Research in Marketing in a changing world

Roger Marshall

The new insights **RESEARCH ASSOCIATION** ecosystem
In the age of the customer

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Today's discussion

- Prophets of marketing's future

- Predictions based on history…

- The here and now, plus the immediate future

- The challenge for researchers

- The fight-back…

- Finis

Prophets, forecasters, of the future abound, from science fiction writers such as Huxley and "1984" and Asimov and his space stations to a plethora of consultants and marketing gurus.

Let's look at a few...

Megatrends picked by major consulting companies

Future State 2030, KPMG

- **AUT** Demographic changes
- **AUT** Rising affluence
- **AUT** Enabling technology
- **AUT** Economic interconnectedness (Trump?!)
- **AUT** Public debt
- **AUT** Economic and political power shift
- **AUT** Climate change
- **AUT** Resources (e.g., water)
- **AUT** Urbanization

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Specifically a marketing future

Frankly, most of these "visionaries" are not particularly, but Joshi, I think, makes some good points:

The marketing function will become more important, but will become split between left- and right-brained types – technologists and creatives

The Future of Marketing:
Six Visionaries Speak

seth **GODIN**
john **HAGEL**
gavin **HEATON**
aditya **JOSHI**
marc **MATHIEU**
jim **STENGEL**

A conversation with The Economist Intelligence Unit.

Marketo®

Frankly, most of these "visionaries" are not particularly, but Joshi, I think, makes some good points:

Measurement, analytics and test-and-learn rather than large-scale research projects will allow more agility (Roger, this is Google's influence)

The Economist | Intelligence Unit

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NEW DIGITAL IMPERATIVES FOR MARKETING

The vast majority of forecasting is based on the past, which is similar to driving a car by looking out of the back window…

Hence:

- AUT weather
- AUT economic
- AUT technology
- AUT political
- AUT consumer behaviour forecasts

all assume a stable environment which, of course, rarely exists. The tricky bit is picking the next corner…

Predicting from the past is hard, but having a longer history at least allows trends to show and past impacts to give us a clue about potential impacts...

Google's analytics are of course immensely useful but in no way replace thoughtful research, and can lead unwary managers into knee-jerk reactions...

Much big data held in bases is claimed to be "real-time," but, in fact it is not and is typically not well archived; it is masses of often poor data with a very, very short history

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The Janus factor...

The most powerful force in the marketing-scape (possibly in the World) that will drive behaviours in the coming decade is big data

→ Big data and research in marketing

Takeaway, big data

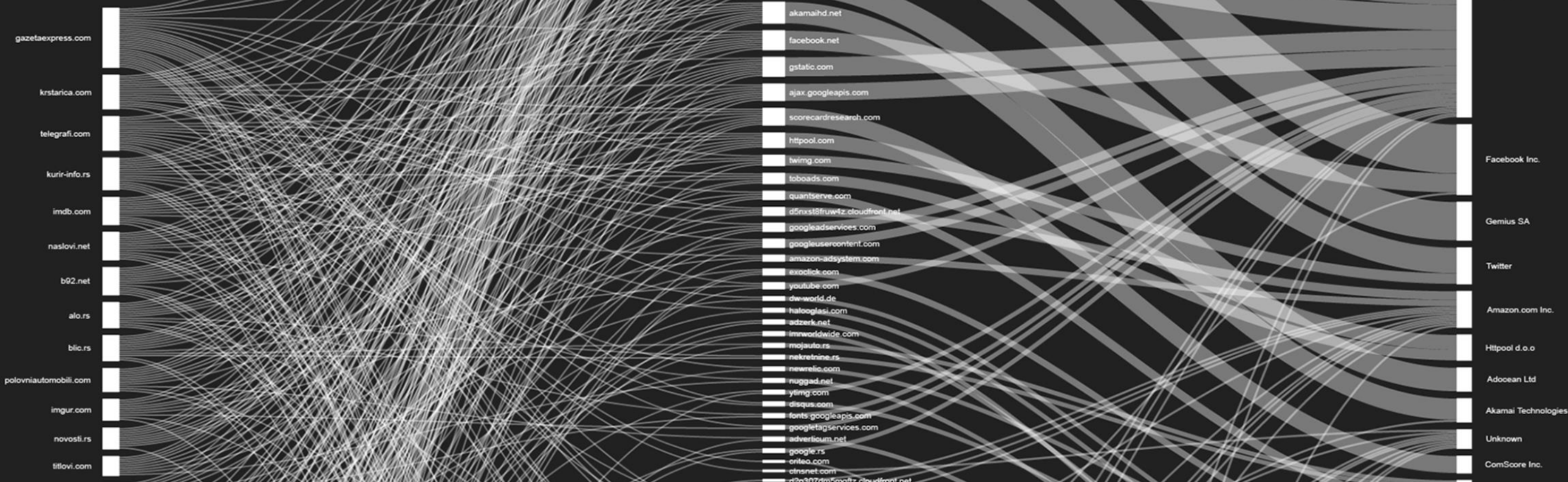- Big data is here and now has many applications and is linked to AI

