

# *The Quantified Employee Self: Ethical & Legal Issues*



*(ESRC Big Data & Employee Well-Being)*

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# 2017





# *The Quantified Self: 'self knowledge through numbers'*

*“use of personal data to improve one’s health and well-being. The concept of Quantified Self entails tracking exercise, sleep patterns, diet and other factors and making lifestyle changes based on the results. The term “Quantified Self” also refers to an informal group of manufacturers and users of self-tracking instruments that connect through live conferences and online forums.”*  
*(Investopedia.com)*

- Not necessarily new, not necessarily ‘big’ data in traditional sense*
- Health: informed or ‘expert patient’ concept*
- Lifelogging, self-tracking, personal informatics*
- Self-examination, self-improvement, self-obsession?*



TABLE 1. QUANTIFIED SELF TRACKING CATEGORIES AND VARIABLES

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Physical activities: miles, steps, calories, repetitions, sets, METs (metabolic equivalents)

Diet: calories consumed, carbs, fat, protein, specific ingredients, glycemic index, satiety, portions, supplement doses, tastiness, cost, location

Psychological states and traits: mood, happiness, irritation, emotions, anxiety, self-esteem, depression, confidence

Mental and cognitive states and traits: IQ, alertness, focus, selective/sustained/divided attention, reaction, memory, verbal fluency, patience, creativity, reasoning, psychomotor vigilance

Environmental variables: location, architecture, weather, noise, pollution, clutter, light, season

Situational variables: context, situation, gratification of situation, time of day, day of week

Social variables: influence, trust, charisma, karma, current role/status in the group or social network

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Source: K. Augemberg.<sup>1</sup> (Reproduced with permission from K. Augemberg)

*Cited in Swan (2013)*

# *Case for Big Data & Quantified Employee Health*

- *Strong within-subject, repeated measures data: ‘micro-randomised trials’*
- *Early interventions, preventative, ‘nudges’*
- *Optimised health & exercise regimes*
- *Personalized medicine & mobile interventions*
- *Empowerment, self-insight (‘Know Thyself’)*
- *Change management: continuous individual change*
- *Real-time feedback*
- *Popular outside of work (‘spillover’, ‘work-life’)*



# *The Case Against Big Data & Employee Health*

- *Productivity obsessions (e.g. ‘life hacks’)*
- *‘Algorithmic prisons’ – e.g. health insurance*
- *Inequality of access & skills (‘digital divide’) & inclusion concerns*
- *Usual analytics ‘pitfalls’ & risks of misinterpretation or ‘mis’-implementation*
- *‘Digital Taylorism’*
- *Monitoring & privacy concerns*
- *Usability ‘gripes’, glitches & hassles*
- *Unmanaged emotions*
- *Lack of reflection outside data*



# *Selected Legal Concepts & Frameworks (U.S. & EU)*

- 1. The Health Insurance Portability and Accountability Act of 1996 (HIPAA)*
- 2. FDA issues guidance, but will not regulate apps, not 'medical devices'*
- 3. Unauthorised disclosure & (mis)use of data may breach contracts, but depends on user's privacy settings*
- 4. Electronic Communications Privacy Act (ECPA) ambiguities over 'electronic communication' (transit only) & 'tracking devices' (exempt)*
- 5. Law enforcement: what data can be 'reasonably' searched for & seized?*
- 6. EU General Data Protection Regulation (GDPR) (2018)*

*Hall (2014); Leibinger (2016)*





# *Additional Ethical & Social Concepts & Concerns*

- 1. Algorithmic accountability - critically examining the ethics of algorithmic processing*
- 2. Epistemic injustice (Fricker 2007) – rights & fairness in ‘knowing’ & interpretation*
- 3. ‘SuperBoss’ & extreme physical endurance in leaders – hyperactive executives*
- 4. ‘Digital divide’ & digital inequality – access & usage within & across countries*
- 5. Bioethical & bio-political implications – ‘data ethics’ (Black Mirror!)*





