

**the promises
& problems of
learning analytics**

Neil Selwyn | Monash University | LAK2018 | Sydney | 09.03.2018

**for many people outside of the
LAK community, the idea of 'learning
analytics' is an uneasy and sometimes
controversial proposition**

- * not all of this is going to work**
- * i don't strictly know what i am talking about**
- * i have no answers ... only questions**

PART#1

**a growing number of people do not
like the idea of data & analytics
in education**



**Technology
Opinion**

Children are tech addicts - and schools are the pushers

Eliane Glaser

Fri 26 Jan 2018 06:00 GMT



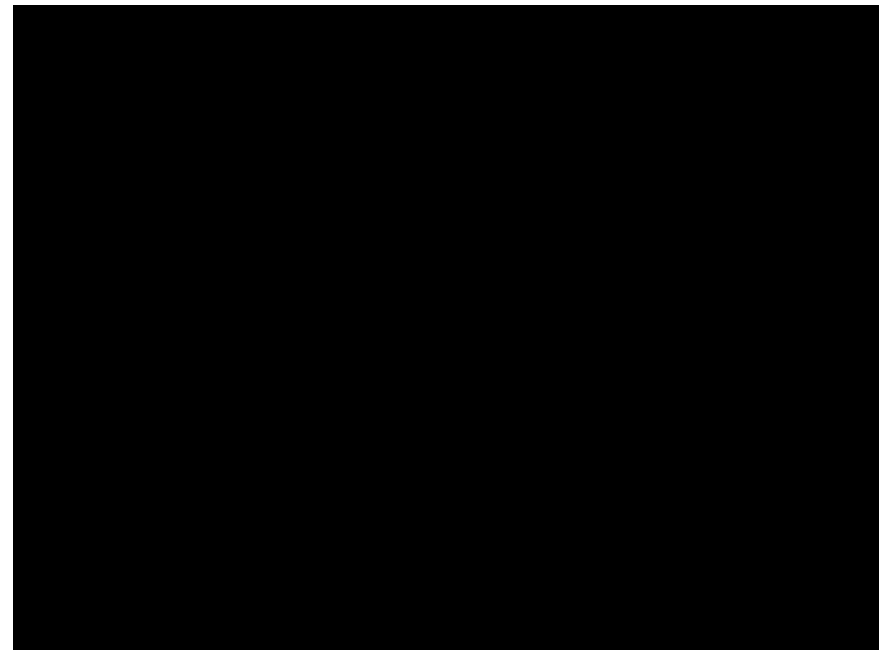
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When Silicon Valley bosses send their children to screen-free schools, why do we believe the claims of the 'ed tech' industry?



▲ 'And not only is screen technology harmful to children per se, there's little evidence that it helps them to learn.' Photograph: Wavebreakmedia/Getty Images/Stockphoto

As a culture, we are finally waking up to the dark side of new technology. "The internet is broken", declares the current issue of Wired, the tech insiders' bible. Last month Rick Webb, an early digital investor, posted a blog titled "My internet mea culpa". "I was wrong," he wrote. "We all were." He called on the architects of the web to admit that new technology had brought more harm than good.



DO ARTEFACTS
HAVE POLITICS?