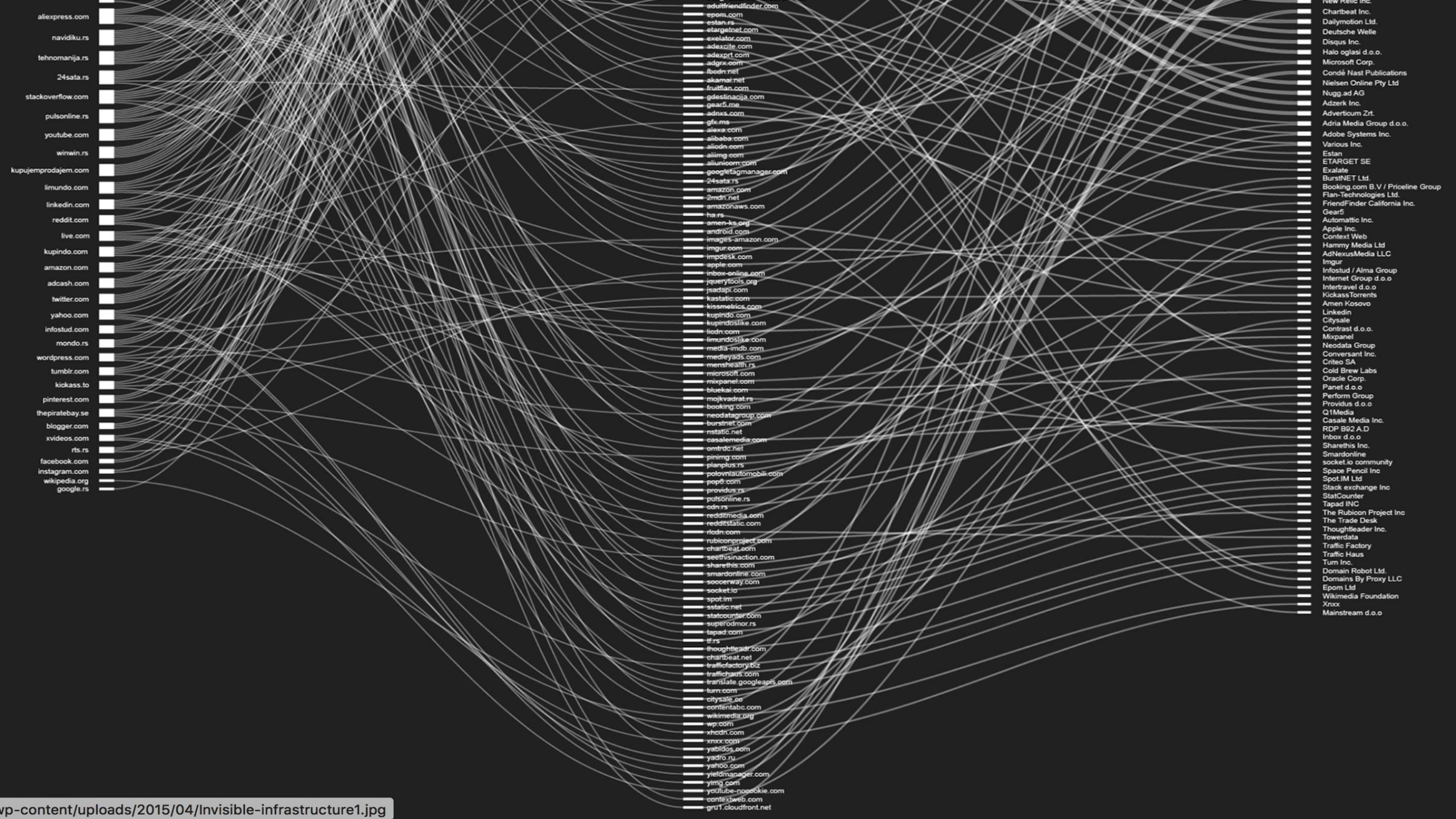- It is being used well only by a handful of companies

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Thoughtleader Inc.
Towerdata
Traffic Factory
Traffic Haus
Turn Inc.
Domain Robot Ltd.
Domains By Proxy LLC
Epom Ltd
Wikimedia Foundation
Xnxx
Mainstream d.o.o

On the top 50 sites in Serbia, Share Lab found...

365 Total number of online trackers found in the sample	**7.3** Average number of trackers per website
87 Number of different companies that can track your visits	**147** Number of unique trackers

90%   **46**%   **36**%   **24**%

Google Inc.   Facebook Inc.   Gemius SA   Twitter

Google Inc.

Facebook Inc.

Gemius SA

Twitter

Amazon.com Inc.

