

A brave new world: student surveillance in higher education

Paul Prinsloo

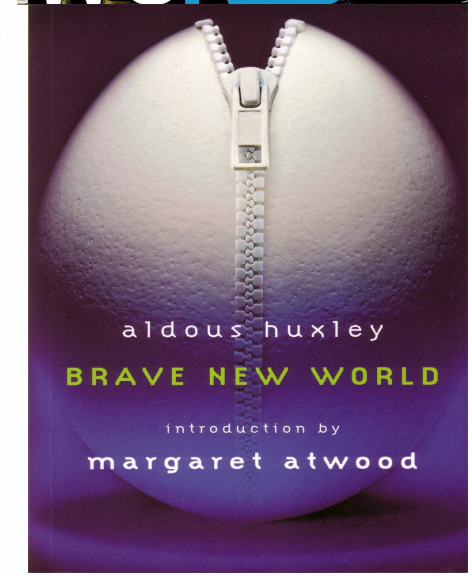
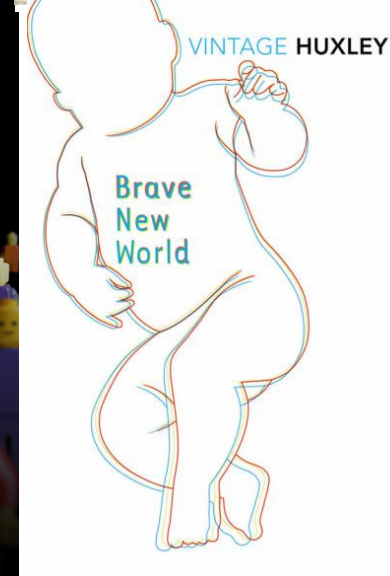
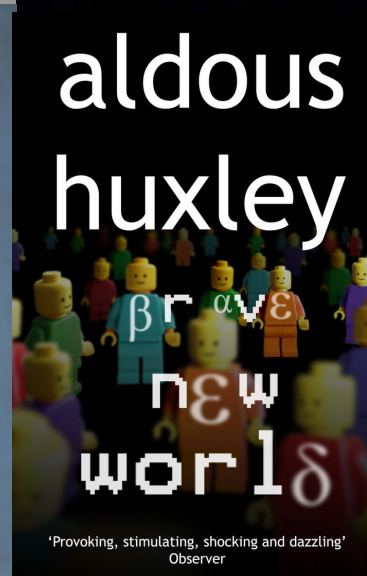
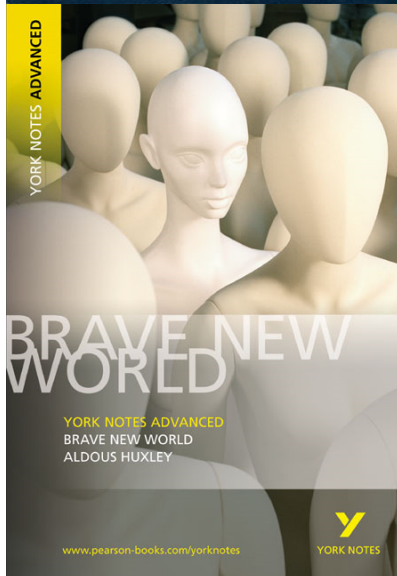
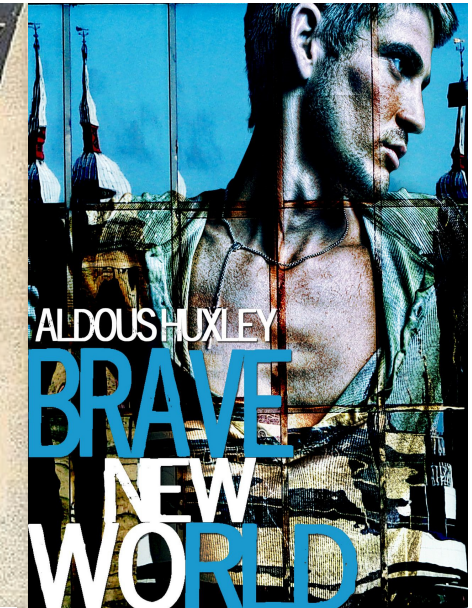
