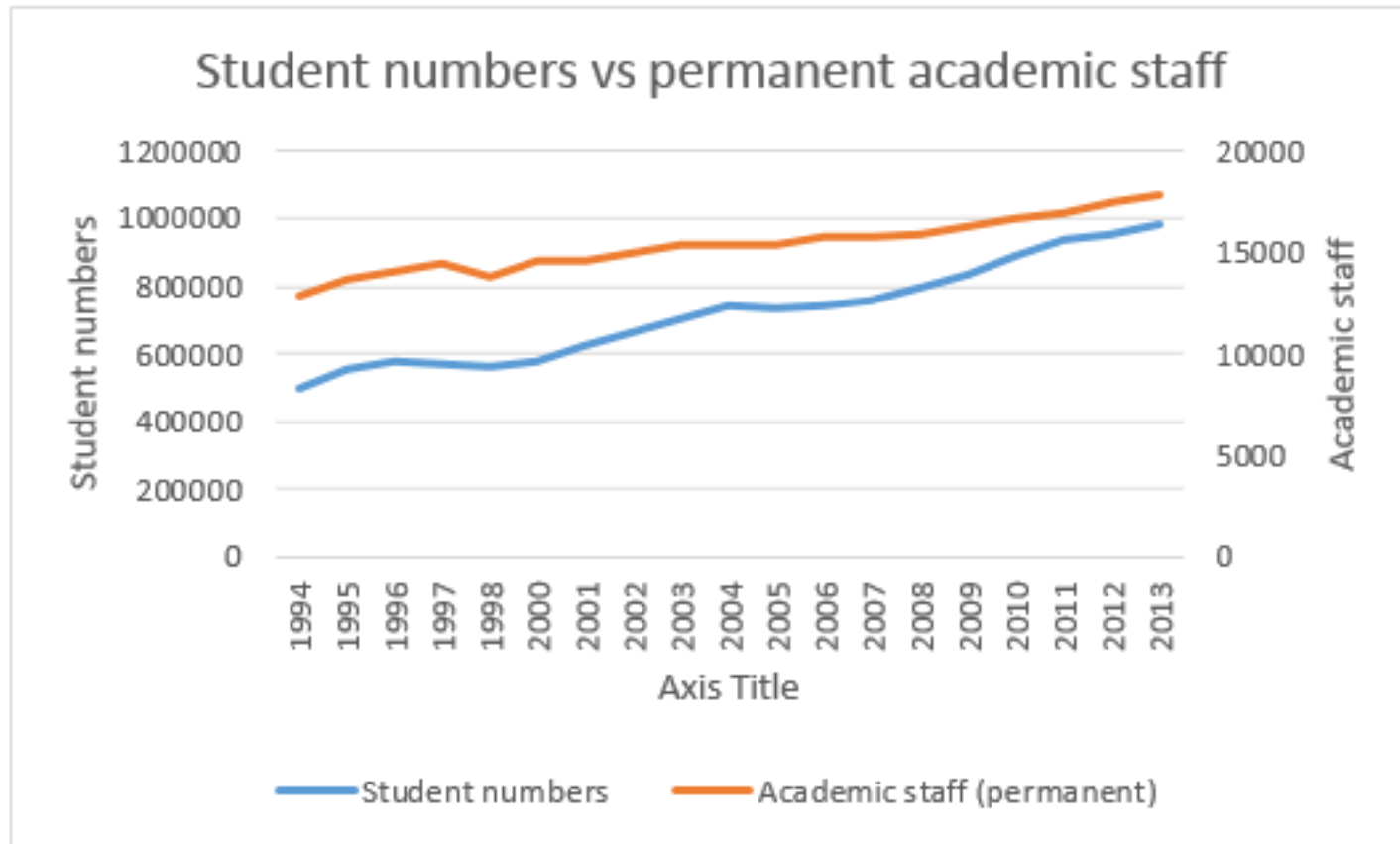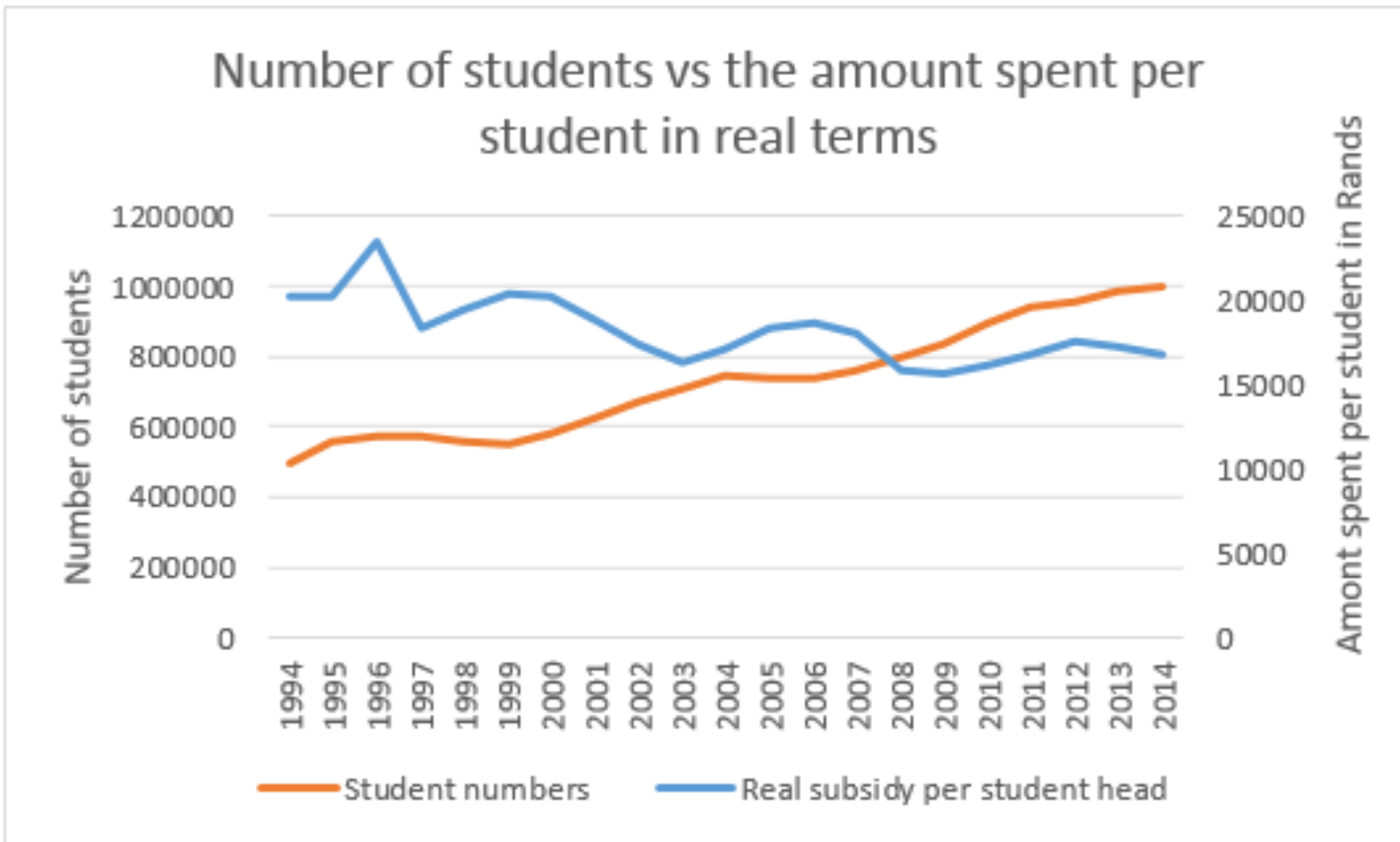
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We had data….