# How Governments Can Promote Open (Big) Data McKinsey (2013-14)

## Provider

- Capture information electronically
- Release data publicly and regularly
- Identify ways to improve data quality

## User

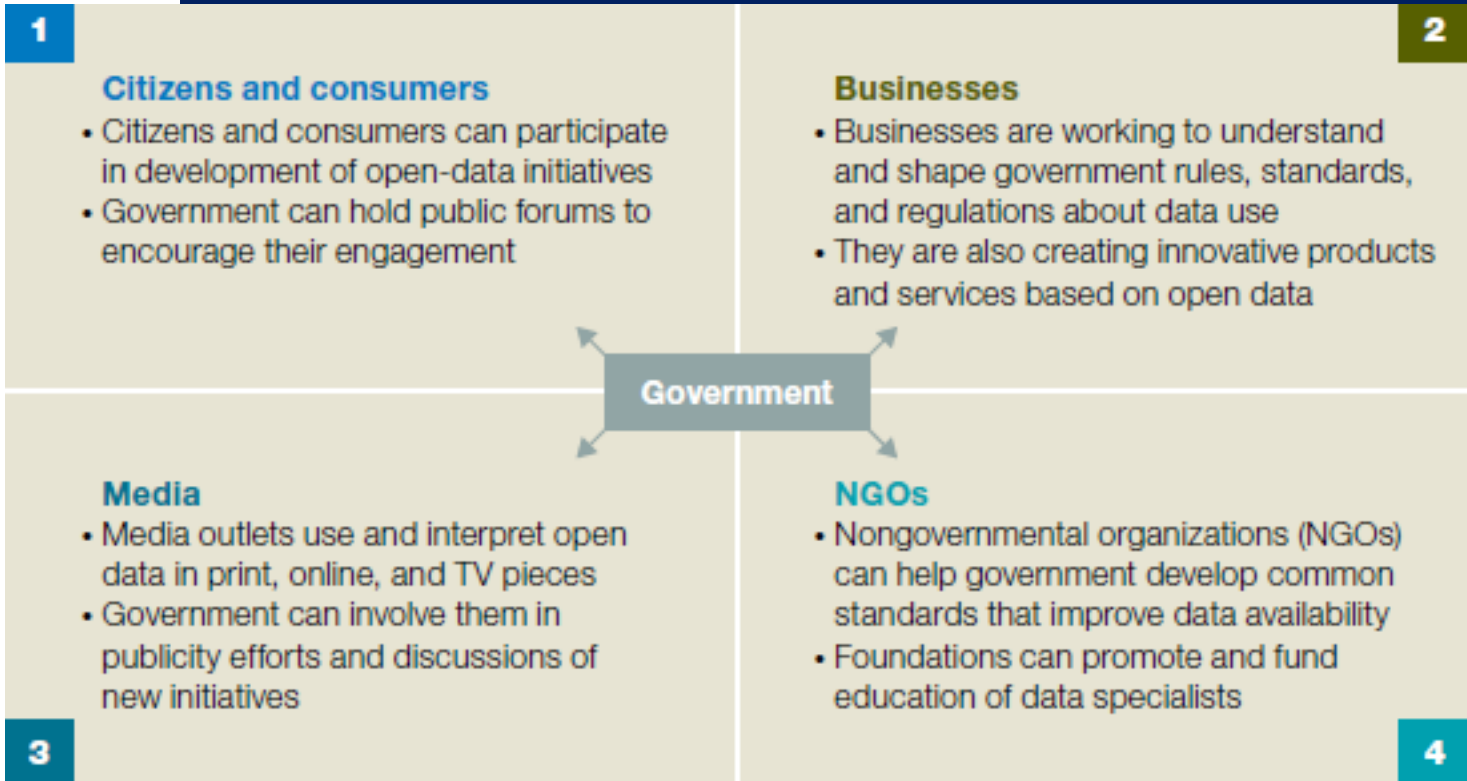
- Apply sophisticated analytics to improve decision making, offerings, and accountability
- Invest in people, tools, and systems