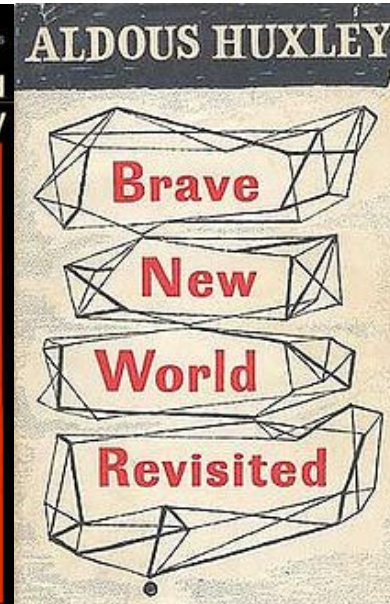
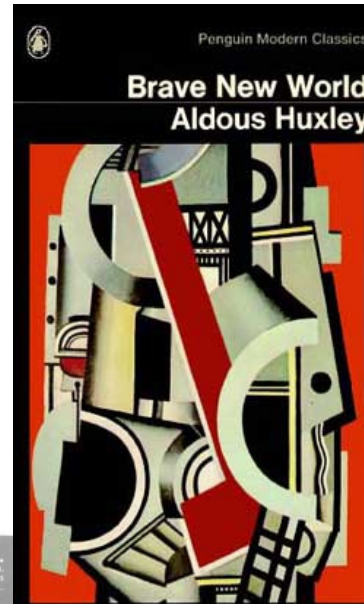
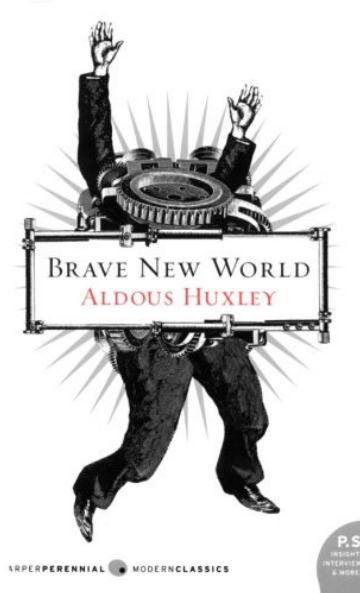
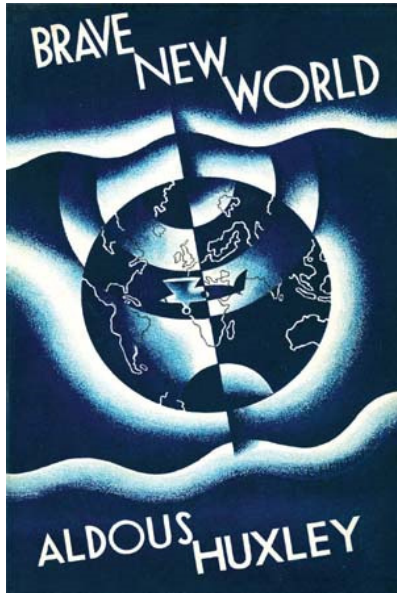
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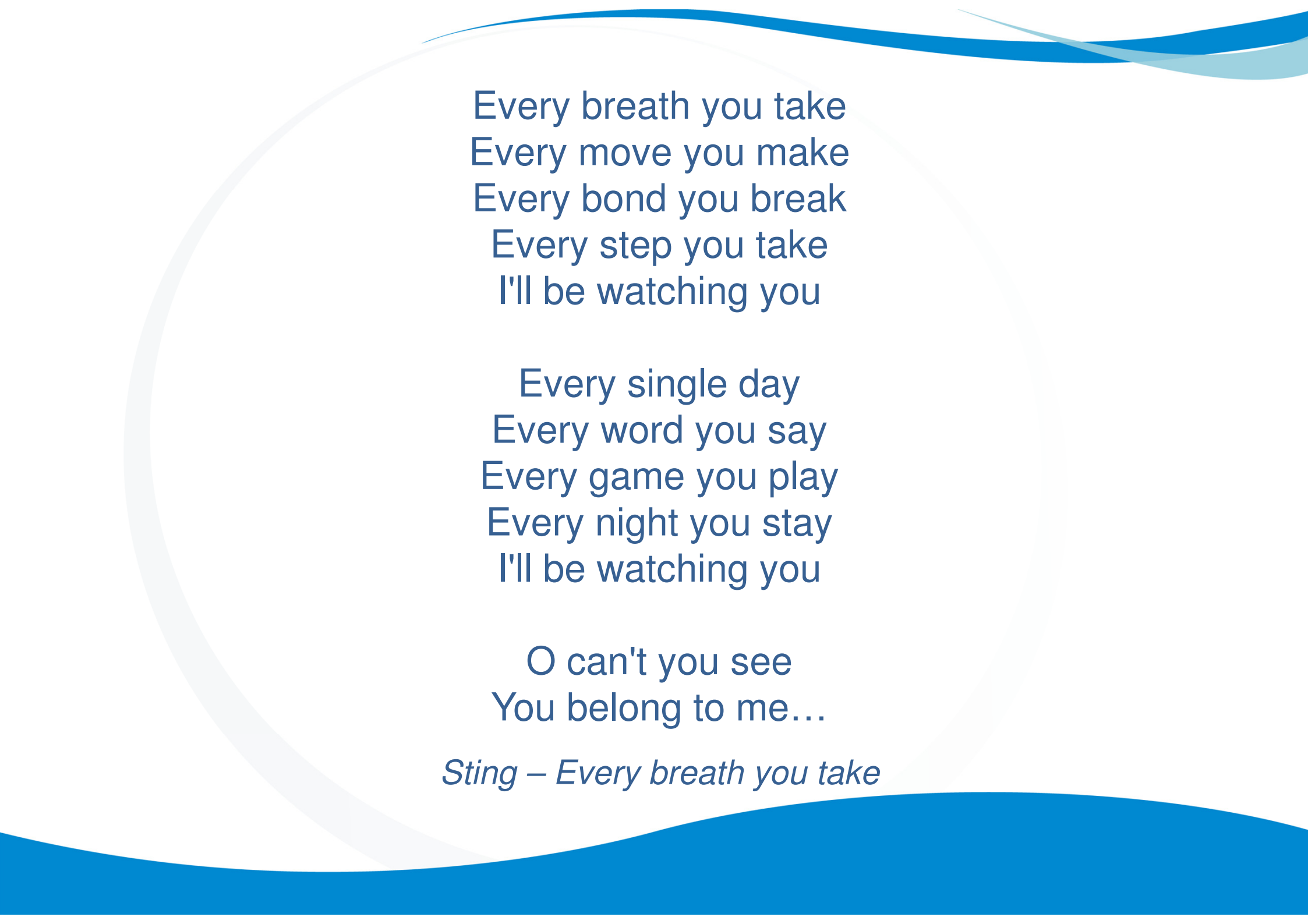