Httpool d.o.o

Adocean Ltd

Akamai Technologies

Unknown

ComScore Inc.
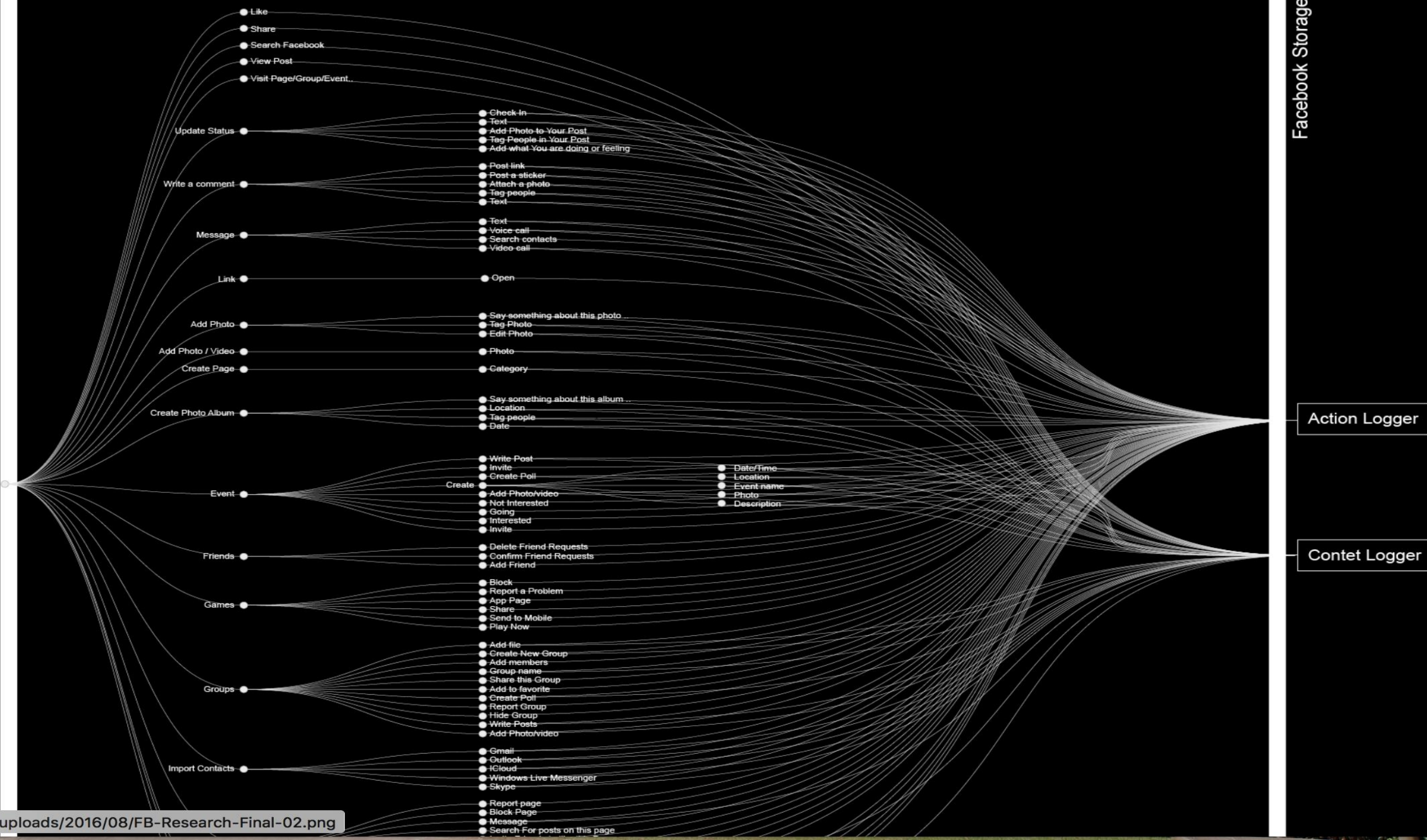
Takeaway, big data

- Big data is here and now has many applications and is linked to AI

- It is being used well only by a handful of companies

- The vast majority of companies are starting to get to grips with it, but are having trouble – most use chunks for data-mining or "shots" for specific statistical analysis

- Ignore historical data at your peril

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- Statistics is not very good at handling big data

Statistics are based on Probability Theory, and are founded on means of distributed datapoints...

Mean
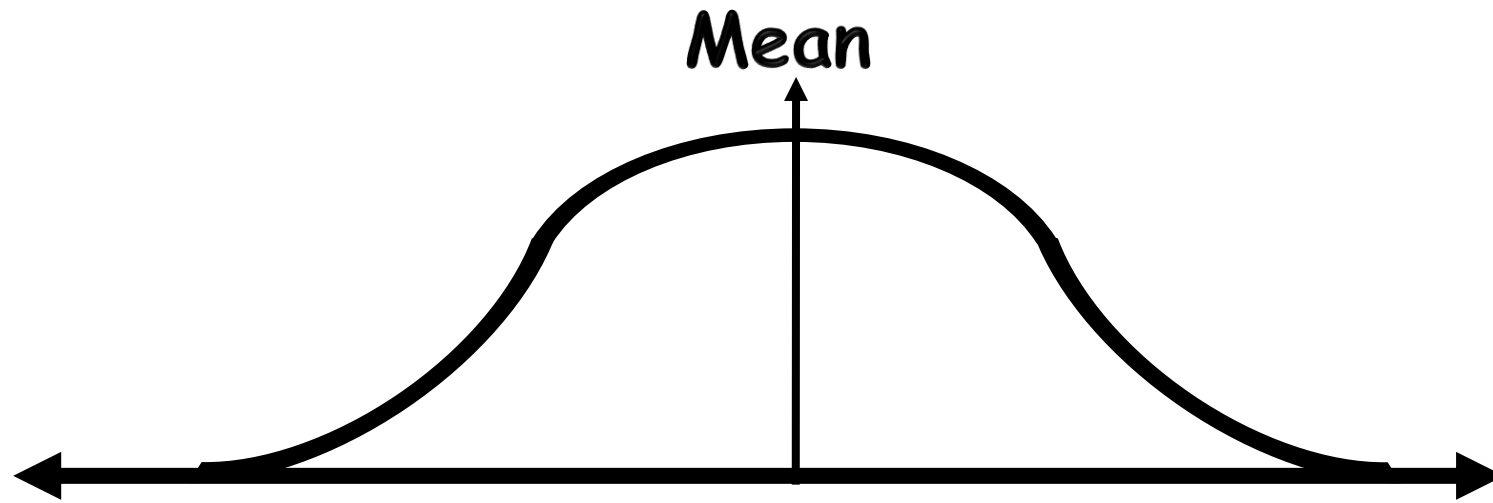
"Centralizing tendency"