Image credit: https://pixabay.com/en/lens-null-one-binary-lichtreflex-1278493/

Student numbers vs permanent academic staff

Site credit: http://www.politicsweb.co.za/news-and-analysis/behind-the-university-funding-crisis

Number of courses financially cancelled during the academic year (Institution A)

Academic year (both semesters)	Number of courses financially cancelled during academic year
2011	204 302
2012	210 680
2013	249 621
2914	226 840
2015	232 581

Statistics provided by Department of Institutional Research (DIR)(Institution A)

Or...

- Did we have the wrong data?
- Not enough data?
- The wrong tools?
- Were we so busy with reporting on course success, throughput, the number of student logins and writing yet another just-in-time report for you-know-who that we did notice?
- Did we have the wrong assumptions about data? Or did we have the wrong lens?

Image credit: https://pixabay.com/en/lens-null-one-binary-lichtreflex-1278493/

Overview of this presentation

1. Situating this social cartography:
   - Our **assumptions about data** (the limitations, anxieties, arrogances and exclusions of data)
   - Data collection, analysis and use as **political acts** that serve declared and hidden assumptions about the purpose of higher education and the masters it serves
   - Our assumptions about evidence-based management and translating institutional research into action
2. Introducing social cartography as methodology
3. A social cartography of higher education as basis for a social cartography of student data
4. (In)conclusions

What does the social imaginary pertaining to student data look like? What are our assumptions? Beliefs?

Student data portrayed as the 'new black', as oil, as a raw resource to be mined, collected and exchanged for return-on-investment

Image credit: http://blog.ceo.ca/wp-content/uploads/2015/02/oil-rigs.jpg

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We assume…

- If we **know more** about our students (in the sense of having access to more of their data), we will, *per se*, have a ***better understanding*** of their learning journey ***(data=information=knowledge)***
- Knowing **what** is happening is more important than knowing **why** something is happening ***(n ≠ all)***
- If we know more about them, and have a clearer or better understanding of their learning journey, ***we can also do more (resources, locus of control)***
- If we know more and have the resources to do more, that we actually ***will act and do more (political will, locus of control)***

What data, understanding and knowledge, resources, political will does moving the 'murky middle' require and in whose locus of control lies the potential?
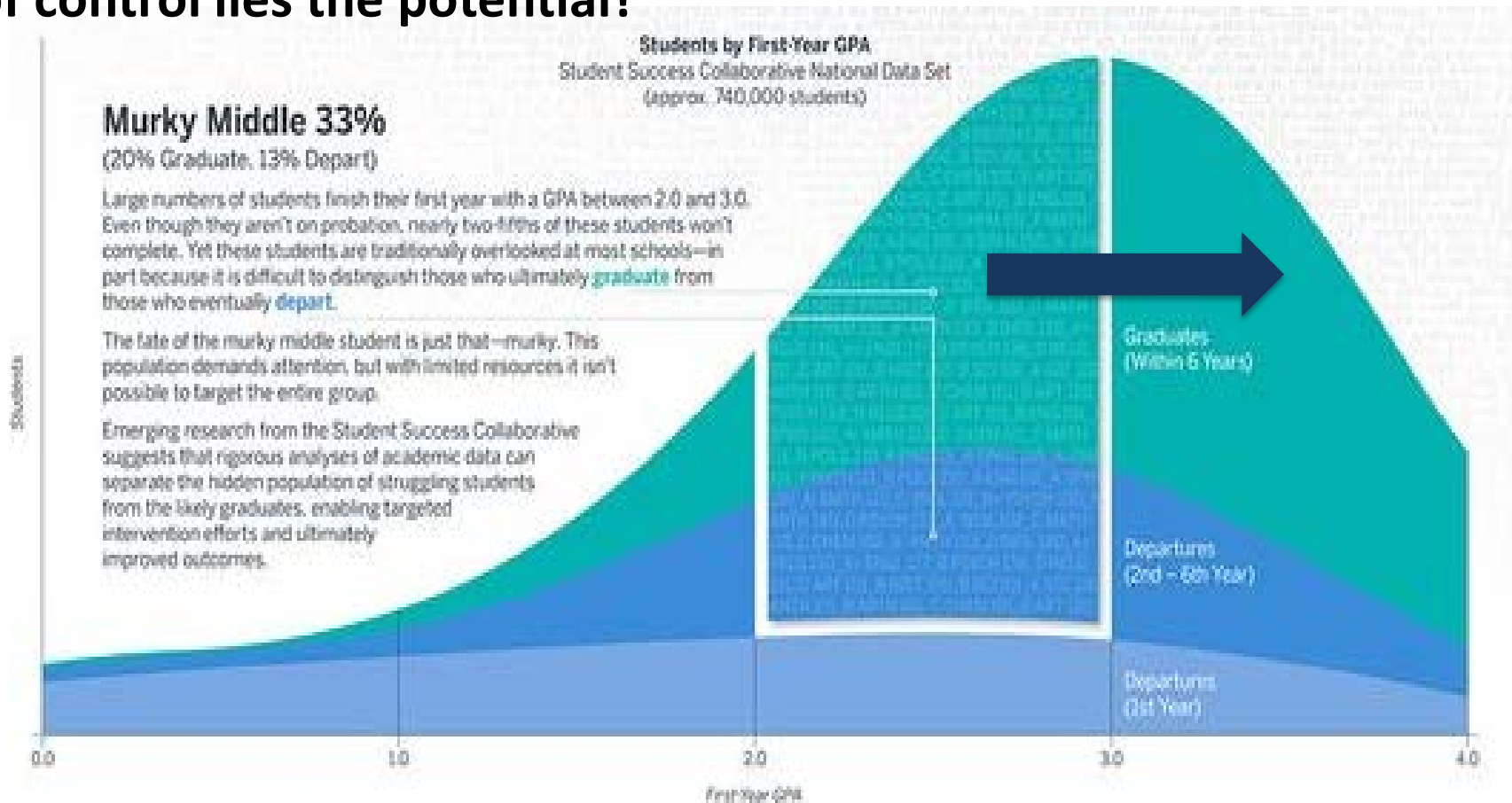
How do we make ethical decisions in using student data in an increasingly resource-constrained and unequal world?

Image credit: https://en.wikipedia.org/wiki/Triage

Are Struggling College Students Like Cuddly Bunnies That Should Be Drowned?

A trip down the rabbit hole of a scandalous analogy

By Steve Kolowich | FEBRUARY 12, 2016

When Simon P. Newman, president of Mount St. Mary's University of Maryland, was pushing for a more ruthless method of improving his college's retention rate, he chose a provocative analogy.

