



THE UNIVERSITY of EDINBURGH
Edinburgh College of Art

Network Plus: Human Data Interaction (HDI)

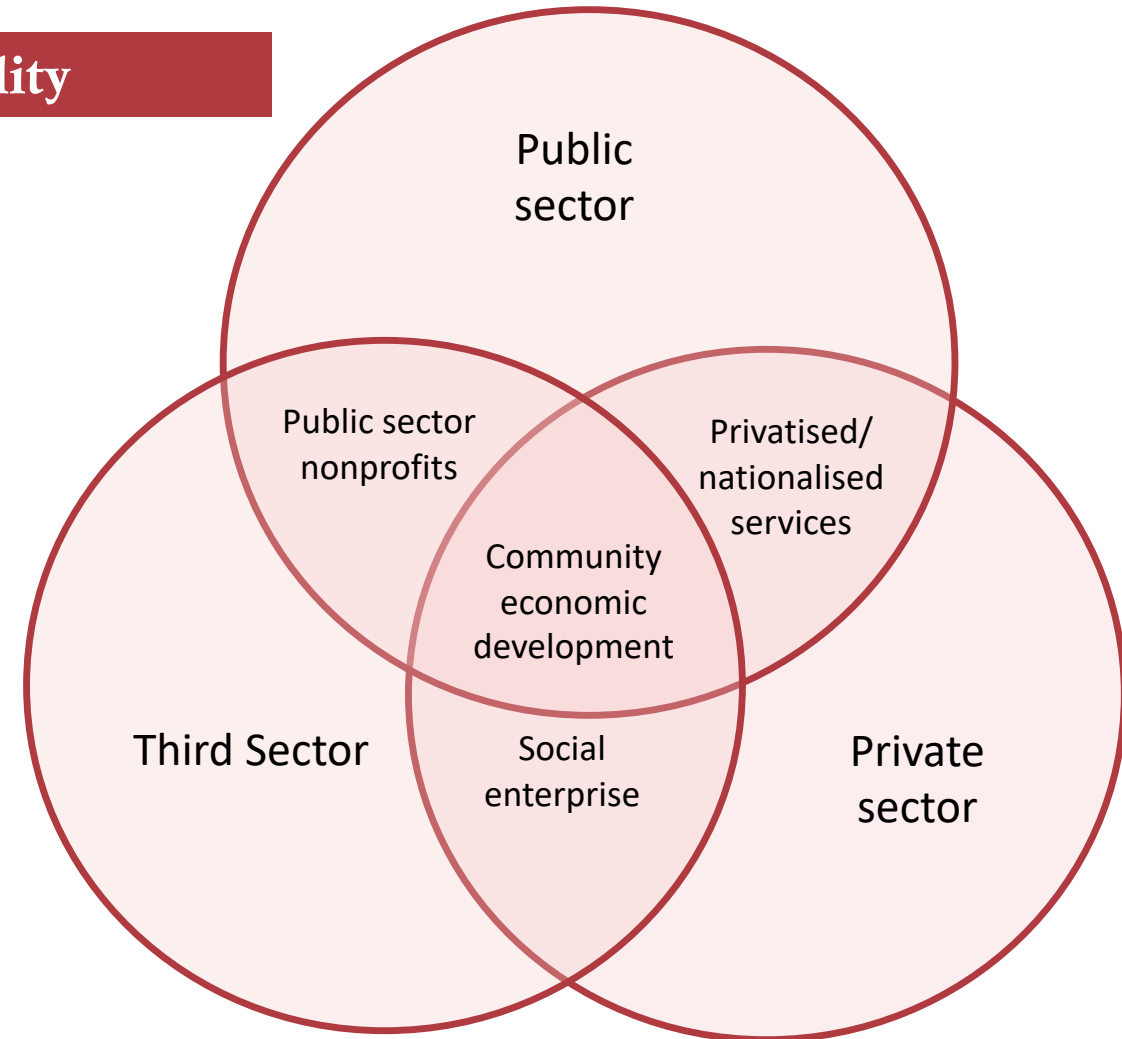
Ewa Luger

University of Edinburgh

Human Data Interaction: Legibility, Agency, Negotiability

“To establish the foundations for a new science of data-driven systems through the framework of Human Data Interaction”

A portfolio of projects and collaborations spanning all socio-economic sectors, linked by this framework



Investigators and collaborators



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Nottingham City Council



Microsoft Research

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TECH CITY

CATAPULT Digital

L&W LEARNING AND WORK INSTITUTE

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IALS INSTITUTE OF ADVANCED LEGAL STUDIES

NHS

NOKIA Bell Labs

creative england

MindTech

THE DATA LAB value from data

Advisory Board

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Jennifer Martin (NIHR MindTech)

Abigail Sellen (Deputy Director, MSR)

Prof. Chris Taylor OBE (U. Manchester, NewMind NetworkPlus PI)

Richard Ward (Government and Regulatory Affairs, IBM)

(ARM) ?