## Catalyst

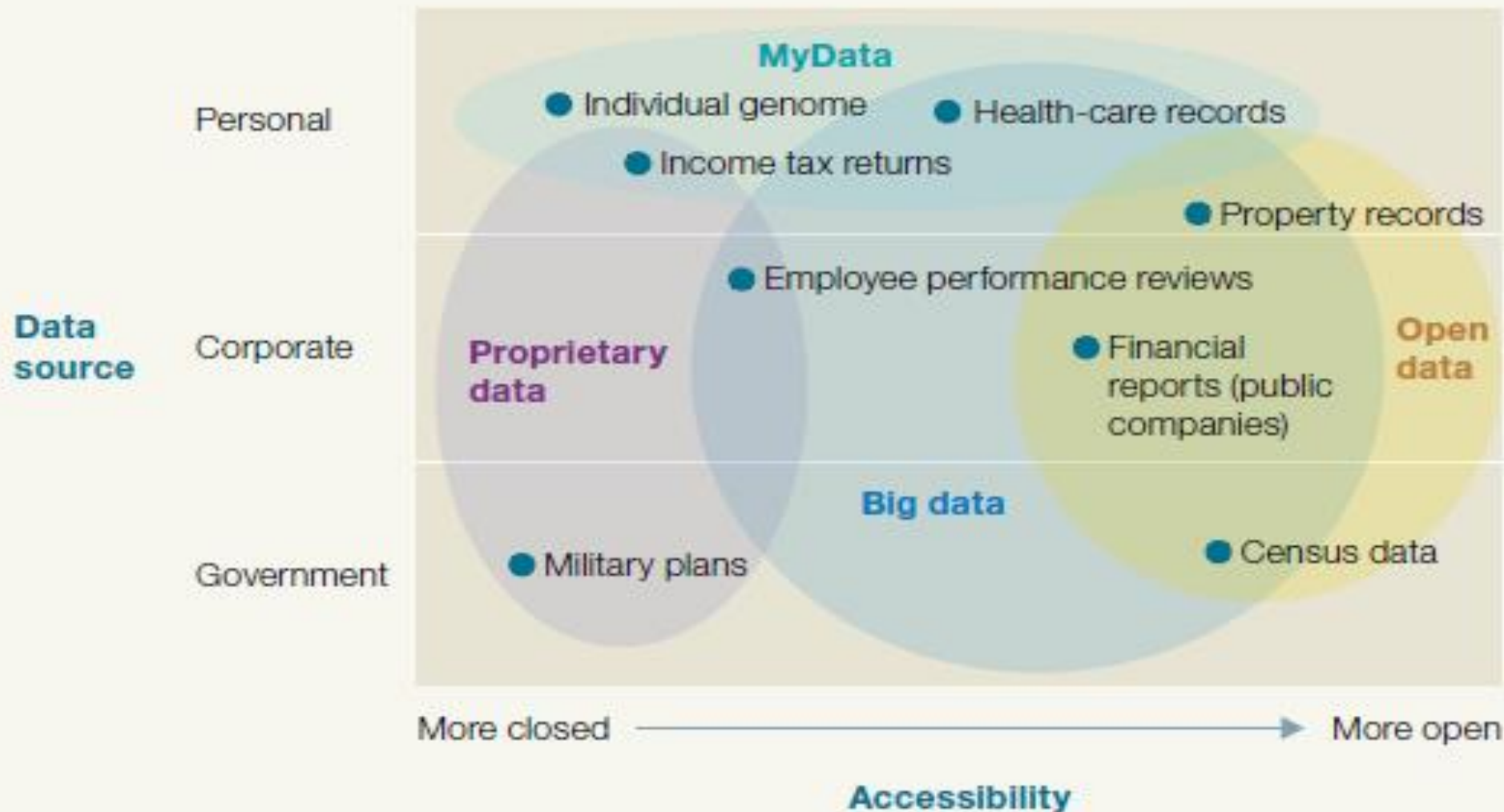
- Build an open-data culture
- Convene stakeholders
- Champion the movement