→ bell-shaped normal distribution

Think of this another way...
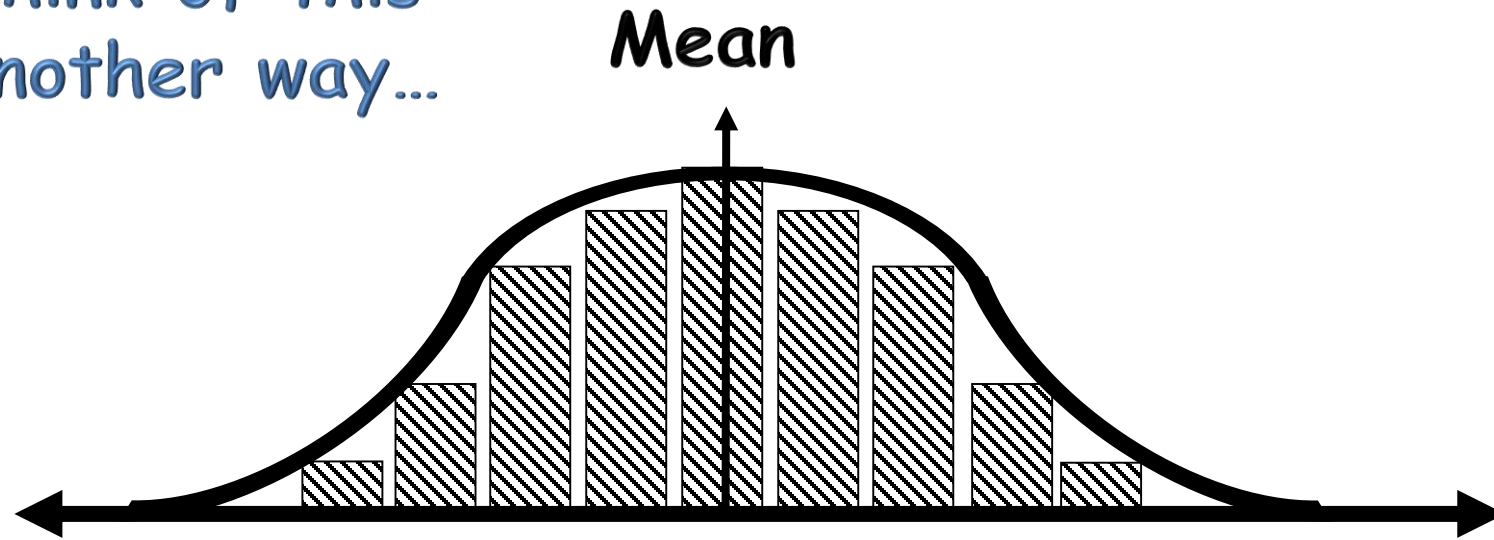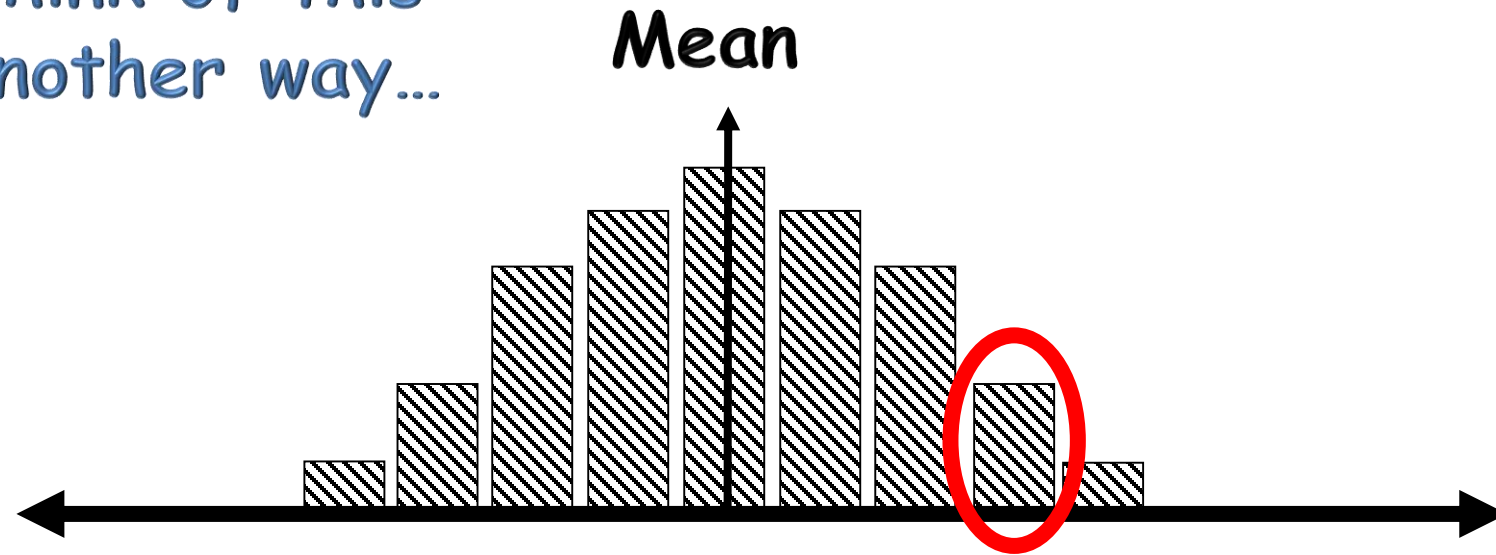
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