Human Data Interaction

HDI goes beyond transparency of data sharing/analytics, to include choices, actions and effects

Brings ethics to the forefront of systems design

A framework that is both a critical lens, and a basis for practical action

HDI draws upon traditional ethical concerns, such as autonomy, consent and agency

Frames those concerns in ways that speak directly to the technical community

Three core tenets: legibility, agency and negotiability

Legibility: enhancing the comprehensibility of data about people

Agency: empowering the individual to act in response to inferences/actions made on the basis of their data

Negotiability: influencing others' use of one's personal data, thereby enhancing one's control over it

Core Activities

45 projects: 9 at £50k, 9 at £10k, and 27 at £2500

All projects to directly address at least one of HDI's three tenets.

Investigators will work with public/third sector partners directly, to create project descriptions and problem/benefit statements, actively matching them to people from non-academic sectors.

Proposals assessed not only on technical goals, but on ethical and/or social impact, strategy for sustainability beyond the term of the project, and their commitment to equality, diversity and inclusion.

HDI Network Plus: Workshop 1

‘AI Intelligibility and Public Trust’

Tuesday 4th December 2018; 10:00-16:00

Microsoft Research, Cambridge, UK

Themes

1 AI intelligibility and public trust (workshop in Cambridge, Dec 2018)

Ways to improve upon the established system design goals such as algorithmic transparency, via HDI's core concepts.

Abigail Sellen (Deputy Director, Microsoft Research Cambridge), Michael Evans (BBC), Dan Hill (Arup), Ewa Luger (U. Edinburgh).

2 Beyond 'Smart Cities' (Edinburgh, Summer 2019)

Data-centred systems for urban settings, and balancing greater information about citizens with individual rights and interests.

Drew Hemment (FutureEverything & U. Edinburgh), Nora NiLoideain (Inst. of Advanced Legal Studies), Dan Hill (Arup), Matthew Chalmers (U. Glasgow).

Themes

3 Art, AI-created content, & industrial/cultural effects (London, pre-workshop May, main workshop 4Q 2019)

Advanced AI/ML techniques for composition, performance and broadcasting, with an emphasis on how legibility, agency and negotiability can be used to address the tension between human creativity and system autonomy.

Atau Tanaka (Goldsmiths), François Pachet (Spotify), Carl Stevens (Arts Council England), Ghislaine Boddington (Body Data Space) and Tadeo Sendon (Music Hackspace).

4 Data beyond the human lifespan (2Q 2019)

How can HDI concepts help us design for processes of infrastructural evolution that continues over decades?

Matthew Chalmers (Glasgow), Nora NiLoideain (Inst. of Advanced Legal Studies) and Hamed Haddadi (Imperial)

Themes

5 Mental health (Nottingham, October 2019)

Data-centred analytics could drive diagnosis, monitoring, and treatment, if privacy and security concerns among patients and clinicians, rooted in issues of information governance and data ethics, can be addressed.

Jennifer Martin (NIHR MindTech), Elvira Perez (U. Nottingham), Roma Armstrong (NHS Greater Glasgow & Clyde), Prof. Chris Hollis (NIHR BRC Mental Health, Nottingham)

6 Auditing, accounting and ledgers (London, 3Q 2019)

Accountancy is vastly influential ‘infrastructure’ that is centred on trusted, legible systems. We will explore how it can build on its current practices and knowledge—rooted in analogue (paper-based) materials—and take advantage of new digital forms of ledger, audit trail and account, such as blockchain.

Ewa Luger (U. Edinburgh), Matthew Chalmers (U. Glasgow), Martin Martinoff (Institute of Chartered Accountants in England & Wales), Burkhard Schafer (U. Edinburgh)

Themes

7 Skills, Education and Training

How can HDI help us improve or adapt the ways that people— from professional data scientists to the general public—learn about data-driven systems' functions, benefits and risks?

Maren Deepwell (Association of Learning Technologists), Catina Barrett (Dept. for Education), Brian Hills (Data Lab), Ewa Luger (U. Edinburgh)

8 AI and the regulatory environment in the UK

The effects on system design of competition laws, as well as consumer protection, privacy and data protection laws. Does regulation provide a sufficient answer to the question of trust, or are other legal and/or technical initiatives necessary?

Richard Ward (Government and Regulatory Affairs, IBM), Burkhard Schafer (U. Edinburgh), Ewa Luger (U. Edinburgh).

Tensions and constraints

Academic sites are basically the only institutions that can lead a project

Exceptions: NHS Trust, hospital, board, primary care trust or GP practice

We aim to involve institutions in other sectors where possible and appropriate

Especially the third sector, and non-academic part of the public sector

Such institutions cannot formally be project leads or partners

However, they may receive payment from the grant by being subcontracted to provide a specific service

Funding proposals will be assessed by a set of reviewers spanning the sectors

Next Workshop theme

‘Beyond Smart Cities’

May/June

Edinburgh, UK

Resources

Web site for the HDI NetworkPlus

<http://hdi-network.org>

Also two project-internal JISC-hosted mailing lists

Twitter handle

@hdinetwork