## Policy maker

- Make rules for internal and external use
- Establish standards for data quality and format



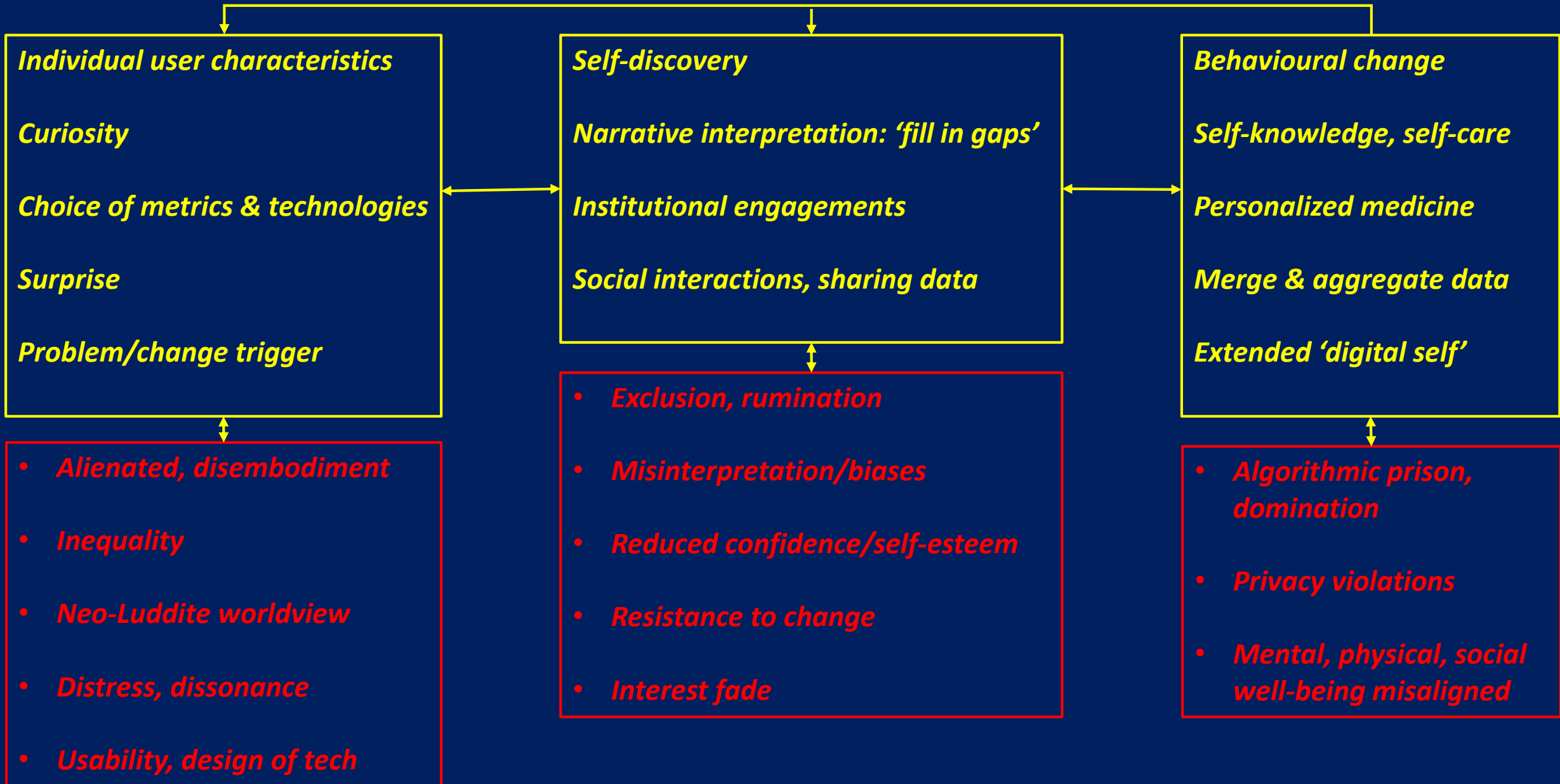
**Open data can come from individuals, companies, or governments, and it differs from other data types in its degree of availability.**