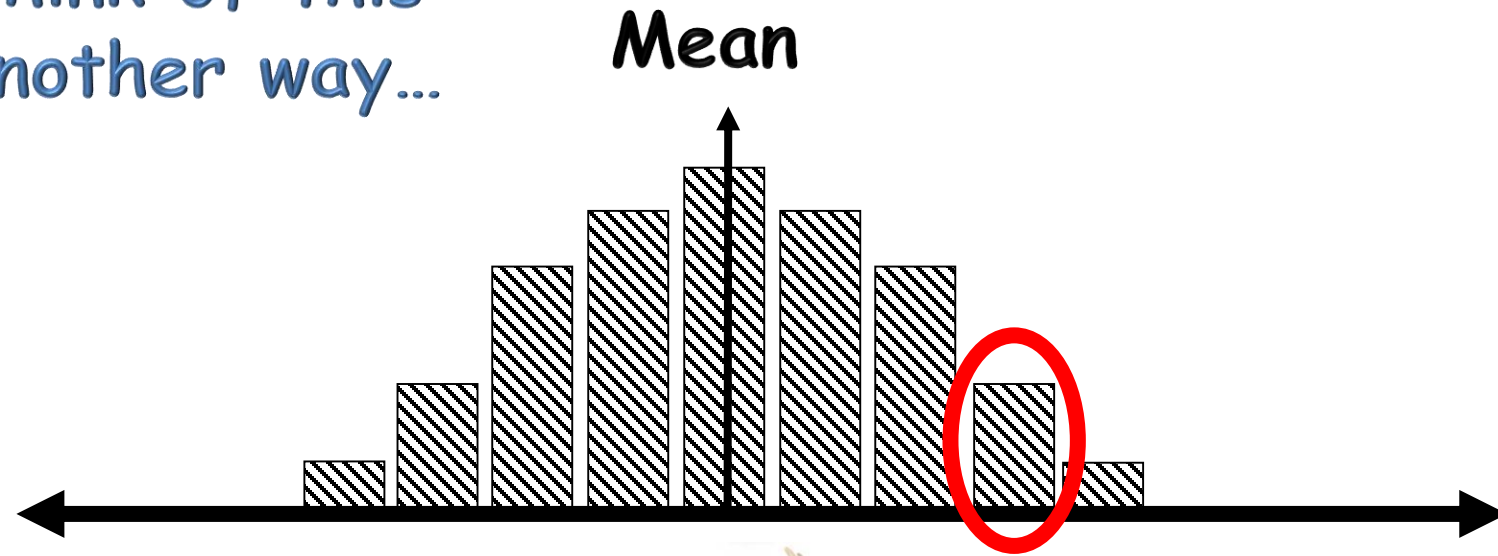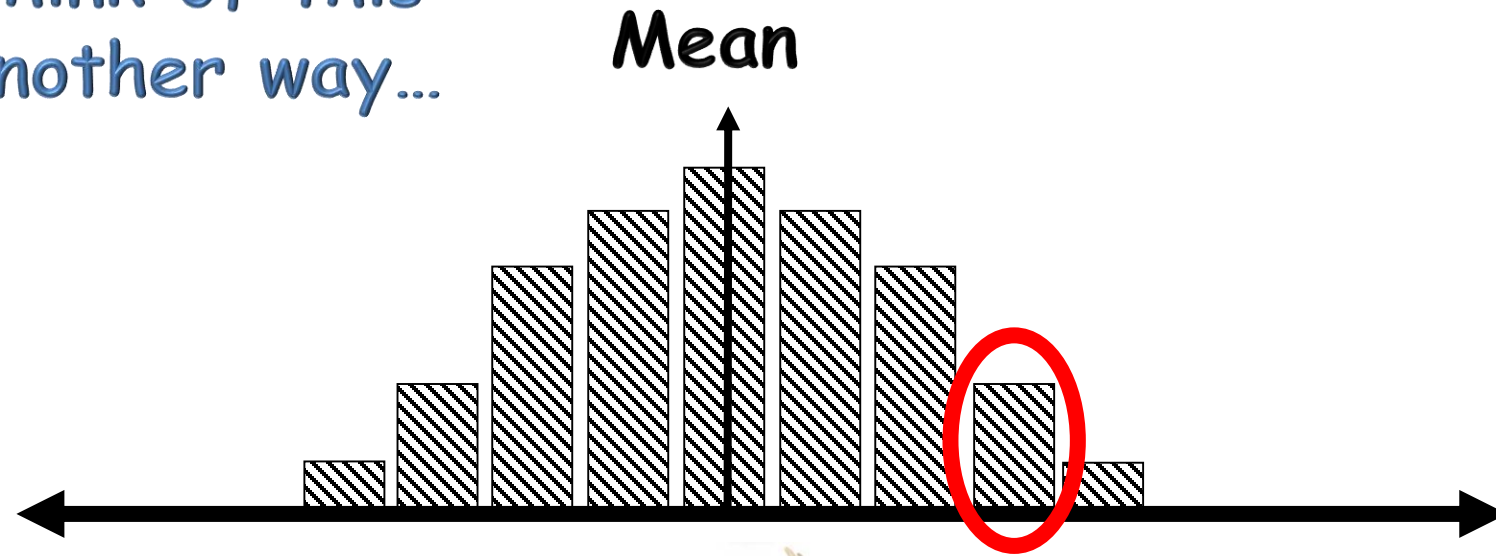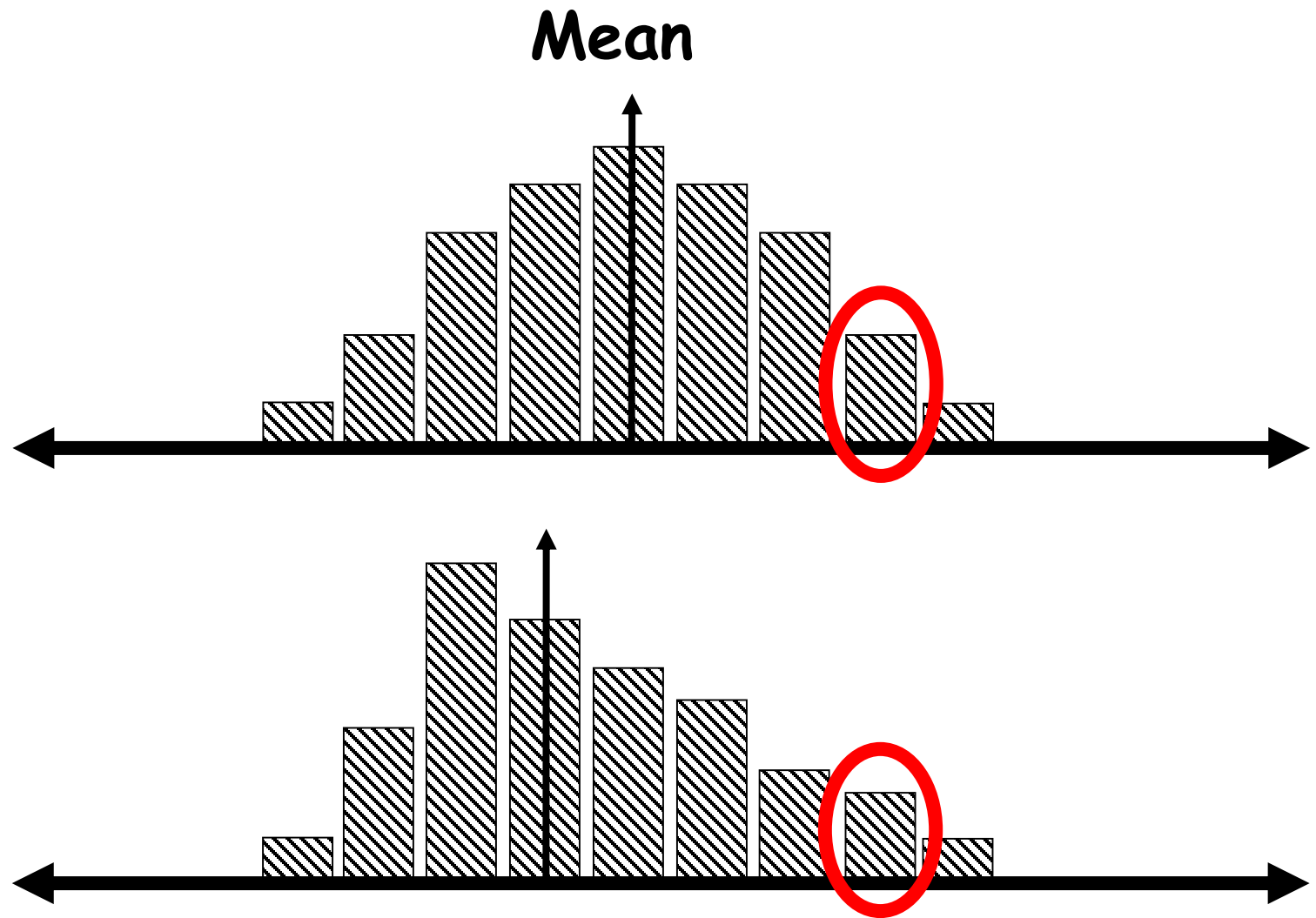
Worse, suppose the distribution is skewed, as most are?

