

Panel

Facets on Trust and Doubts in Information Interpretation and Consumption

The Third International Conference on Advances in Information Mining and Management

The Third International Conference on Social Eco-Informatics

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	Richard Lucas	University of Canberra, Australia
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What is Trust ? [1]

[mass noun]: (1) **firm belief** in the reliability, truth, or ability of someone or something:

*relations have to be built on **trust***

*they have been able to win the **trust** of the others*

- **acceptance of the truth** of a statement without evidence or investigation:

*I used only primary sources, taking nothing on **trust***

- the state of being responsible for someone or something:

*a man in a position of **trust***

- ...

verb [with object]: (1) **believe in the reliability, truth, or ability of**

*I should never have **trusted** her*

[1] Definition of 'trust' in the Oxford Dictionary:

<http://www.oxforddictionaries.com/definition/english/trust>



What can we Trust (or not)?

- **Information**
 - **source**
 - **provider**
- **Interpretation mechanism**
 - **Human**
 - **Software/hardware**
 - **Algorithm correct and applicable**
 - **Vendor/developer of the software**
 - **Implementation of an application**

What can we Trust (or not)?

- **Infrastructure**
 - **Operating systems**
 - **trusted computing (very controversy)**
 - **proprietary vs. open source**
 - **Cloud provider**
 - **Communication channel**
 - **encryption algorithm**
 - **encryption implementation**

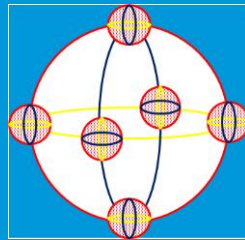
What can we Trust (or not)?

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Joseph Heller (Catch-22):

Just Because You're Paranoid, Doesn't Mean They're Not After You

Trusts & Doubts in Information Interpretation & Consumption



Complex Creo Simplex

Complex Civil Systems
Research Group &
Project Management
Programme

FACULTY OF
ENGINEERING &
INFORMATION
TECHNOLOGIES

Associate Professor Simon Reay Atkinson



THE UNIVERSITY OF
SYDNEY

An Ethical / Moral Base for Complex Decisions

Respect the hard-won scientific gains of those in whose steps [you] walk; share such knowledge as is [yours]; apply, for the benefit of [all], all measures [that] are required, avoiding those twin traps of over [specification] and [professional] nihilism; remember that there is *art* to [empiricism] as well as science, and that warmth, sympathy, understanding and [the desire to work together] may outweigh the [demands to act or wish to prescribe]. To use your knowledge [for the betterment of humankind and our environment] and not be ashamed to say 'I know not', nor [be unprepared to collaborate with colleagues] or to place [your] capacities at the disposal of people not respecting the humans' right. To take all responsibility for your acts and not to discharge your responsibilities in any manner on others. Not to use your knowledge at destroying ends and to face this awesome responsibility with great humbleness and awareness of your own frailties. To practice your profession in all intellectual honesty, with *conscience* and dignity and most especially to tread with care in matters of life and death. Not to allow that considerations of religion, nationality, ethnicity, sex, rank, social standing or policy carry injury to people concerned with your actions. Above all not to play at God and to remember that you remain a member of society, with special obligations to all your fellow human beings: to always act so as to preserve the finest traditions of your calling and for long experience the joy of [responding] to those who seek and are needful of your help.

Based on Louis Lasagna's, (then Academic Dean of the School of Medicine at Tufts University) 1964 'Modern' Hippocratic Oath; the H. E. T. Haultain / Rudyard Kipling (1922) (private and undeclared 'though' not secret?) 'Ritual obligation of the calling of an engineer' and the UN General Assemblies' 1948 'Declaration of Human Rights'.

- › Risk may be a function of both the *Likelihood* of an *adverse event* occurring and a system or person's *ability to comprehend, explain and understand by logic*.
- › Trust may be a function of the *Likelihood* of a person or system being able to *comprehend, explain, understand by logic* and *deal* with a set of outcomes or events.