Learn without limits.

UNISA







Every breath you take
Every move you make
Every bond you break
Every step you take
I'll be watching you

Every single day
Every word you say
Every game you play
Every night you stay
I'll be watching you

O can't you see
You belong to me...

Sting – Every breath you take

Last thing I remember, I was
Running for the door
I had to find the passage back
To the place I was before
"Relax, " said the night man,
"We are programmed to receive.
You can check-out any time you like,
But you can never leave! "

Eagles – Hotel California

Overview of the presentation

- Acknowledgement
- Claims and disclaimers
- Welcome to a brave new world – learning analytics in the context of student surveillance
- Learning analytics in the context of Big Data
- Towards a typology of student surveillance (Knox, 2010)
- (In)conclusions

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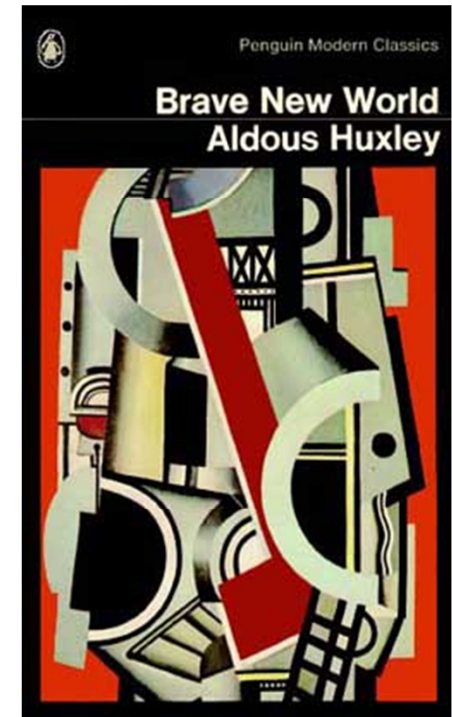
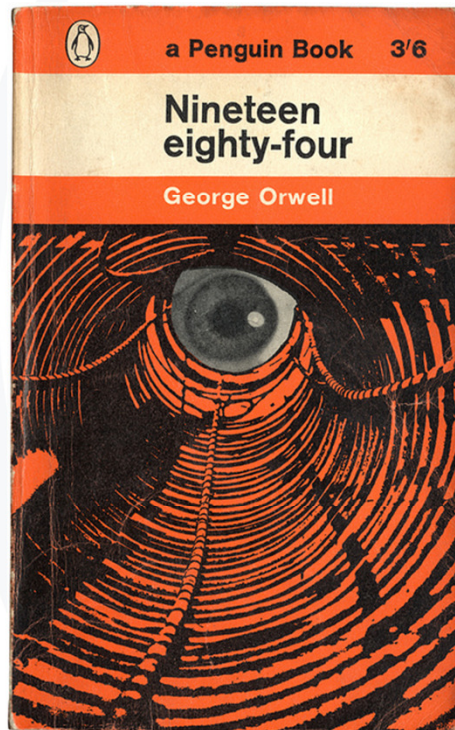
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There are claims that Big Data...

- “change everything” (Wagner & Ice, 2012)
- student data are the “new black” (Booth, 2011) and that student data are the “new oil” (Watters, 2013)

There are also claims that Big Data...



How do we talk about learning analytics in the context of...

- ...“societies of control” (Deleuze, 1992)
- “Privacy is dead. Get over it” (Rambam, 2008)
- our “quantification fetish”, the “algorithmic turn” and “techno-solutionism” (Morozov, 2013a, b)
- the hegemony of “techno-romanticism” in education (Selwyn, 2014)?

Disclaimer 1:

Big Data and learning analytics are

...not an unqualified good (Boyd and Crawford, 2011) and “raw data is an oxymoron” (Gitelman, 2013).