A related issue concerns sample size

p>.05

p<.05
Eueka!
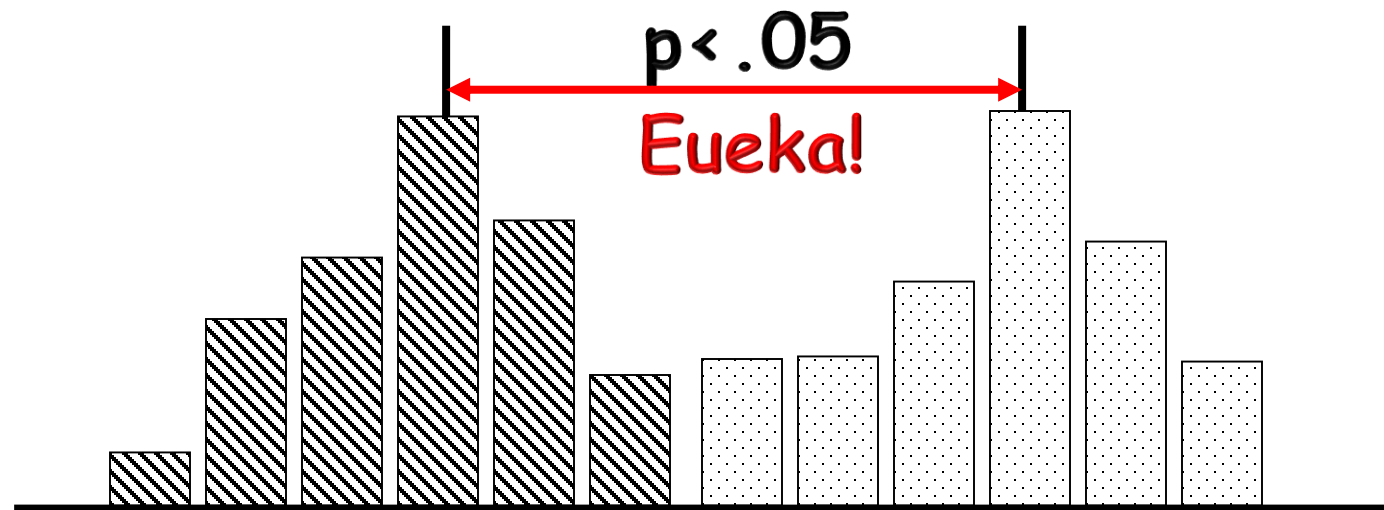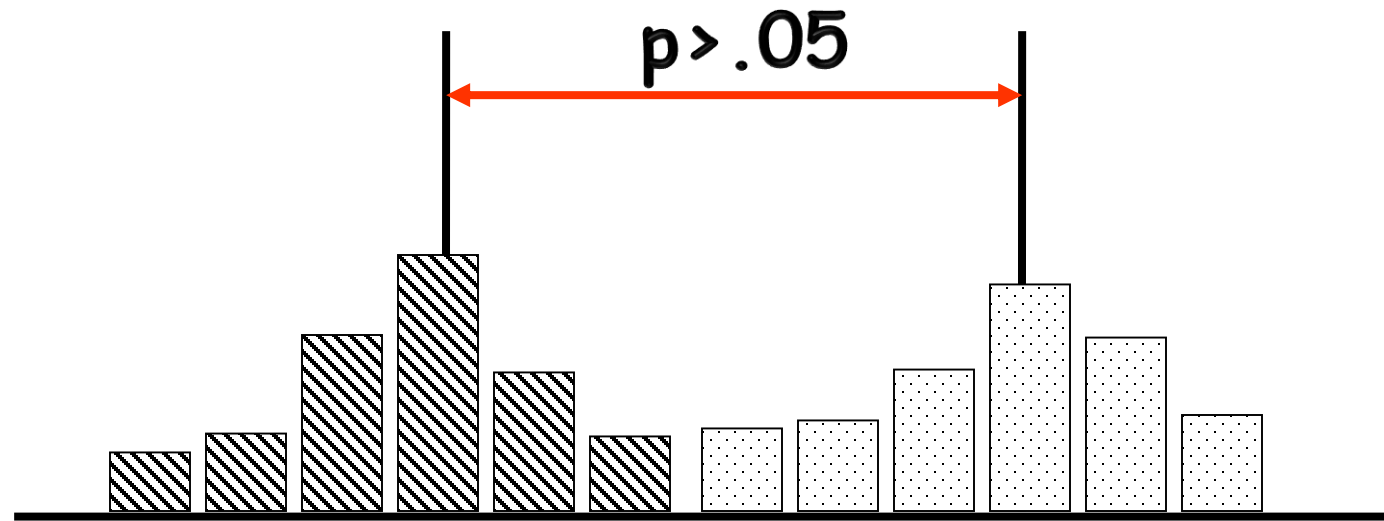
Responses to some opinional variable