"This is hard for you because you think of the students as cuddly bunnies," he told

Getty Images/iStockphoto

Web site credit: http://www.chronicle.com/article/Are-Struggling-College/235311?cid=trend_right

Getting from here…

To here…

Image sources: https://twitter.com/urbandata/status/695261718344290304
https://za.pinterest.com/barbaralley/fair-is-not-equal/
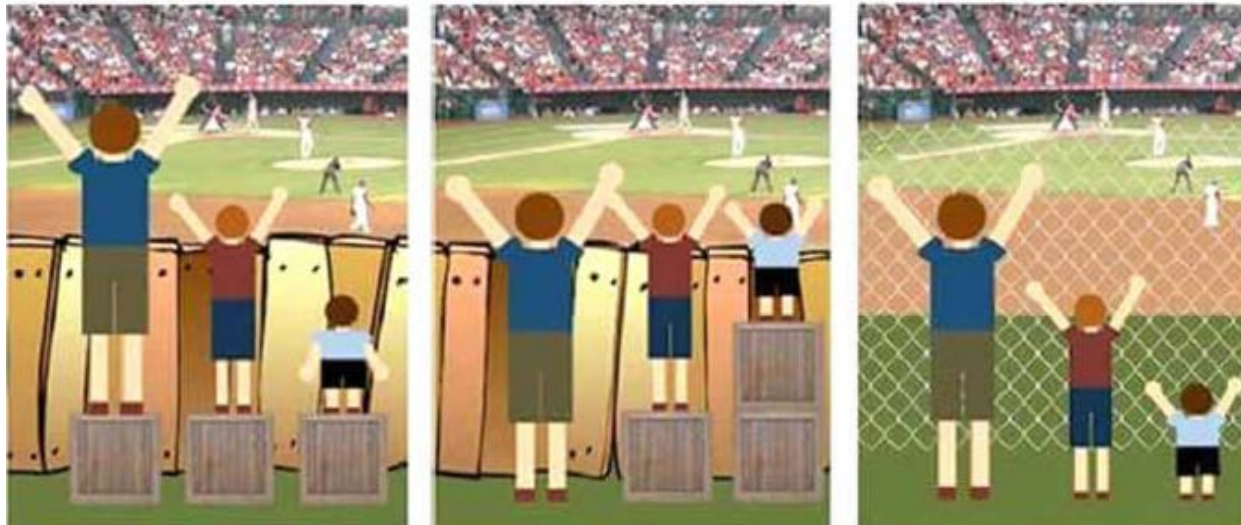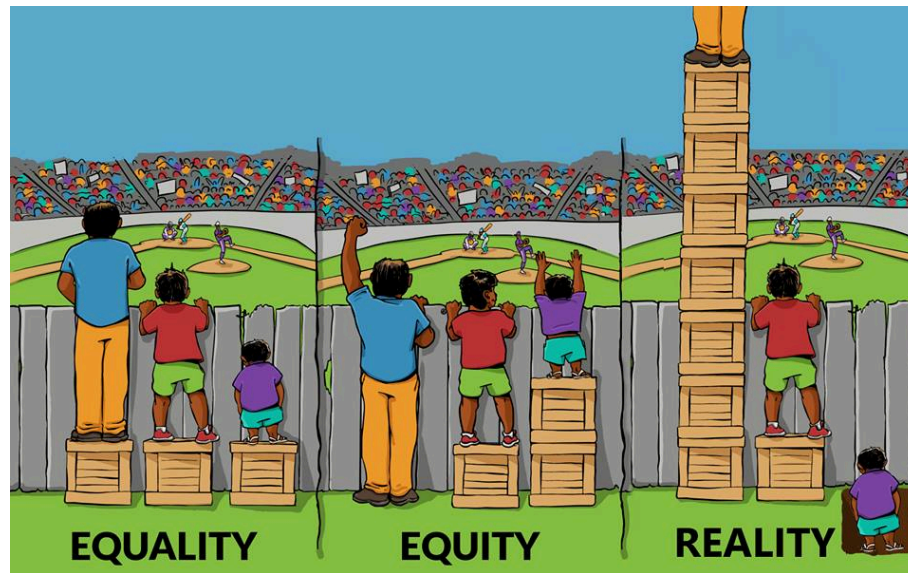
How does the social imaginary pertaining to evidence-based management impact on what data we collect, analyse and use the data?

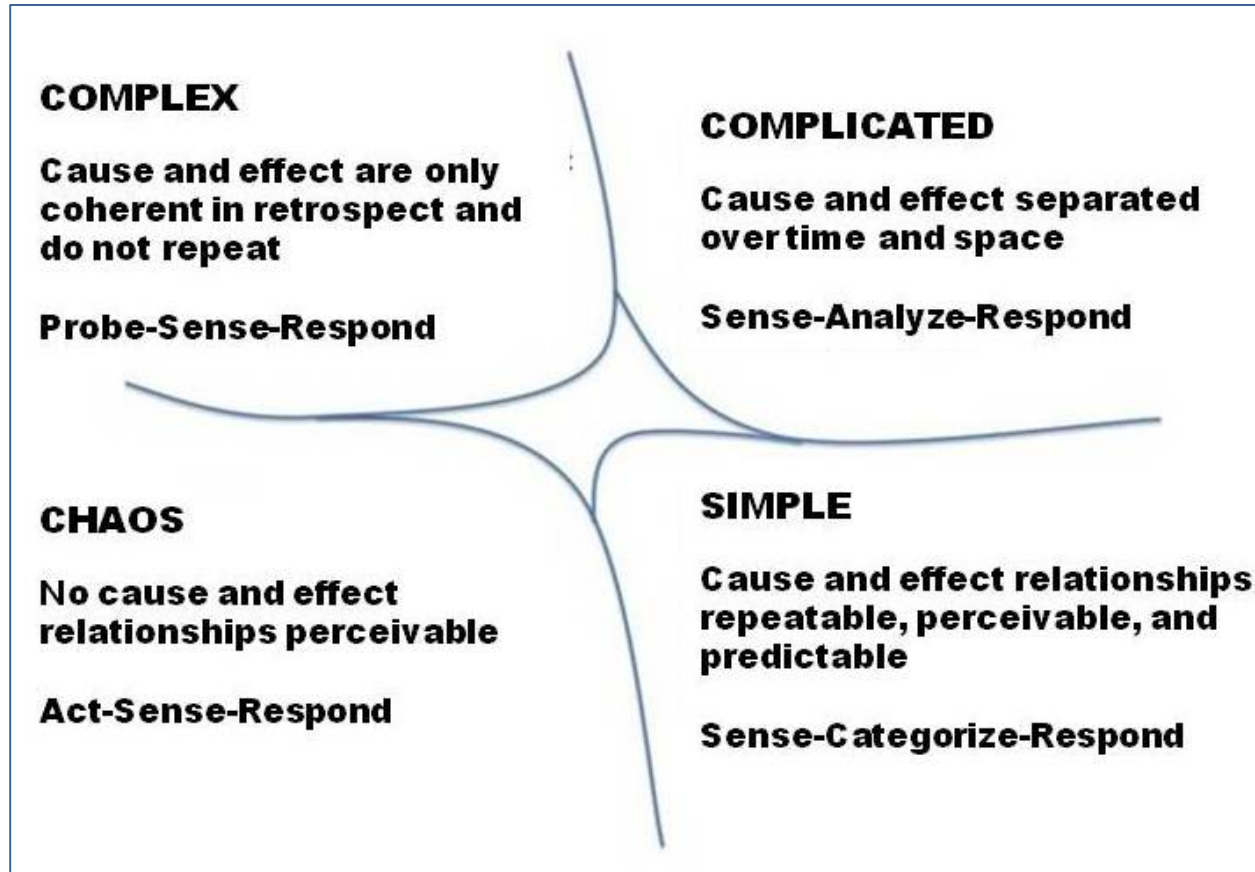# How does evidence look and function in an open and recursive system?