Technology and specifically the use of data has been and will always be ideological (Henman, 2004; Selwyn, 2014) and embedded in relations of power (Apple, 2004; Bauman, 2012).

Disclaimer 2: If we accept that

**“... ‘educational technology’ needs to be understood as a knot of social, political, economic and cultural agendas that are riddled with complications, contradictions and conflicts”
(Selwyn, 2014, p. 6)**

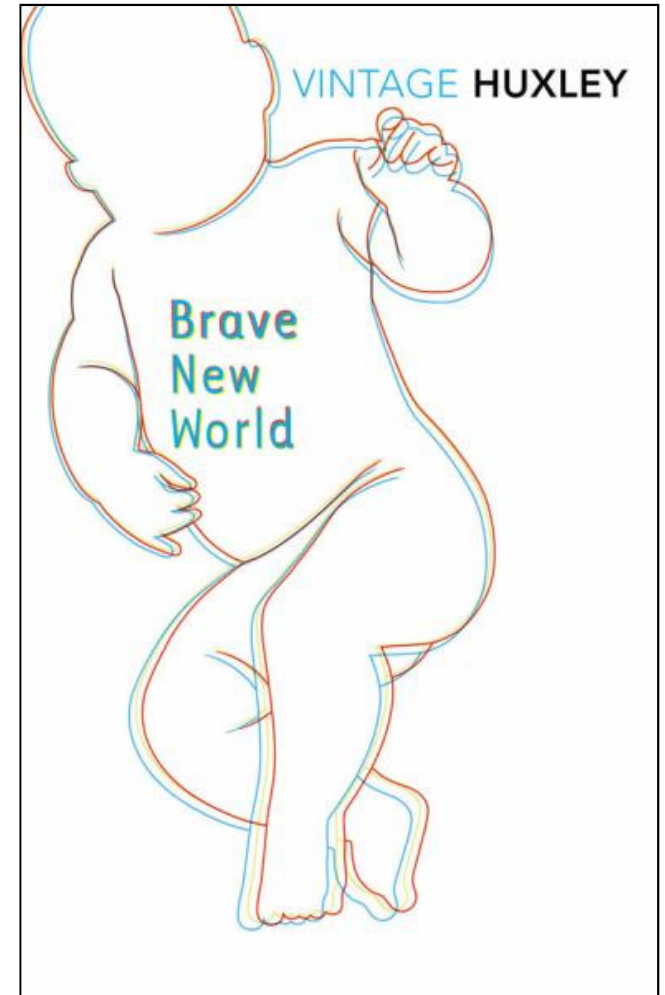
...what are the implications for learning analytics?

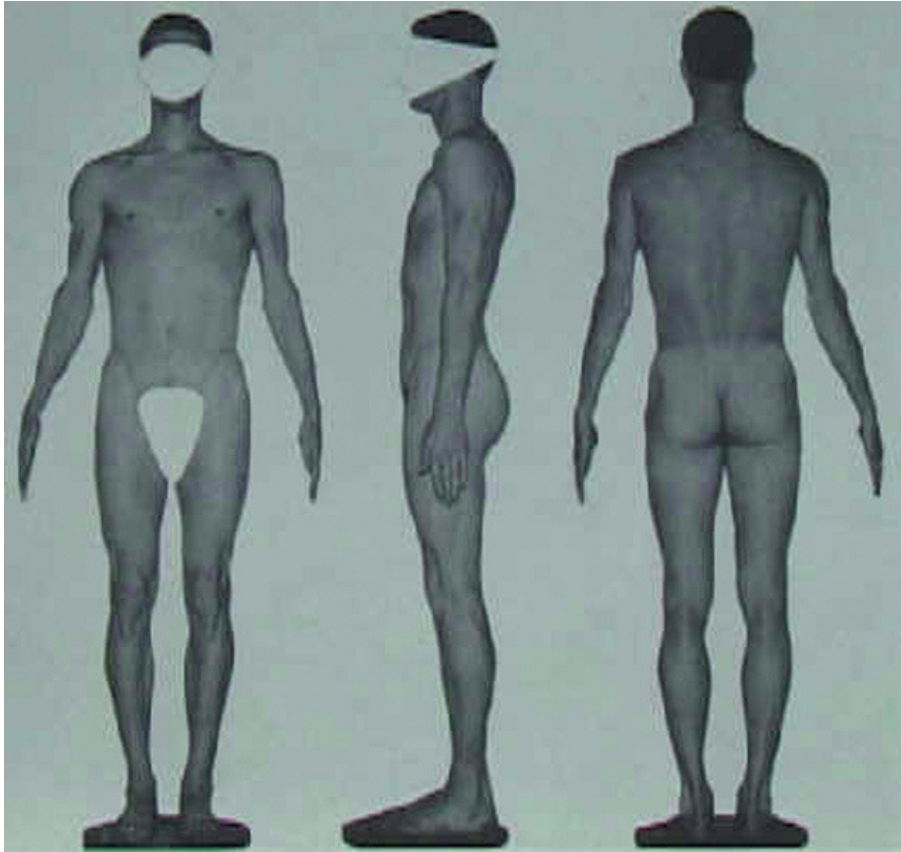
Disclaimer 3: The (current?) limitations of our surveillance

- Students' *digital* lives are but a minute part of a bigger whole – but our claims pretend as if this minute part represents the whole
- We create smoke and claim we see a fire
- We seldom wonder what if our algorithms are wrong, and what the long-term implications for students are

Welcome to “**A brave new world**” (Huxley, 1932) where learning analytics enables higher education to become a “hatchery”, and a “social predestination room.”