What does this mean for big data?

In a big dataset, there will be a tendancy for tiny differences - that in reality mean very little - to become significant.

To be fair, there are effect size measurements, but these are rarely reported and little understood.

There is also the question of margins of error, which do not relate well to business decisions...
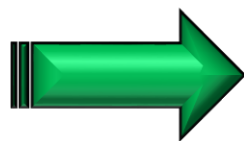
This is where the expression "Lies, damned lies and statistics" comes from!

One more issue regards the linearity of statistical analysis...

General form of a regression equation is:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 ... + \beta_n X_n$$

Where Y is the dependent variable and X, X1 etc. are the independent variables, right?!

What actually happens is that all the independent variables are held constant while one is correlated to the IV... Life is not like that, in fact?

Variable A

Variable B

Variable C

Variable D

Again, life is not typically like this, either – it is not linear and symetrical, but interactive and assymetrical...

Statistical analysis is excellent for accurately analyzing the effect of one variable on another, when all other things are held constant; it is poor for predicting in the real world...

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- Statistics is not very good at handling big data

- New methods are emerging, such as comparative qualitative analysis, that offer more promise

Qualitative Comparative Analysis introduced

QCA is not concerned
with probability or with
comparing means of
normal distributions, but
with frequencies and
data patterns…

In QCA we seek a cluster of variables, named a "causal recipe" that are consistently and uniquely present whenever the output variable of interest is also present.

Cluster of variables, called a "recipe"

Output variable
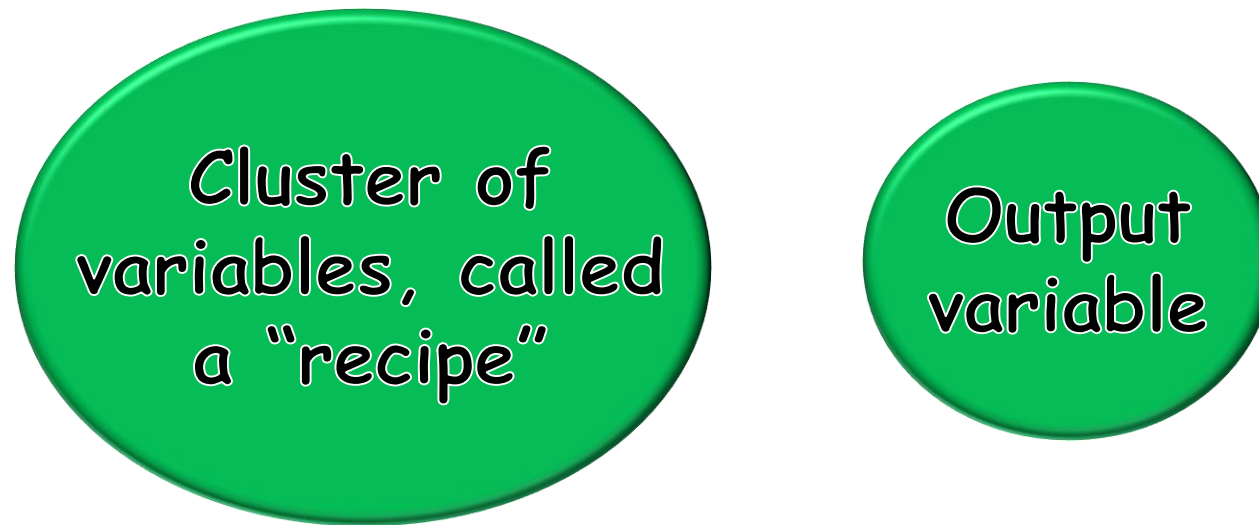
There are measures of consistency and uniqueness to assist sort out a superior causal recipe

fsQCA or csQCA?

In crisp-set QCA (based on Boolean algebra, using configurations of binary data) when analysis reveals that a particular set of variables being present (or absent) consistently results in a particular outcome, causation can be inferred

In fuzzy-set QCA the variables are coded (calibrated) to allow partial presence in a set, rather than simply presence or absence

Qualitative Comparative Analysis introduced

I am not selling anything, just suggesting that many of the common marketing analysis tools can't handle big data, and the majority of analysts with sufficient skill to do so do not understand marketing. Furthermore, neuro-scientists build their brain-models using Boolean algebra, not statistics…

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Change will come, and big data and robotics will play a role, no question.