COMPLEX

Cause and effect are only coherent in retrospect and do not repeat

Probe-Sense-Respond

COMPLICATED

Cause and effect separated over time and space

Sense-Analyze-Respond

CHAOS

No cause and effect relationships perceivable

Act-Sense-Respond

SIMPLE

Cause and effect relationships repeatable, perceivable, and predictable

Sense-Categorize-Respond

Image credit: http://www.hlswatch.com/wp-content/uploads/2010/07/Cynefin-Adapted.jpg

Data and evidence in an open and recursive system

Education is an open and recursive system where student retention is the result of

- multiple, often mutually constitutive and inter-dependent factors
- in the nexus between **student contexts** (their dispositions, life-worlds, aspirations, locus of control),
- **disciplinary contexts** (epistemological access, teacher: student ratios, operational efficiencies),
- **institutional contexts** (budget and resources, operational efficiencies, political will, locus of control), and
- **macro-societal factors** (socio-economic, political, technological, environmental, and legal)

(Adapted from Subotzky and Prinsloo, 2011)

What may be effective may not be appropriate…

Image credit: http://www.whudat.de/images/out-of-place-robert-rickhoff_7.jpg

Data collection, analysis and use are *political acts* and serve declared and hidden assumptions about the purpose of higher education and the masters it serves (Apple, 2004, 2007; Grimmelman, 2013; Johnson, 2015; Watters, 2015)
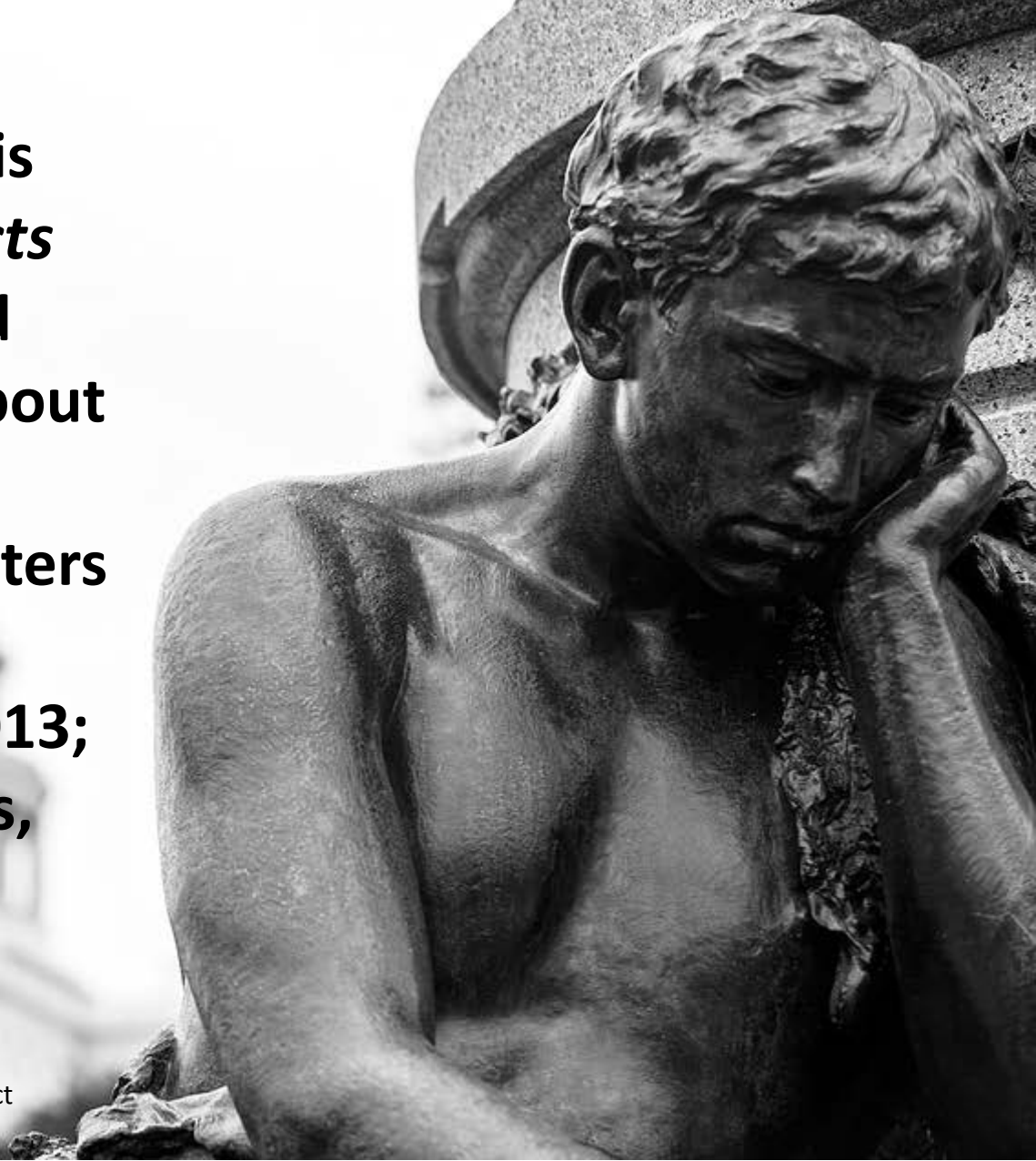
Image credit: https://pixabay.com/p-534751/?no_redirect

We think of data as...
- Objective
- Pre-analytic
- Neutral

But...

"Data do not exist independently of the ideas, instruments, practices and contexts and knowledges used to generate, process and analyse them" (Kitchen, 2014, p. 2).

There is no such thing as 'just' data...

Databases "are expressions of power/knowledge and they enact and reproduce such relations"

(Kitchen, 2014, p. 22)

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The Paperholder – "le serre papiers" (1749)
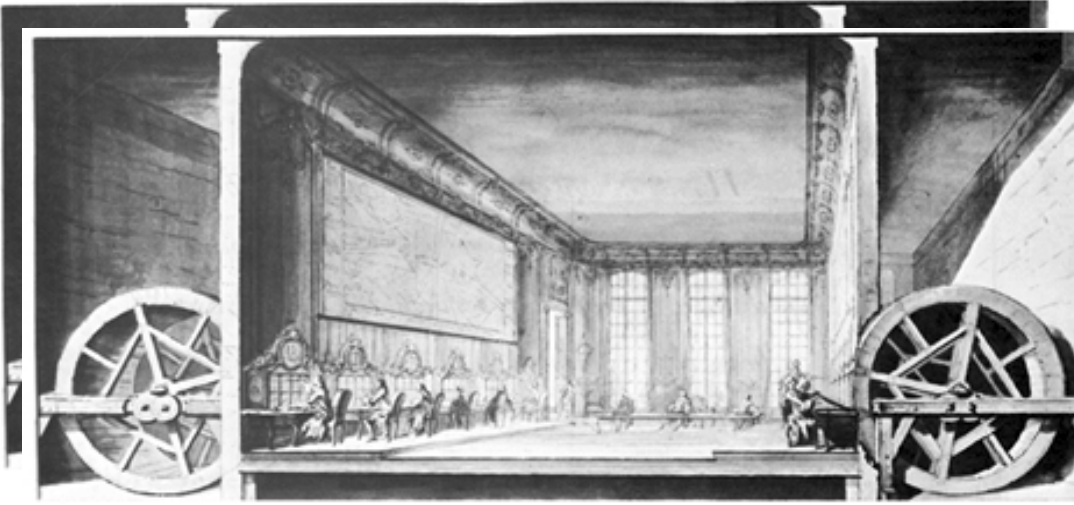
The technology will allow the sovereign "…to know every inch of the city as well as his own house, he will know more about ordinary citizens than their own neighbours and the people who see them everyday (…) in their mass, copies of these certificates will provide him with an absolute faithful image of the city" (Chamayou, n.d)

- **1749** Jacques Francois Gaullauté proposed "le serre-papiers" – The Paperholder – to King Louis the 15th

- One of the first attempts to articulate a new technology of power – one based on traces and archives (Chamayou, nd)

- The stored documents comprised individual reports on each and every citizen of Paris

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The dark side of numbers...