- › Info/Techno-Socio systems seek to program (as opposed to programme) the relationship between technical *processes* and humans by *digitizing performance fidelity* and coding for repeatable *risk free* procedures in computer-control-spaces so that *data* and *communication* do not [temporally] contradict each other.
- › By contrast: Socio-Info/Techno systems stress the *reciprocal interrelationship* between humans and computers to foster *improved shared awareness* for *agilely* shaping the *social programmes of work*, in such a way that *humanity* and *ICT [control] programs* do not contradict each other.
- › The two systems are also considered in terms of their signatures, where:
 - IT-S systems are considered as strong-signal systems, in which: *System Information* and *Communication* are the key variables, and:
 - Weak-signal S-IT systems, in which: *Influence* (through shared awareness) and *Control* (through switching) of *Information* and *Communication* are the key variables.

Management & Control may be a function of rules, time, bandwidth and fidelity, whereas Command & Leadership may be a function of influence, trust, collaboration and agility.

Reay Atkinson S, & J, Moffat. (2005) *The Agile Organization*, Washington: CCRP Publications.

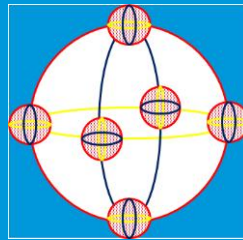
Reay Atkinson S, S., Tavakolitaebazavareh, D., Walker, L., Liu, & L., Hossain. (2013b) Securing the bolts before the horse has bolted: A new perspective on Managing Collaborative Assurance. *The IEEE 2013 Conference on Security Management*, Aug. Las Vegas.

Debit, ergo cogito, ergo sum

(I doubt, therefore I think, therefore I am)
Descartes.

The Third International Conference on Social Eco-Informatics: SOTICS 2013

<http://www.iaia.org/conferences2013/SOTICS13.html>



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THE UNIVERSITY OF
SYDNEY



Dr. Richard LUCAS FACS
Information Systems, University of Canberra
CAPPE, Charles Sturt University

**Facets on Trust and doubts in Information
Interpretation and Consumption**

—

Panel Discussion

20 November 2013

What does it mean to trust?

The Abilene Paradox

- Going along to get along
- Failure to communicate
- Inaccurate perceptions and assumptions

Some Thoughts

- There are many things that I believe or desire that are not worthy of my trust
 - What makes me worthy of my trust is my capacity to evaluate my beliefs and desires
- Lehrer, p.3

Life is never so ordered or choices so forced that the need for trustworthiness can be eliminated

Kohn, p.5

What are we trusting

- the information, the medium, or the messenger?

Another Thought

... regard numbers, graphs, and formulas first of all as strategies of communication. They are intimately bound up with forms of community, and hence also with the social identity of the researchers.

Porter (1996, p. viii)

A Final Thought

Trust is possible where:

- distrust is possible,**
- deception is possible.**

Trust in, and for, Yourself

Fukuyama F. Trust: The social virtues and the creation of prosperity. Free Press; 1995.

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Richard

CAN WE TRUST INFORMATION INTERPRETATION?

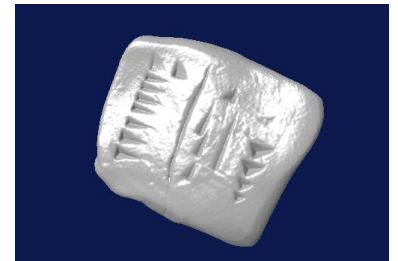
Ariella Richardson



בית הספר הגבוה לטכנולוגיה בירושלים
JERUSALEM COLLEGE OF TECHNOLOGY

Input - information as raw data

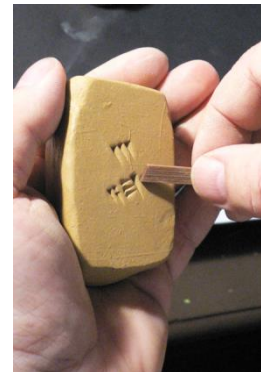
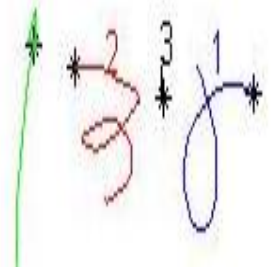
- Handwriting deficiency classification
 - Time series of: pressure, tilt, azimuth
- Text mining
 - Letters and other characters
- Cuneiform feature selection (Archeology)
 - 3d mesh



Task – Interpret the information

Domain Expert Knowledge

- Handwriting
 - Writing is composed of letters
 - “In-air” and pressure features (known) to be important
- Text mining
 - Words have average length of 5 letters
- Archeological cuneiform feature selection
 - The stylus is shaped as a tetrahedron



Can we **trust** information interpretation?