A world of Alphas, Betas, Gammas, Deltas and even Epsilons ...





<http://iconicphotos.wordpress.com/2010/07/29/the-great-ivy-league-photo-scandal/>

The great Ivy League photo scandal

“... a person's body, measured and analysed, could tell much about intelligence, moral worth, and probably future achievement...”

The data accumulated... will eventually lead on to proposals to ‘control and limit the production of inferior and useless organisms’”
(Rosenbaum, 1995).

Big(ger) data creates the potential for a brave new world



http://commons.wikimedia.org/wiki/File:DARPA_Big_Data.jpg

What is Big data?

- Huge in *volume*
- High in *velocity*, being created in or near real time
- Diverse in *variety*
- *Exhaustive* in scope
- Fine-grained in *resolution* and uniquely indexical in identification
- *Relational* in nature
- *Flexible*, holding traits of extensionality (can add new fields easily) and scalability (can expand in size rapidly)

(Kitchen, 2013, p. 262)

Three sources of data

Directed

A digital form of surveillance wherein the “gaze of the technology is focused on a person or place *by a human operator*”

Automated

Generated as “an inherent, automatic function of the device or system and include traces ...”

Volunteered

“*gifted* by users and include interactions across social media and the crowdsourcing of data wherein users generate data” (emphasis added)

(Kitchen, 2013, pp. 262—263)



Quantified Self

self knowledge through numbers




DATARELLA

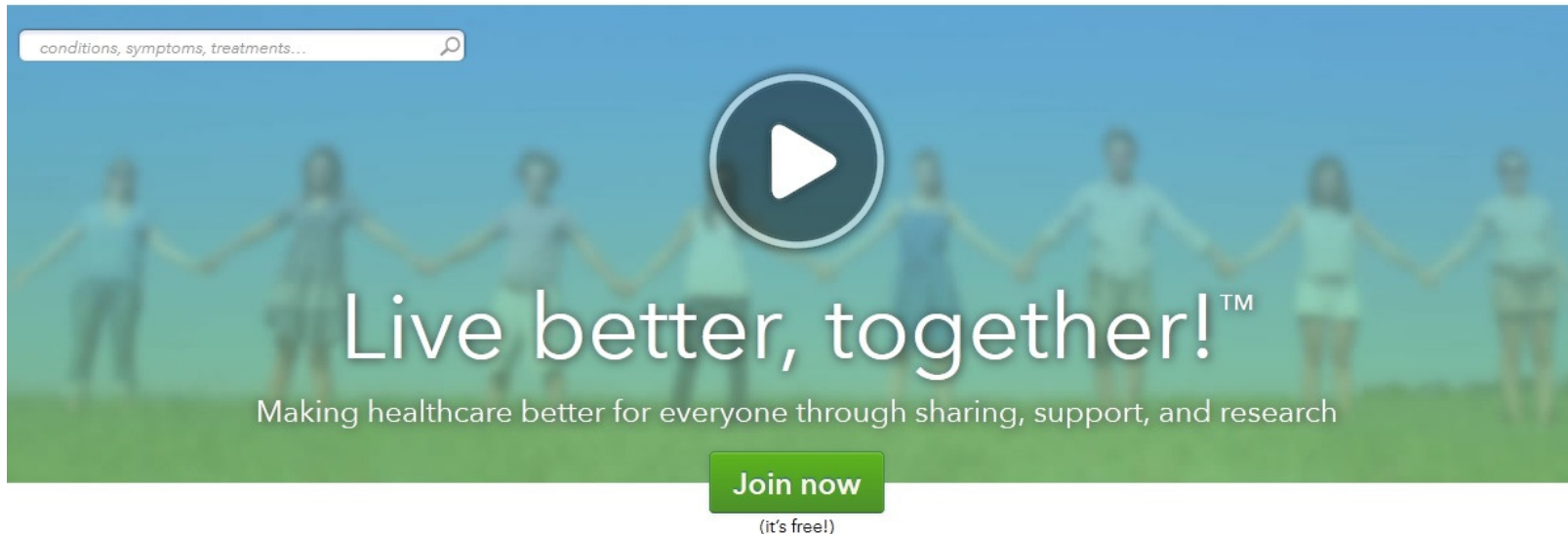
- Wearable app – always at your side
- Learn more about yourself
- Highly usable surveys
- Effortless usage
- Real-time feedback and charts
- Valuable hints and recommendations
- Intelligent, event-based notifications
- Benchmarking with other members
- Personal coach to improve your life

Some examples ...

patientslikeme®

<input type="text" value="Username or Email"/>	<input type="text" value="Password"/>	<input type="button" value="Sign in"/>
<input type="checkbox"/> Remember me	I forgot	

conditions, symptoms, treatments...