While data collected served and serve a range of social, political and humanitarian functions, often to the benefit of all, there is ample evidence how data sets have been used to identify vulnerable subpopulations (Seltzer & Anderson, 2001)
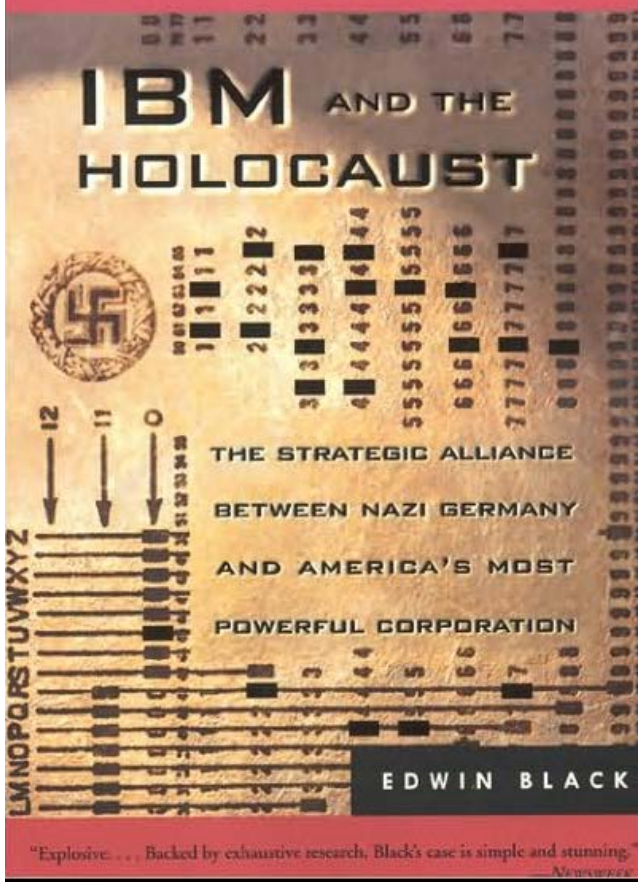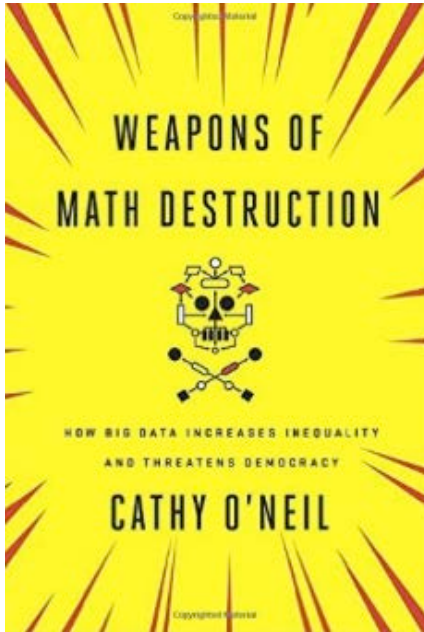
Data doing political things

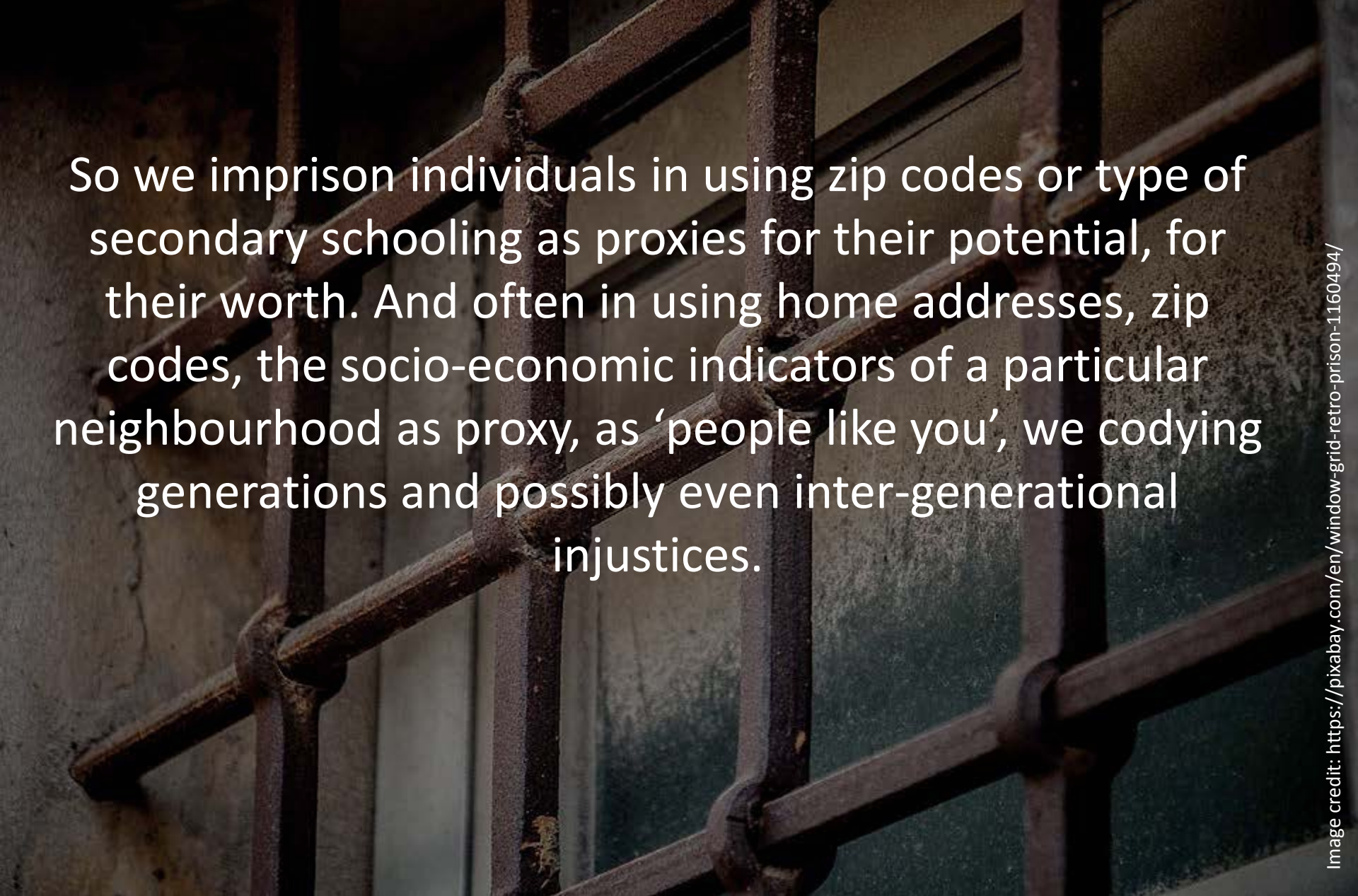Image credit: https://pixabay.com/en/auschwitz-history-concentration-camp-1066516/