- Do we expect to know how information is interpreted in advance or only in retrospect?
- Do expert knowledge/our expectations affect interpretation?
- Is there really a single correct interpretation of information?
 - How do we measure correctness of interpretation?

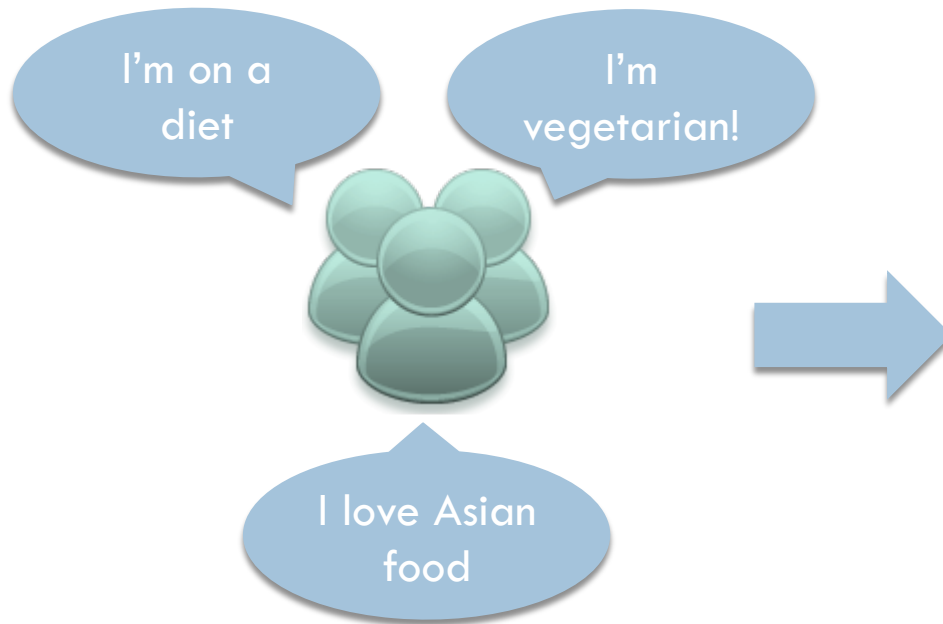


TRUST IN GROUP RECOMMENDATION

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Group Recommendation

- Group recommendation is designed for contexts in which more than a person is involved in the recommendation process.



Where should we dine?

Trust in social recommendation

- Social recommender system follow the epigram “Tell me who your friends are, and I will tell you who you are” [Cacioppo and Berntson, 1994] [Falcone et al., 2003] [Ricci et al., 2011].
- The recommendations generated by these systems are based on information coming from a *trust network* [Victor et al., 2012]
 - a social network which expresses how much the members of the community trust each other

Discussion

- Can we extend the notion of trust to a group recommender system?
 - ▣ We know how similar the preferences of two users are
 - ▣ Can we use similarity as a form of *trust* in another user's preferences?
 - ▣ If we have an outlier (i.e., a user very dissimilar from the others), can we avoid considering her/his preferences from the group model?
- Aspects to consider:
 - ▣ The accuracy for the users in the trust network increases
 - ▣ Based on the numbers of outliers, the overall accuracy of the system might worsen

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[Ricci et al., 2011] Ricci, F., Rokach, L., and Shapira, B.. Introduction to recommender systems handbook. In *Recommender Systems Handbook*, 2011.

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Facets on Trust and Doubts in Information Interpretation and Consumption

Control between incentives and property (rent?)

PANEL IMMM/SOTICS 2013

November 20, 2013 - Lisbon, Portugal



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What is ethical behavior?



1. What is ethical behavior?
2. Theory of Moral sentiment (1759)
3. Problem of current market economy.
 - “Edward Snowden Case” and “Bank secrecy
 - “The Social Responsibility of Online Charge-free Service Providers; Accountability for use of the term "free" ”
4. Conclusion

- Back to round 17th and 18th century, when price (Market) system was born.