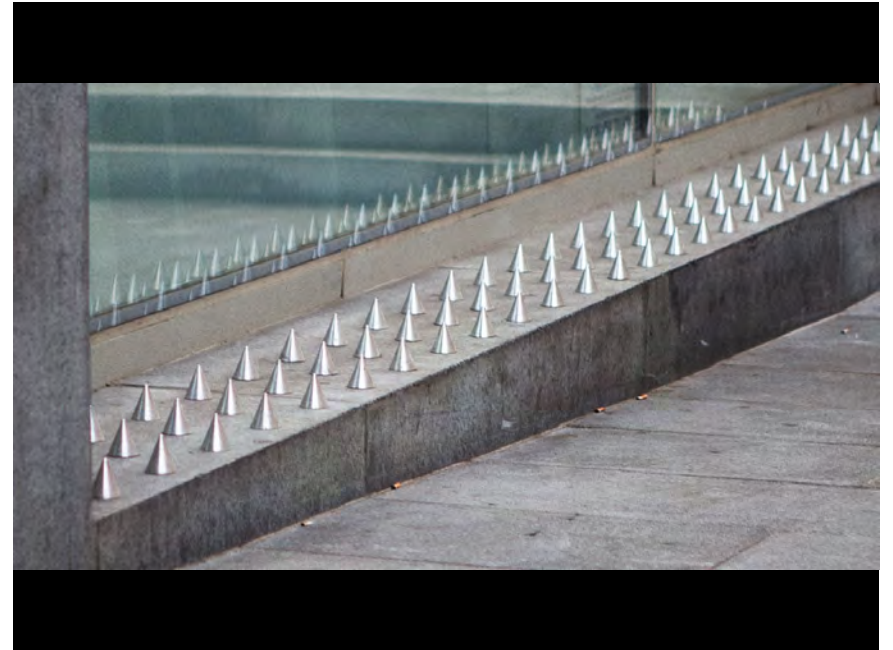


The
WHALE
and the
REACTOR

*A Search for Limits in an
Age of High Technology*

LANGDON WINNER





**DO LEARNING
ANALYTICS
HAVE POLITICS?**

LEARNING ANALYTICS HAVE POLITICS!

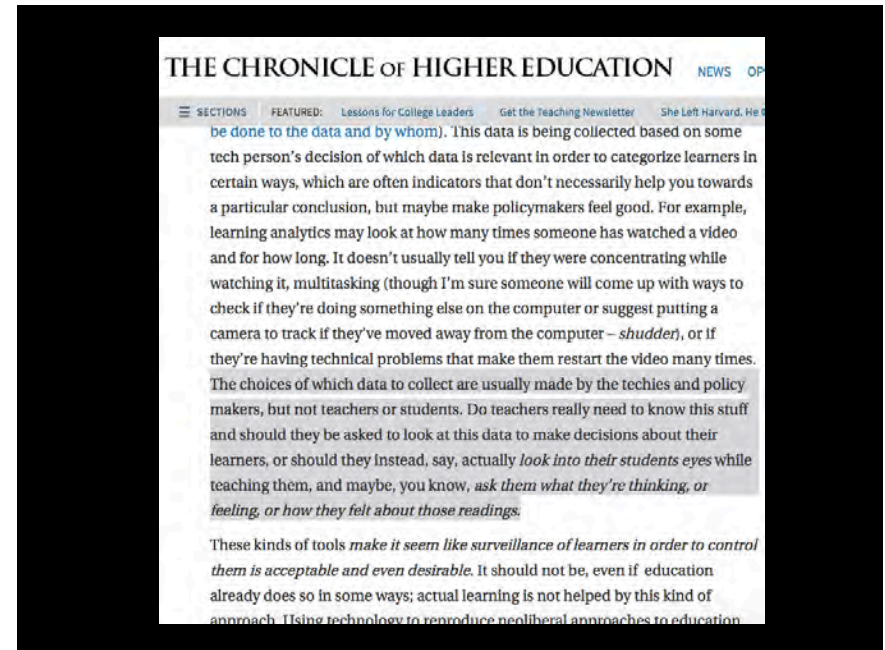
- * data representativeness?
- * data reductiveness?
- * models of learning?
- * sense of 'student context'?
- * sense of 'social context'?
- * data-driven performativity?

PART#2

*there are a number of
'well-worn gripes' with learning
analytics that still need to be
given serious consideration*

*different disciplines imagine their own
objects and construct different data sets
that harbour interpretive structures of their
own imagining*

(Lisa Gitelman)



when you hear someone say “data are objective”, that just means they got to choose the definition of success
(Cathy O’Neil)

“the definition of today’s AI is a machine that can make a perfect chess move while the room is on fire”
(Fei-Fei Li)

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“in some ways, we might say that engineers, data scientists, programmers and algorithm designers are becoming today’s most powerful teachers”