"Like gods, these mathematical models [are] opaque, their workings invisible to all but the highest priests in their domain: mathematicians and computer scientists. Their verdicts, even when wrong or harmful, [are] beyond dispute or appeal" (O'Neil, 2016, p. 3).
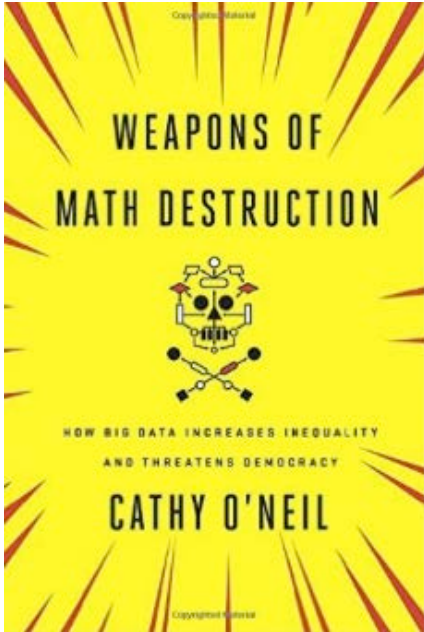
The models and algorithms used to model people's risk profiles are unapproachable, you cannot appeal to them. "They do not listen. Nor do they bend. They're deaf not only to charm, threats, and cajoling, but also to logic – even when there is good reason to question the data that feeds their conclusions" (O'Neil, 2016, p. 10).

So we imprison individuals in using zip codes or type of secondary schooling as proxies for their potential, for their worth. And often in using home addresses, zip codes, the socio-economic indicators of a particular neighbourhood as proxy, as 'people like you', we codying generations and possibly even inter-generational injustices.

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Collateral damage

We never question the negative unitended consequences of our models and algorithms and reframe these consequences as "collateral damage" (O'Neil, 2016, p. 13) in the name of return-on-investments.

The issue is not whether some people benefit from the models, but the fact that so many suffer.

# A social cartography of higher education and the implications for student data:

de Oliveira Andreotti, V., Stein, S., Pashby, K., & Nicolson, M. (2016). Social cartographies as performative devices in research on higher education. *Higher Education Research & Development*, 1-16.

Neoliberal

Liberal

Critical
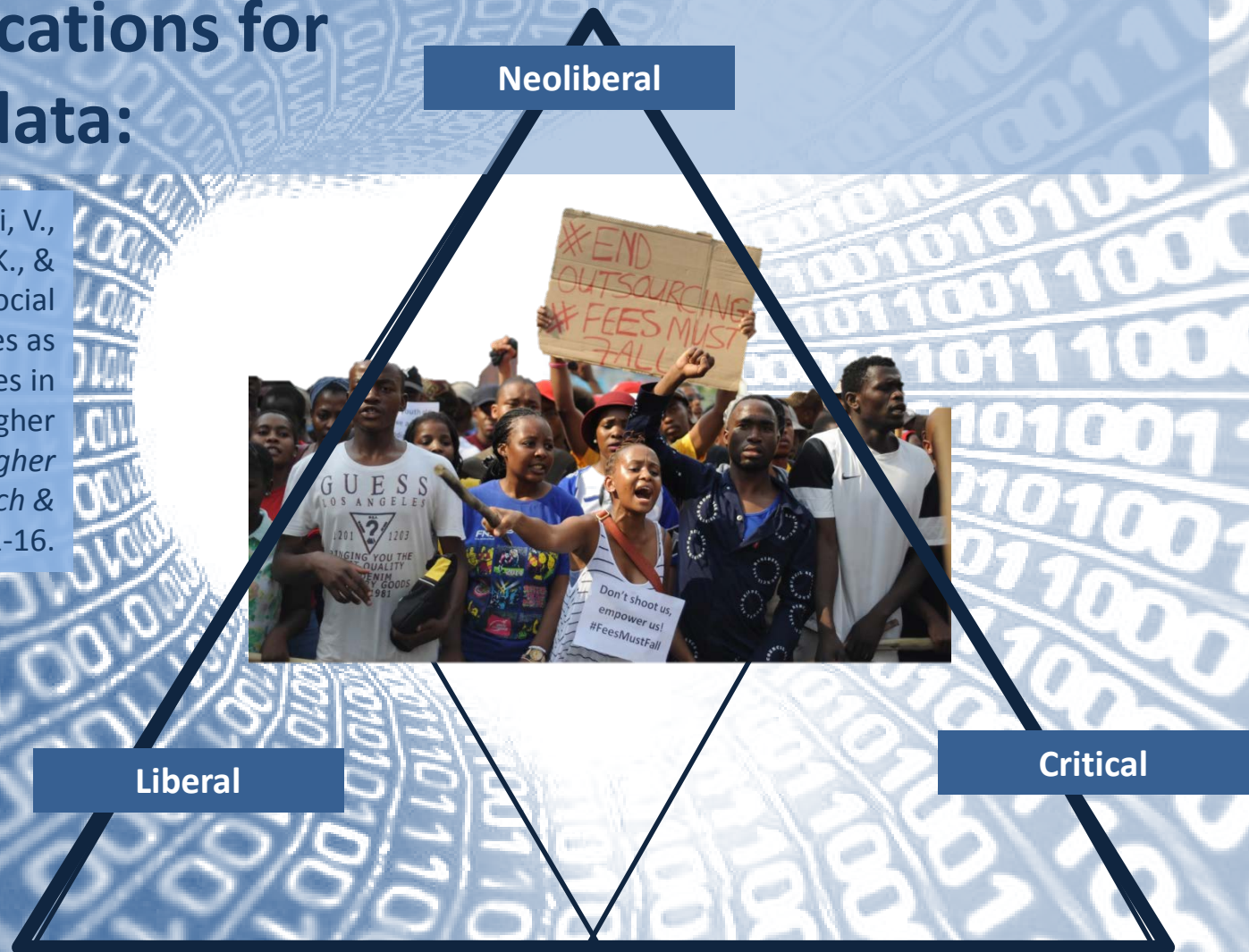
- Serving the **public good** – defined by those in power
- Increasing **equality** and access to **individual** freedoms
- A strong **state role** in welfare and re-distribution
- Higher education as **key** in achieving national development goals
- Increasing **access** and the **massification** of higher education
- Economic **growth** as driver
- **Everyone** can be a success – from poverty to riches and the individual as an autonomous, rational agent

Liberal
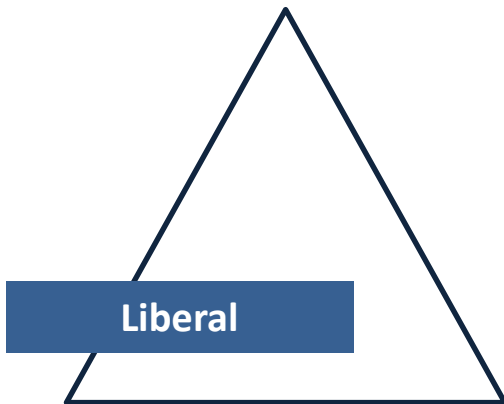
- **Let-us-forget-the-past-and-go-on-with-our-lives-the-future-is-bright-just-take-off-your-glasses-and-pull-up-your-socks**