Live better, together!™

Making healthcare better for everyone through sharing, support, and research

Join now
(it's free!)



Learn from others

Compare treatments, symptoms and experiences with people like you and take control of your health



Connect with people like you

Share your experience, give and get support to improve your life and the lives of others



Track your health

Chart your health over time and contribute to research that can advance medicine for all

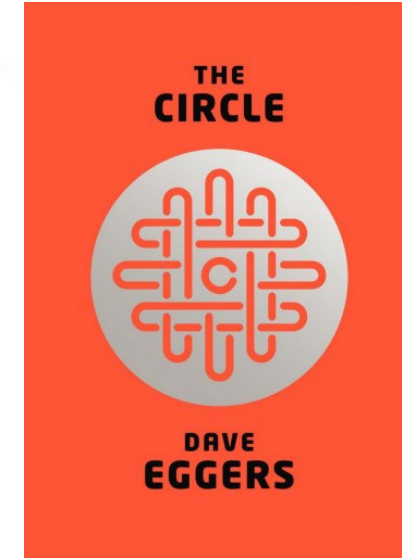


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<http://onedio.com>

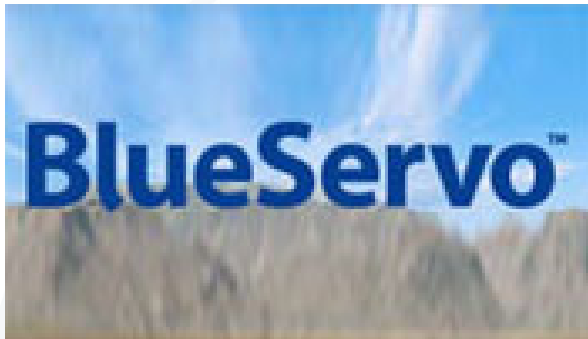
Jennifer Ringely – 1996-2003 – webcam

Source: <http://onedio.com/haber/tum-zamanlarin-en-etkili-ve-onemli-internet-videolari-36465>



“Secrets are lies”
“Sharing is caring”
“Privacy is theft”

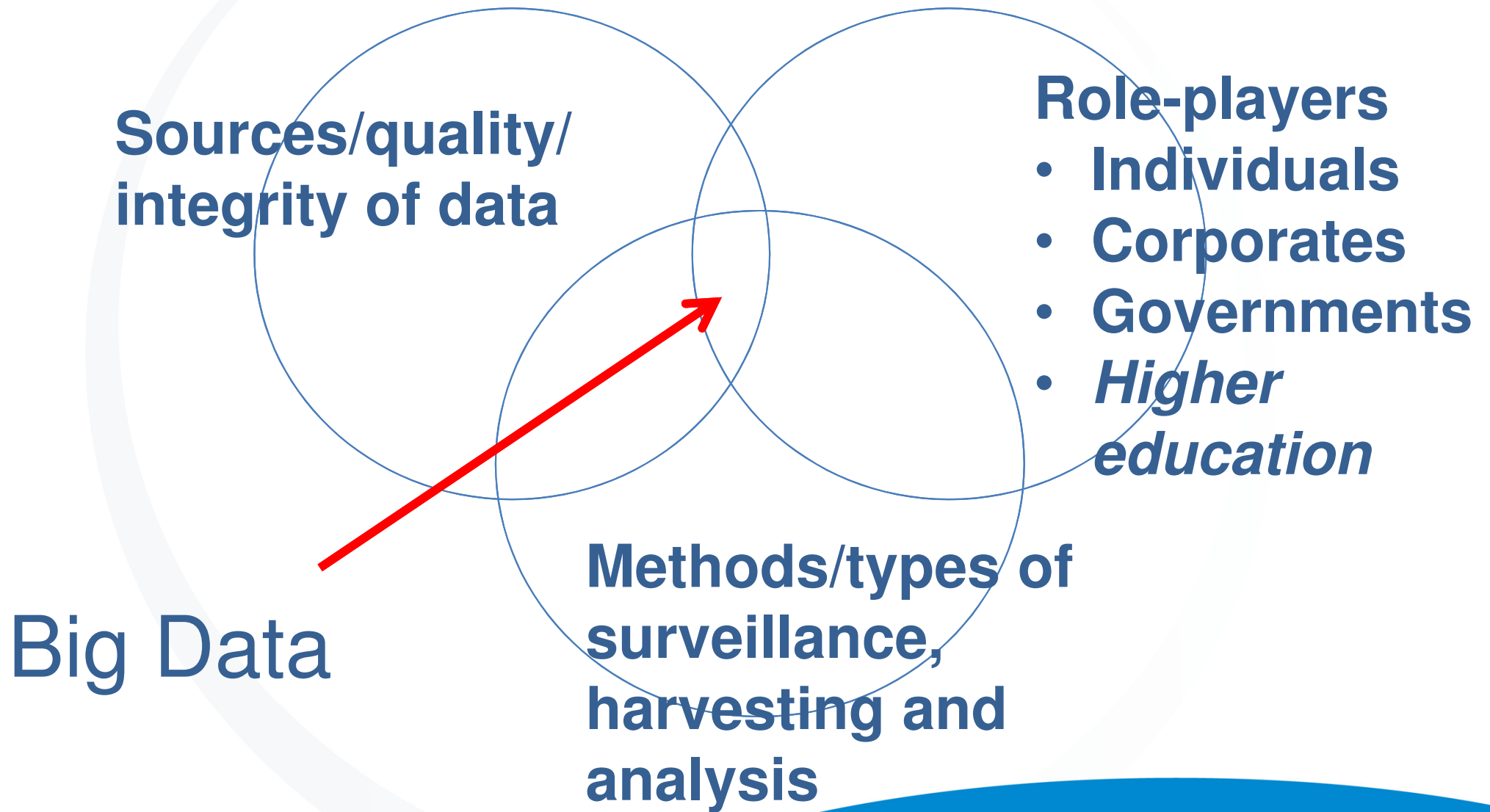
(Eggers, 2013, p. 303)