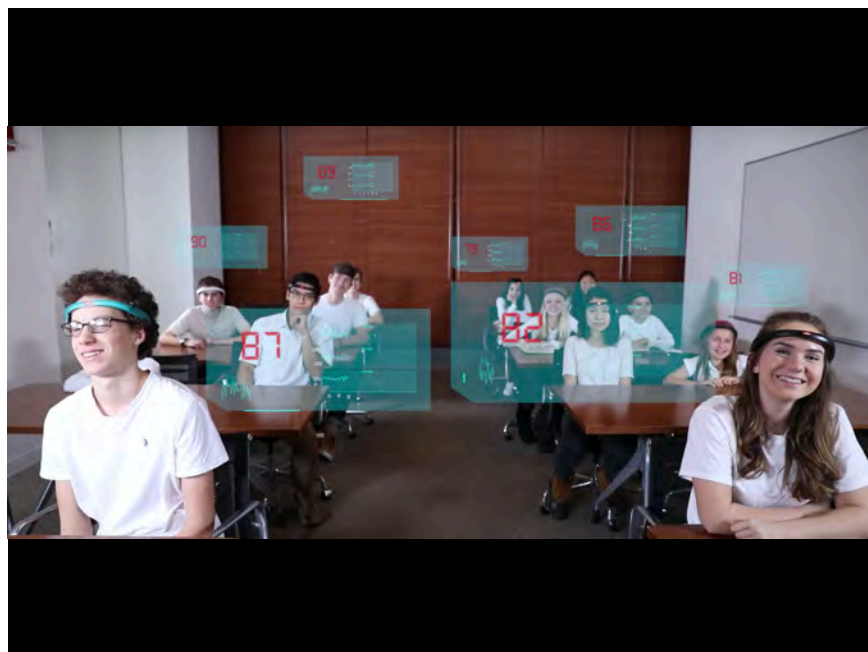
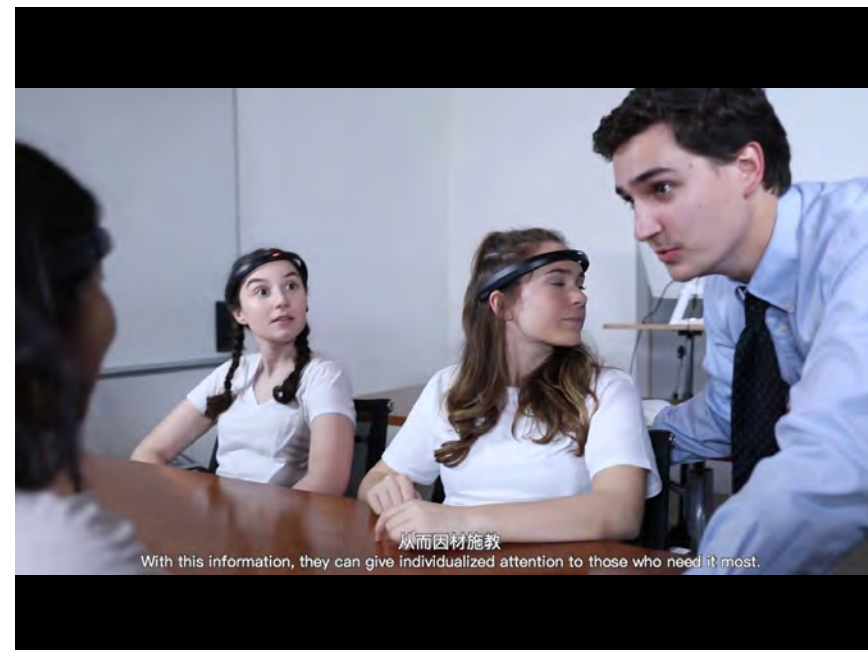
(Ben Williamson)

There are not enough data points in the world to adequately capture the complexities and nuances of who a student is ... or how a school or university functions

PART#3

there are a number of less familiar problems with learning analytics that also merit serious consideration

- * the 'end users' of LA are not students
- * the 'end users' of LA are not humans
- * LA alter the nature of public education
- * LA exploits students, teachers and schools



PART#4

*critical perspectives on data &
education can be a help rather
than a hinderance*

a learning analytics wish-list ...

Socially sympathetic design

- No room for "off-the-shelf" - bespoke design + bespoke products
- Developers developing IA for others - not themselves

System / algorithmic transparency

- "White boxing" infrastructures?
- Easily "explainable IA"

Giving students control

- Requiring IA systems to inform students of how their data is being used -
 - o.g. continuous tracking of data use?
 - OR - a yearly audit of when and how one's personal data being used?
- User-respectful design - privacy, security and transparency
- **OPT-IN** rather than OPT-OUT?
- Allowing students complete curatorial control - a right to be forgotten?
- Allowing students to "build their own" analytics?

Sharing the profits of learning data

- Establishing a personal data marketplace
- Paying students a wage for their efforts?
- "Representative data management" - licensed data brokers?
- **Treating IA data as a public good**
 - o.g. 100% to the state?
 - OR - a "tyche" system for all data-generating platforms?

Working toward a better "public understanding of IA"

- Improved customer understanding / savvy procurement / informed adoption
- **Critical data literacy** - teaching critical awareness of data in schools and universities

Seeing ethics in terms of power, not in terms of protection

- Building ethics into the design of whatever you are doing next
- Judging the quality of IA data by the same high standards as medicine or defense? - (OUP Symposium)
- License any IA system as we would license a teacher?
- Hold IA system providers legally accountable?
- Monitor and enforce quality/QA thresholds?
- Require an independent "bias assessment" of any new IA system?

What is the powerful idea implicit
in learning analytics ... and how does it
fit with the powerful ideas that people
already have about education?

PART#5

how might things

be otherwise?