Neoliberal
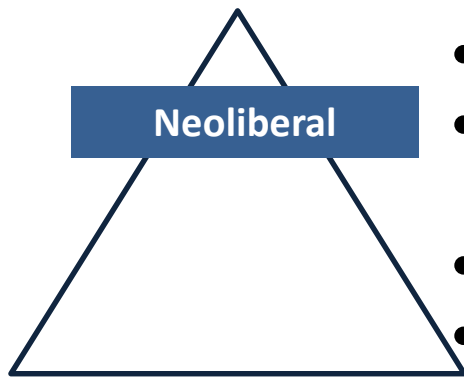
- **Austerity** measures and **defunding** of higher education
- **Commodification** of the curriulum and the **rationalisation** of the PQM
- Students and industry as **customers**
- Increasing **administrative**, well-paid staff and the **outsourcing** of teaching to contract and adjunct faculty

- Institutional **prestige** and **global university rankings**
- "In this orientation, the role of the nation-state is to enable and to protect, with military force if necessary, the rights of capital and the smooth functioning and expansion of markets" (p. 91).
- Faculty have become "individualist strivers competing for grants, publications, promotions, salary increases, better jobs elsewhere according to a set of rules as market driven as anything dreamed up by administrators" (Jemielniak & Greenwood, 2015, p. 73).

"The research universities will have **three classes of professors**, like the airlines. A small first-class cabin of researchers, a business-class section of academics who will teach and do some research, and a large economy cabin of poorly paid teachers" (Altbach & Finkelstein, 2014, par. 16; emphasis added)
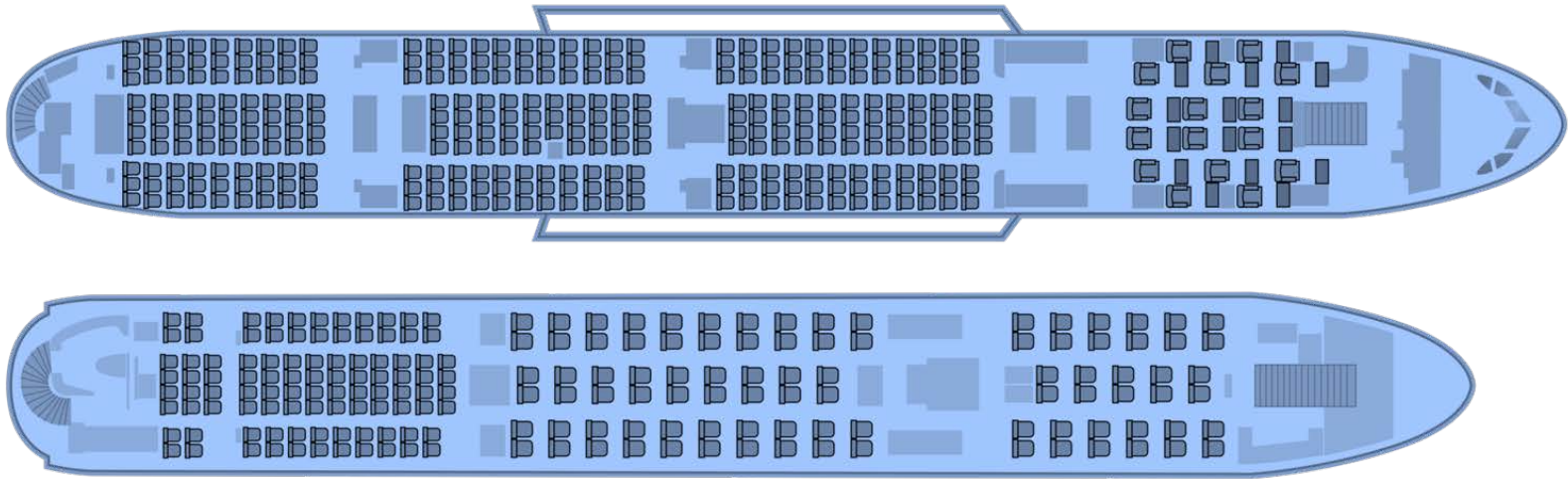

Image credit: https://en.wikipedia.org/wiki/Aircraft_seat_map

- It explores and exposes the inherent **epistemological power** and patterns of **violence** in curricula
- It highlights **capitalist exploitation**, processes of **racialization** and colonialism and other forms of **oppression** at work in seemingly **benevolent** and **normalised** patterns of thinking and behavior (p. 91).
- The inclusion of more **diverse voices** but contrary to the production of a singular and homogenous narrative of a nation-state, it "aims to transform, pluralise, or replace these narratives through historical and systemic analyses of patterns of oppression and unequal distributions of power, labour and resources" (p. 91).

- This orientation contests and confronts the notion of the university as "an **elitist** space, and ivory tower" (p. 91)

Critical
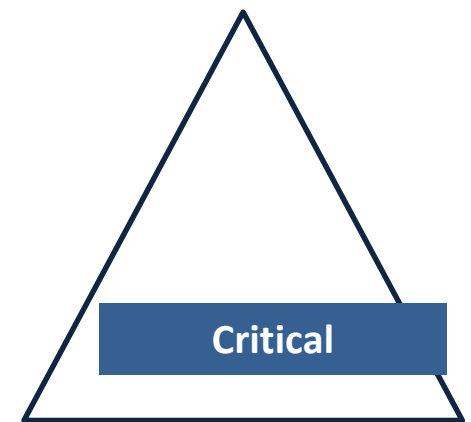
Visible

Direct violence

Curricula

Cost

Access

Invisible

Cultural violence

Structural violence

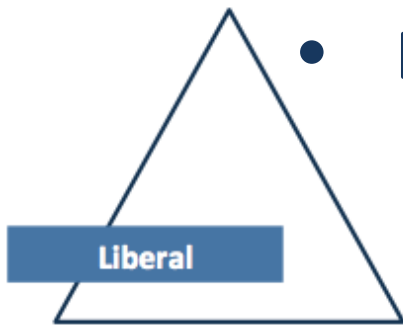Iceberg Image credit: https://www.flickr.com/photos/pere/523019984

What data do we need, collect, analyse and use when we adopt a liberal discursive orientation to higher education?

- Identify vulnerabilities – whether socio-economic, emotional, academic
- Race, gender, schooling – and the danger of 'people like you'
- What they have or don't have… (Deficiency model)
- Streaming students according to criteria - Access , extended and remedial programs
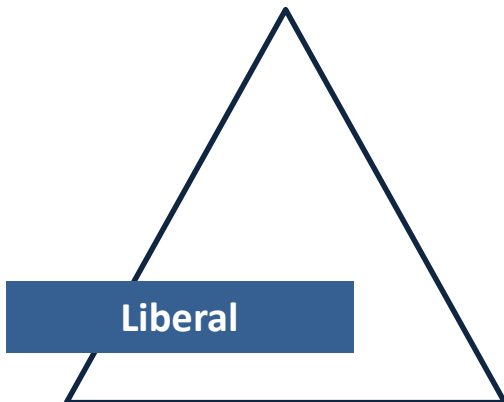
Liberal

Ethical issues and challenges in a liberal orientation

- Disregard for entrenched, inter-generational structural inequalities
- Disregard locus of control
- Expect too much of education
- Ignores epistemic violence
- Grit and growth are not the answer
- Pathogenic vulnerabilities
- Emphasis on providing support not removing barriers

Liberal
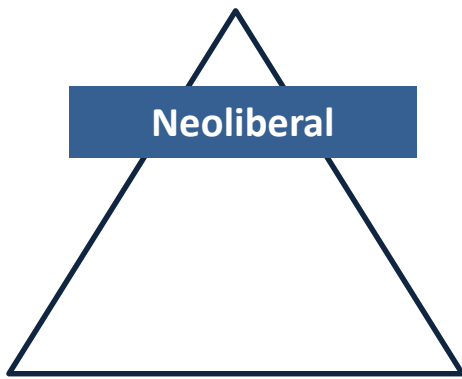
Neoliberal

What data do we need, collect, analyse and use when we adopt a neoliberal discursive orientation to higher education?