<http://www.sanjacwatch.org/links.html>



The Trinity of Big Data



Towards a typology of surveillance in higher education (Knox, 2010)

- *Panoptic* – Automated/internalised visibility
- *Rhizomatic* – Multidirectional/sousveillance/
Surveillant assemblages – merging of different
spheres/multiplying/amplifying
- *Predictive*

Predictive surveillance

- The (digital) past + (digital) real-time => future behavior ... “*The past becomes a simulated prologue*” (Knows, 2010, p. 6; emphasis added)
- Structuring/constraining choices/possibilities – shaping material conditions (Henman, 2004; Napoli, 2013)
- Issues of identity/race/gender/class
- The end of forgetting (Mayer-Schönberger, 2009; Rosen, 2010)

Preliminary seven dimensions of surveillance (Knox 2010)

1. Automation
2. Visibility
3. Directionality
4. Assemblage
5. Temporality
6. Sorting
7. Structuring

1. Automation

Key questions	Dimensional intensity	
What is the timing of the collection?	Intermittently/infrequently	Continuous
Locus of control?	Human	Machine
Can it be turned on and off (and by whom?)	All the monitoring can be turned on/off	None of the monitoring can be turned off


2. Visibility

Key questions	Dimensional intensity —————→	
Is the surveillance apparent and transparent?	All parts (collection, storage, processing and viewing) are visible	None of the monitoring is visible
Ratio of self-to-surveillant knowledge?	Subject knows everything the surveillant knows	Subject does not know anything that the surveillant knows

2. Visibility (cont)

Key questions	Dimensional intensity —————→	
Are the individuals or institutions collecting the data visible to the subject?	All collecting entities are visible	None is visible
Does the action make some individuals or groups more visible?	Individual subjects are aggregated	Individual subjects are isolated
Are subjects identifiable as individuals?	Collects info unique to a single individual - ID	Collects only info common to multiple individuals/groups

3. Directionality

Key questions	Dimensional intensity	
		
What is the relative power of surveillant to subject?	Subjects hold all the power	Surveillant holds all the power
Who has access to monitoring/recording/broadcasting functions?	Subjects	Surveillant


4. Assemblage

Key questions	Dimensional intensity	
	—————→	
Medium of surveillance	Single medium (e.g. text)	Multimedia
Are the data stored?	No	Yes
Who stores the data?	Subject or collector	Third party

4. Assemblage (cont.)

Key questions	Dimensional intensity	
Can the data be copied and transmitted? (And by whom?)	None	All
Where does the monitoring occur?	One specific place	Across multiple locations (e.g. GPS systems)


5. Temporality

Key questions	Dimensional intensity	
		
When does the monitoring occur?	Confined to the present	Combines the present with the past
How long is the monitoring frame?	One, isolated, relatively short frame (e.g. test)	Long periods, or indefinitely
Does the system attempt to predict future behavior/outcomes	No – only assessment of the present	Present + past used to predict the future
When are the data available?	All of the data available only after event is completed	Available in real-time and experienced as instantaneous

6. Sorting

Key questions	Dimensional intensity —————→	
Are subjects' data compared with other data – other individuals/ groups/ abstract configurations/ state mandates?	None	Other data are used as basis for comparison

7. Structuring

Key questions	Dimensional intensity	
		
Are data used to alter the environment (i.e. treatment, experience, etc.)?	Not used	Used to alter the environment of all subjects
Are data used to target the subject for different treatment that they would otherwise receive?	No data are used as basis for differing treatment	Based on data, treatment is prescribed