There is resistance to change, though, and there are signs that suggest there may be limits. Basically, people like human interaction, on a face-to-face basis. E.g.,

MOOCs have generally failed

Change will come, and big data and robotics will play a role, no question.

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- MOOCs have generally failed

- The Nokia hand telephone is making a comeback

- NAB Australia is re-opening many rural and even suburban bank branches to halt their profit slide

My major takeaway for today is to return to an old advertising mantra...

KISS!

AUT Seek large differences, clear relationships and don't get blinded by science

It can be shown that steady-state value of the capital inputs can be expressed as functions of their respective investment rate. Substituting the steady-state expression back into the production function and adopting a formulation using steady-state human capital, h^*, consistent with previous research (Qu, Simes, and O'Mahony, 2016), the functional form of our growth equation can be derived as:
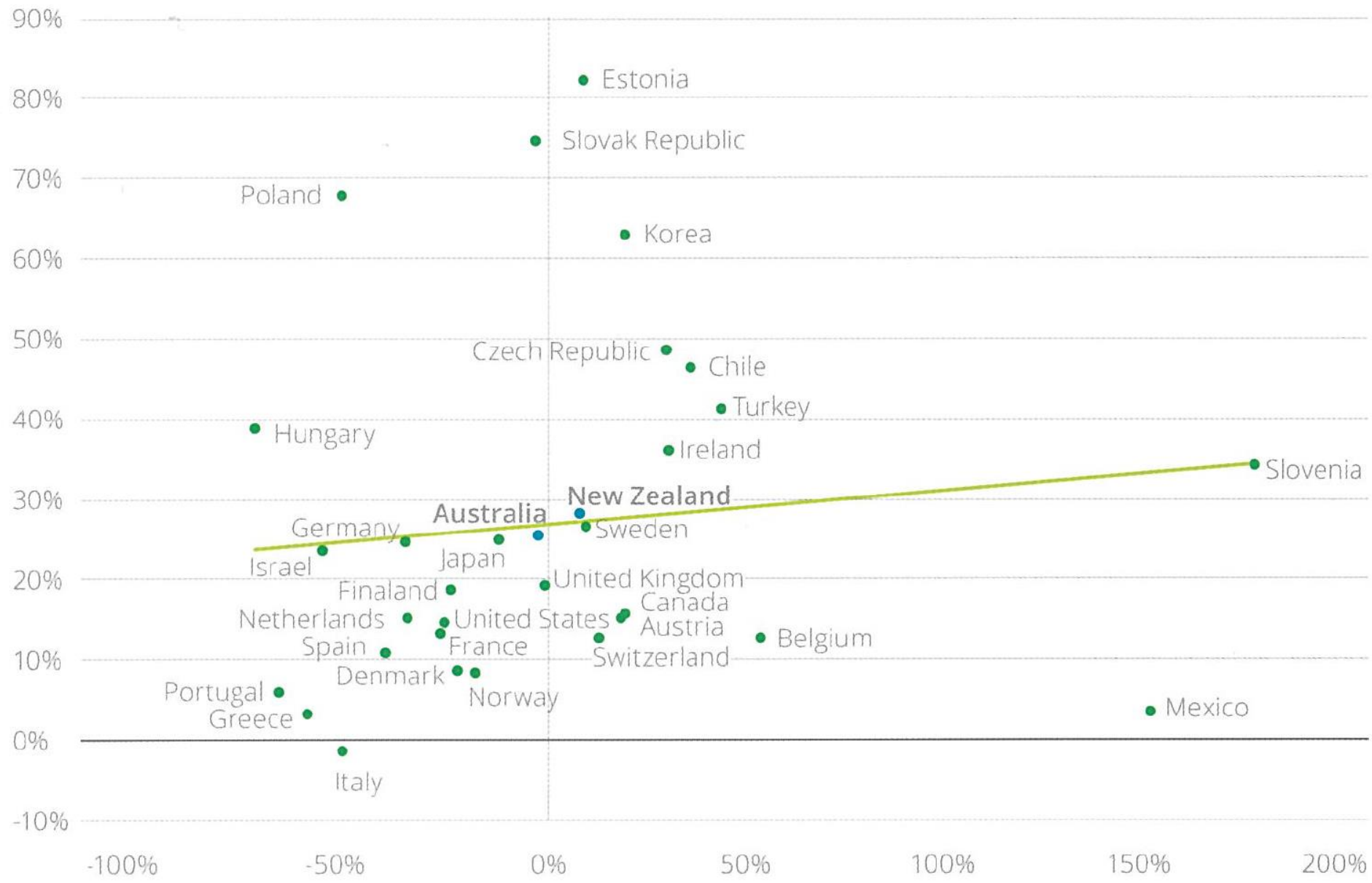
$$\Delta \ln y(t)$$

$$= \phi \left(-\ln y(t-1) + \left(\frac{\alpha}{1-\alpha}\right) \ln s_k(t) + \left(\frac{\beta}{1-\alpha}\right) \ln h(t) + \sum_j p_j \ln V_j(t) \right.$$

$$\left. - \left(\frac{\alpha}{1-\alpha}\right) \ln(g(t)+d) \ln\big(n(t)\big) + g(t)t + (p_0 + \ln \Omega(0)) \right)$$

$$+ \frac{1-\psi}{\psi} \left(\frac{\beta}{1-\alpha}\right) \Delta \ln h(t) + \left(1 - \frac{\phi}{\psi}\right) g(t)$$

Real GDP and advertising expenditure growth, 1980 - 2015

GDP per capita growth 2000-2015 vs. Advertising Expenditure Growth 2000-2015

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AUT Seek large differences, clear relationships and don't get blinded by science

AUT If you don't understand the algorithm that interprets the data, if the algorithm is designed by a pure mathematician rather than a market-savvy businessperson, then think twice before acting on the results!