- Pre-occupation with causation – because it will help us to effect triage and ensure ROI
- Focus on what can be measured, and even we want to measure something that resists measuring, find proxies and measure
- Data collection as surveillance and not research – students don't know
- Ethical review takes too long
- Don't have time for theory or pilot studies – need impact and move on
- Identify the deviants, the trouble-makers those who disrupt

Ethical issues and challenges in a neoliberal orientation

Neoliberal

- What about that which can not be measured, quantified?
- The need not for deeper and smaller data, not bigger
- Our assumption that data are knowledge, that n=all and that we don't need to know the why as long as we know the what
- If students don't know, it is not research, but spying and surveillance
- The danger in learning analytics to blame it on students – just work harder, grit – and not consider institutional inefficiencies
- Levels of abstraction save us the emotions

What data do we need, collect, analyse and use when we adopt a critical discursive orientation to higher education?
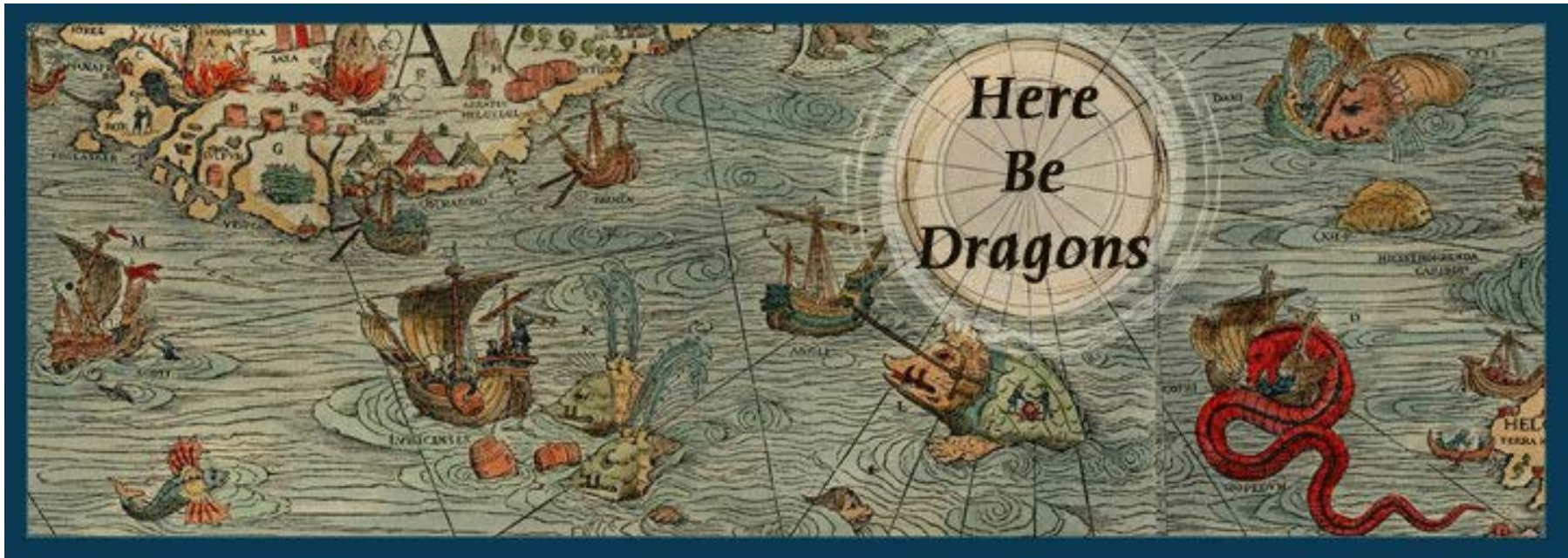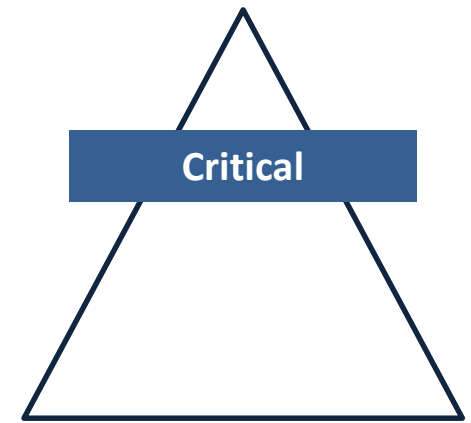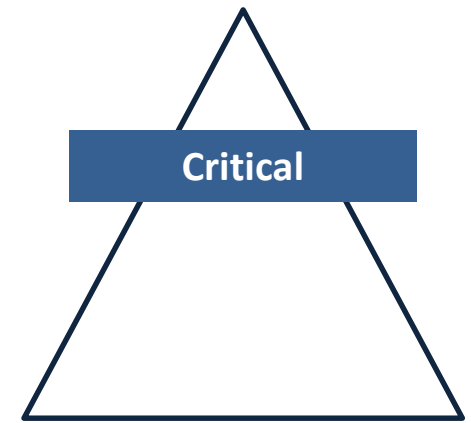
Critical

Image credit: https://bookwormsandcoffeemonsters.files.wordpress.com/2014/12/here-be-dragons.jpg

Towards a critical discursive orientation to higher education and the collection, analysis and use of student data?

Critical

- Recognise the legacy and continued impact of structural inequalities and discrmination
- Recognise that the notion of "people like you" is increasingly problematic
- Recognise the inherent violences in our curriula, our access criteria, our assessment methodologies, our adoption of technologies
- Looking for deep, small and qualitative data
- Open up collaborative spaces for sense-making of questions, data, analyses

(In)conclusions

- **Rule 1:** Do no harm.
- **Rule 2:** Read rule 1
- Students have a right to know who designs our algorithms, for what purposes, using what data, how they are affected, and make an informed decision to opt-in
- Provide students access to information and data held about them, to verify and/or question the conclusions drawn, and where necessary, provide context
- Provide access to a neutral ombudsperson
- Ethical oversight? Accountability?

(See Prinsloo & Slade, 2015; Slade & Prinsloo, 2013; Willis, Slade & Prinsloo 2016)

#ImNotYourData

I am not your data, nor am I your vote bank,
I am not your project, or any exotic museum object,
I am not the soul waiting to be harvested,
Nor am I the lab where your theories are tested,
I am not your cannon fodder, or the invisible worker,
or your entertainment at India habitat centre,
I am not your field, your crowd, your history,
your help, your guilt, medallions of your victory,
I refuse, reject, resist your labels,
your judgments, documents, definitions,
your models, leaders and patrons,
because they deny me my existence, my vision, my space,
your words, maps, figures, indicators,
they all create illusions and put you on pedestal,
from where you look down upon me,
So I draw my own picture, and invent my own grammar,
I make my own tools to fight my own battle,
For me, my people, my world, and my Adivasi self! ~Abhay Xaxa

Source: http://www.adivasiresurgence.com/i-am-not-your-data/

Thank you. Ke a leboga. Baie dankie

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