- Industrial Revolution

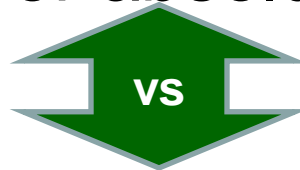
(Spinning factory. Steam engine Thomas Newcomen in 1712)

2. Theory of Moral sentiment(1759): organizational theory

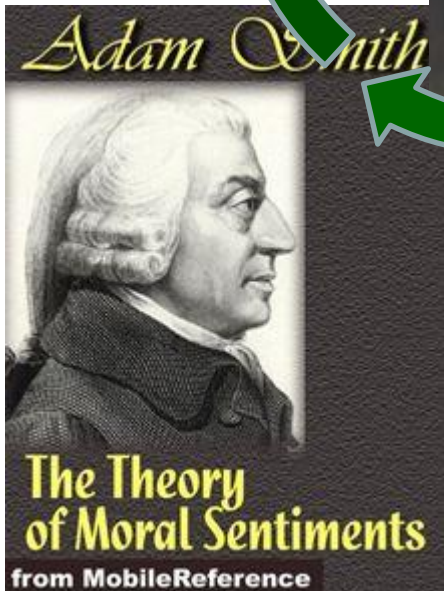
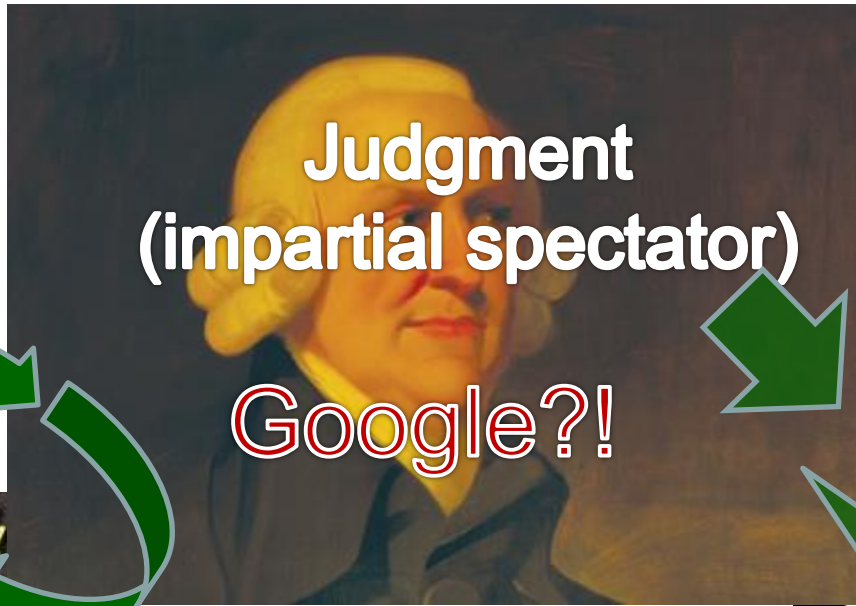
A) Historical Background

(Robinson Crusoe in 1719.)

a. Mercantilism or absolutism : Globalization



b. Physiocracy : It immediately preceded the first modern school, classical economics, which began with the publication of Adam Smith's The Wealth of Nations in 1776.



- Edward Snowden Case; Someone's Privacy protection distract an prevention of international terrorism.
- Democratic=Freedom



contradiction

- Swiss Banking Case; Bank secrecy (or bank privacy) is a legal principle in some jurisdictions under which banks are not allowed to provide to authorities personal and account information about their customers unless certain conditions apply
- Absolutism=Need Privacy



Special Report

The World's Billionaires

03.10.10, 06:00 PM EST

1 - 24

RANK	NAME	CITIZENSHIP	AGE	NET WORTH (\$BIL)	RESIDENCE
1	Carlos Slim Helu & family	Mexico	70	53.5	Mexico
2	William Gates III	United States	54	53.0	United States
3	Warren Buffett	United States	79	47.0	United States
4	Mukesh Ambani	India	52	29.0	India
5	Lakshmi Mittal	India	59	28.7	United Kingdom
6	Lawrence Ellison	United States	65	28.0	United States
7	Bernard Arnault	France	61	27.5	France
8	Eike Batista	Brazil	53	27.0	Brazil
9	Amancio Ortega	Spain	74	25.0	Spain
10	Karl Albrecht	Germany	90	23.5	Germany
11	Ingvar Kamprad & family	Sweden	83	23.0	Switzerland
12	Christy Walton & family	United States	55	22.5	United States