# *Other Research/Evidence on the Quantified Self*

- *General positive effects of self-management, but concerns about sharing*
- *Psychology concerned with conditions for behavioural change*
- *Phenomenology focuses on user experience & context of use*
- *Humanistic focuses on critical, historical & societal implications*
- *Bodies and devices 'entangled' in ways that can be contradictory*
- *Whether or not quantified self threatens social interaction & community*
- *Feminist & post-structuralist concerns about 'health' & 'wellness'*
- *'Biopedagogy' – learning & training us to live healthier lives*

# *An Embodied Sensemaking Approach to Employee QS*

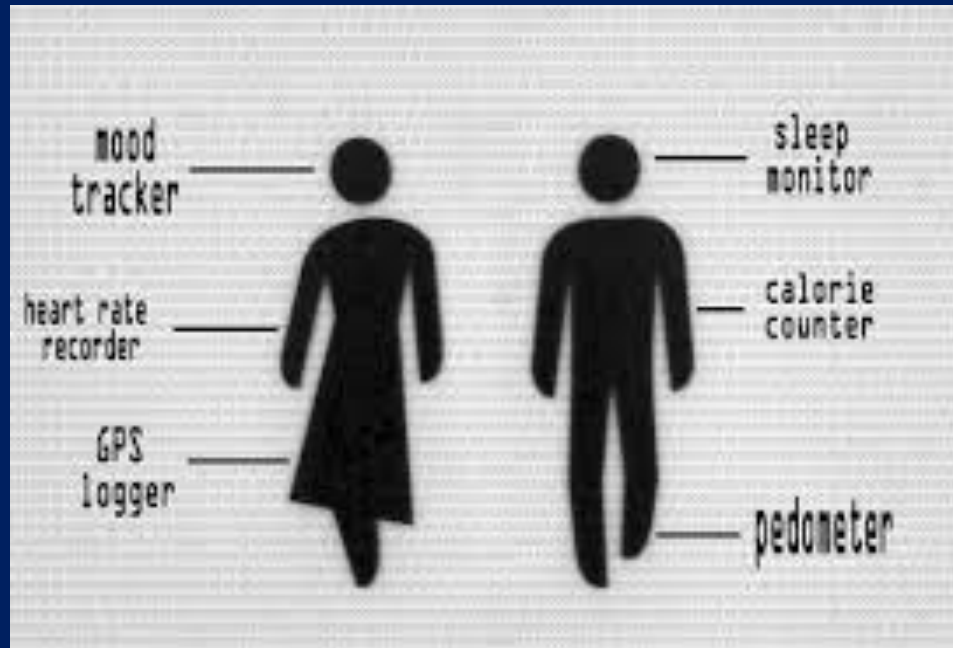




# *Conclusions & Implications for Future*

- *Balancing empowerment with paternalism, privacy with transparency*
- *Positive implications for self-managing, preventative healthcare*
- *'Care of self' – ethical & legal responsibilities for our data & data of others*
- *'Transhumanism' – extending & transferring ownership & rights*
- *Evidence-based? OB theories of motivation, well-being, performance*
- *Aggregation: quantified selves to quantified communities, organizations etc.*
- *Sensemaking (Calvard 2016): cycles of interpretation from data-driven world*
- *'Neo-Luddite' resistance to technologies should be considered*
- *Must ensure 'technology' isn't kept separate from other disciplinary research!*

***Thanks for your attention – questions & comments welcome***



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