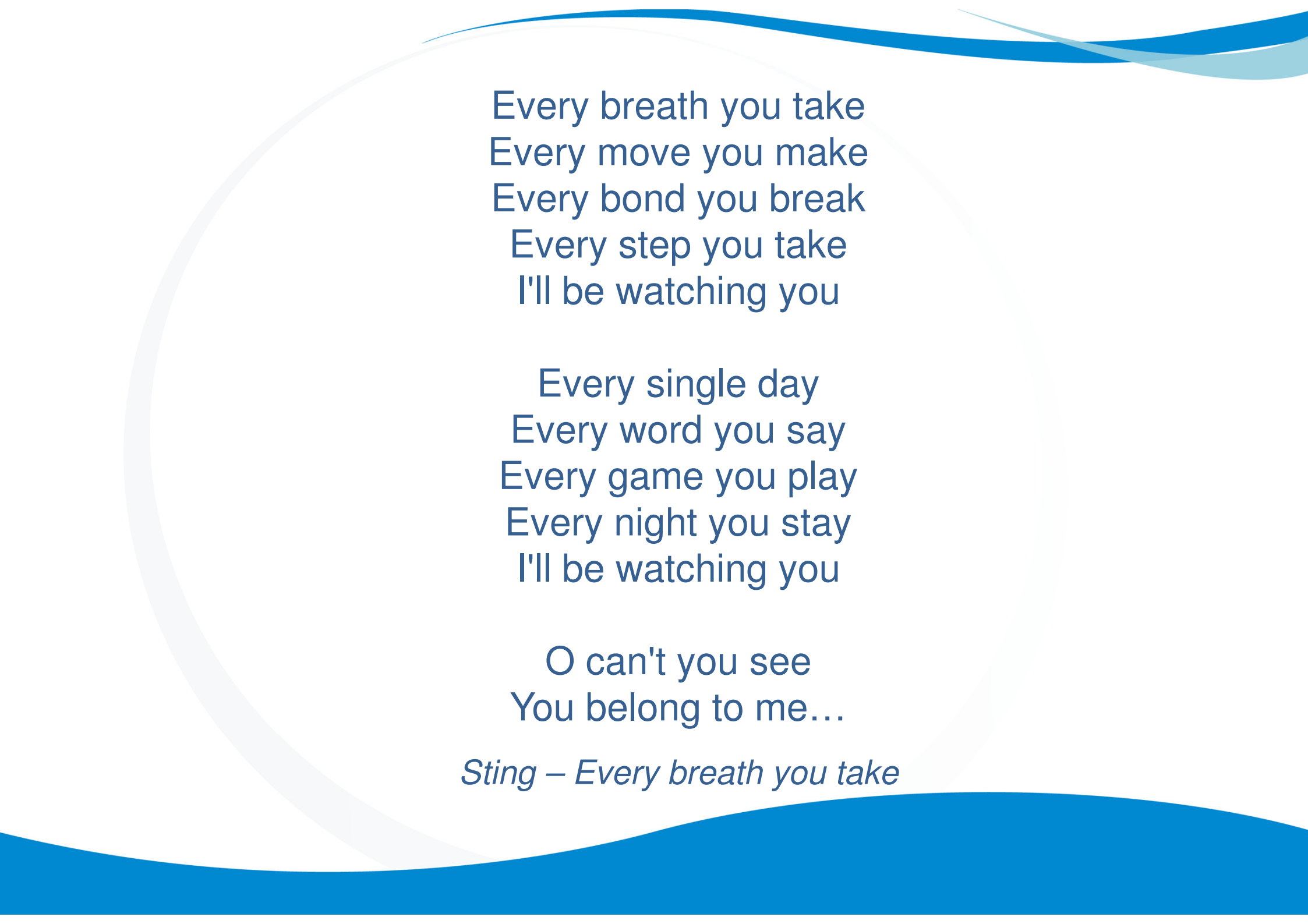
7. Structuring (cont.)

Key questions	Dimensional intensity —————→	
Are the data used to exclude the subject from treatment they would otherwise receive?	No data are used to exclude subjects	Data are used as basis for exclusion of identified subjects from standard treatment
Is the subject aware that the structuring has occurred and/or about the source and functions of the data collection?	The subject has no knowledge of the structuring – e.g. subjects are not informed of why they were not admitted	Subjects are aware of all aspects of the structuring and data sources

(In)conclusions

Learning analytics are a structuring device, not neutral, informed by current beliefs about what counts as knowledge and learning, colored by assumptions about gender/race/class/capital/literacy and in service of and perpetuating existing or new power relations

Welcome to a brave new world...



Every breath you take
Every move you make
Every bond you break
Every step you take
I'll be watching you

Every single day
Every word you say
Every game you play
Every night you stay
I'll be watching you

O can't you see
You belong to me...

Sting – Every breath you take

Last thing I remember, I was
Running for the door
I had to find the passage back
To the place I was before
"Relax, " said the night man,
"We are programmed to receive.
**You can check-out any time you like,
But you can never leave! "**

Eagles – Hotel California

Thank you. Baie dankie. Ke a leboga

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