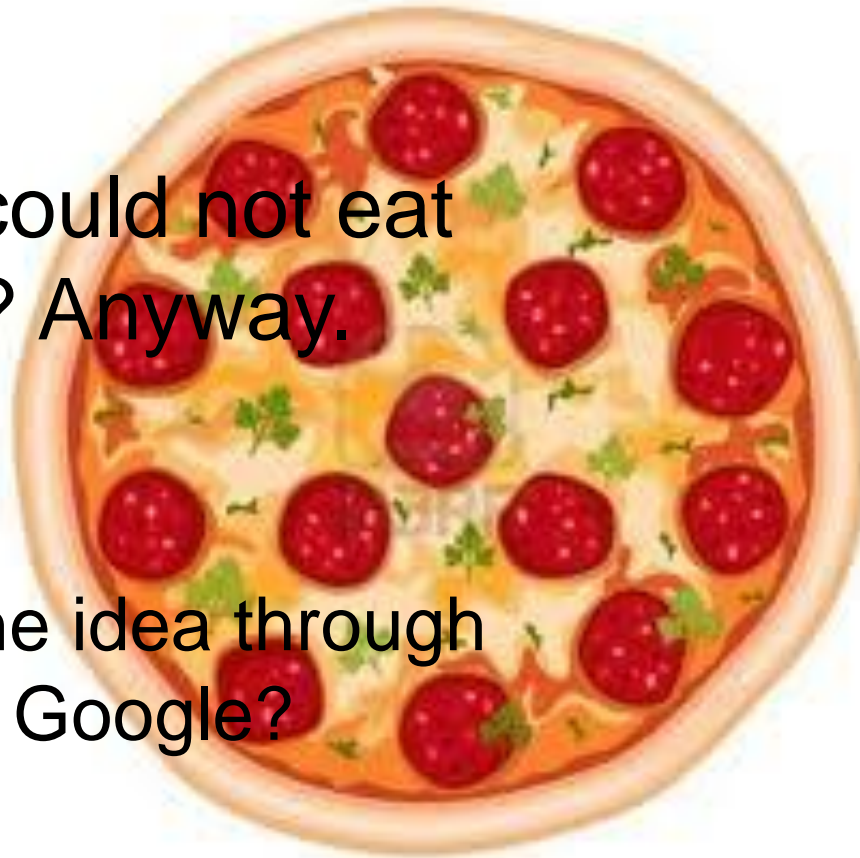
Name	Major Holdings	Value of Holdings	Change
 Bill Gates	MSFT CNI RSG	22.55 B	↓263.85 M -1.16%
 Carlos Slim Helu	AMX GPFOY MSNFY	50.37 B	↑876.65 M 1.77%
 Amancio Ortega	IDEXY	57.84 B	↓960.96 M -1.63%
 Warren Buffett	BRK.A	58.38 B	↓16.73 M -0.03%
 Larry Ellison	ORCL N	40.49 B	↓222.20 M -0.55%
 Christy Walton	WMT FSLR	33.50 B	↓53.60 M -0.16%
 Jim Walton	WMT	32.60 B	↑12.34 M 0.04%
 Alice Walton	WMT	32.43 B	↑12.28 M 0.04%
 S. Robson Walton	WMT	32.12 B	↑12.16 M 0.04%
 Sheldon Adelson	LVS	29.93 B	↓612.87 M -2.01%

<http://www.forbes.com/billionaires/list/>

- Theory of Moral sentiment could still apply to a case by case situations.
- How?
 - Social network (Church) in the past
 - Google?! Or Facebook
- incentives and property has changed?
 - Pizza?!
 - Depend on quality and quantity of Information is key for better understanding?
 - Could we do more ethical compared in the past?

Baby could not eat
pizza!? Anyway.

Or get the idea through
out from Google?



Thank you for your attention!

(No question, please give me just your comment.)