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# Quantified Data & Social Relationships

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**Abstract**

This one-day workshop will encourage the emergence of more critical and socially oriented perspectives to a data-driven life. We adopt a focus on how data mediates *relationships* – personal, professional, across social networks and cross-culturally – to consider the social and cultural implications of quantified lifestyles. At the workshop, attendees will engage in panel discussions, and a series of ‘speed-dates’ to develop a catalogue of compelling relationships with data, which exemplify the social nature of personal informatics tools, and the opportunities and challenges for design.

**Author Keywords**

Data-Driven Life; Quantified Self; Personal Informatics; Relationships; Experience-Centred Design; Social Computing;

**ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

**Introduction**

*"For a long time, only one area of human activity appeared to be immune. In the cozy confines of personal life, we rarely used the power of numbers.... A journal was respectable. A spreadsheet was creepy."*

Gary Wolf (2010)  
New York Times

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Wolf [17] discusses the emergence of the “data-driven-life”. Until recently, living by numbers seemed anachronous to everyday life, even “creepy”. Data was the preserve of dieters and athletes, and often treated as private [3]. But this has changed, firstly with the emergence of the quantified self [2] and more recently with the proliferation of personal informatics applications and devices that “collect relevant information for the purpose of self-reflection and self-monitoring” [9].

Terms such as “the quantified self” and “personal tracking” suggest that data is individual and personal. However, this has never really been the case. Self-tracking is done in situ and in the contexts of friendships, family life, workplaces and so on. Moreover, tracking can relate to shared places such as the home, and to shared technologies and devices. Tracking might also be of others, such as employees or relatives. Therefore we ask, how does such data fit with, mediate and change our everyday social relationships?

### **Background**

Building on numerous prior CHI & UbiComp workshops in this field (see [personalinformatics.org](http://personalinformatics.org) and specifically our CHI 2015 workshop [5]) we hope to bring together researchers and practitioners for a workshop that focuses explicitly on the implications of data-driven lives for social relationships (online or offline).

The issues and challenges in this area go beyond an instrumental view of data and concern for the efficacy of application in supporting outcomes such as behavioral change (to reduce energy consumption, improve recovery, increase productivity etc.). It is

important to understand and address the ways in which data becomes enmeshed with identities and social relationships. There is clearly more to a data-driven life than becoming fitter, happier and more productive [7].

Critical perspectives on data have emerged most strongly in the humanities and social sciences (e.g. [3,11,12]). Perhaps most relevant to the mediation of relationships, Lupton offers the concept of ‘lively data’ [7]. Lively data encompasses the recursive and vital nature of personal digital data: these data are about human life itself, they are lively as they are constantly moving around in the digital data economy, they are brought into people’s lives as part of data practices and they possess value that can contribute to livelihoods.

Within HCI, Ayobi et al. [1] have noted how an initial stream of personal informatics research primarily concerned with self-knowledge, self-reflection and behavioral change (e.g. [8,9]) has been supplemented in recent years by phenomenological and humanistic views on how tracking is experienced and grounded in everyday life – described by Rooksby as ‘Lived Informatics’ [13]. These views look beyond the functionality, ease of use or effectiveness of a technology. Research questions tend to be more open, with a view to gaining a broader understanding of how people think and feel about self-tracking technology. Researchers have investigated in detail the stories people tell themselves, and each other with data, as ‘data-work’ [4,15] and ‘data narratives’ [16]. Taylor et al. [14] provide a description of ‘data-in-place’ to detail how social, cultural, political and historical contexts are key – how data comes to be situated, to matter and to settle in a place.

Extending this prior work, our attention in this workshop is focused on *how data is situated and meaningfully engaged with in human relationships*, serving both to document and influence those relationships. As such, it is the phenomenological and humanistic aspects of tracking to that will be of key consideration at this event.

### **Quantified Data and Relationships**

We are interested in all kinds of social relationships, mediated or affected by data, either at the present time, or in the near future. These might be intimate, *personal relationships* (e.g., between family, couples, housemates, or with pets); *professional relationships* (e.g., work peers doctor/patient, teacher/student(s), managers/staff); relationships across *social networks* (e.g., support groups, teams, neighbors, or communities); or *cross-cultural relationships* (e.g. between nationalities, languages, or religions). In each case, the central question we hope to develop with the workshop is this:

*How do we design for shared interactions and experiences with data, which acknowledge the messiness, intricacies, transitions and sensitivities within human relationships?*

Although privacy is often the most immediate concern in the socializing of data, our workshop seeks to look much further than this. There are a much wider range of questions and issues that arise when looking at the social contexts and meanings of data. How can people be polite, affectionate or humorous with data? How does data foster or intervene in shared rituals and habits? Are there cultural values, which can be encompassed or transgressed with data? These

questions articulate a broad-minded design perspective – where we emphasize designing interactions with data that prioritize social experience, rather than seeking only ‘actionable insights’ towards some specific *personal* behaviour change.

### *Aim of the Workshop*

The successes of previous workshops in the area of personal informatics demonstrate the breadth of existing researchers studying data-driven technologies. However, the ‘Beyond Personal Informatics’ [5] workshop highlighted the appetite for more critical and socially oriented approaches to these technologies.

One particular aim of the workshop will therefore be to shift discourse that exists around personal informatics and self-tracking from being largely focused on individuals, to encompass social relationships, experiences and cultural norms and expectations.

As such, the workshop aims to develop a catalogue of compelling relationships with data, which exemplify the complex and social nature of personal informatics tools, and the opportunities and challenges for design.

### **Areas of Interest**

The theme of data and relationships is deliberately wide-ranging in its scope. The following are examples of the areas of interest that we hope to address with attendees at the workshop.

#### *Data and social relationships*

- Data in family and home life
- Data, dating and relationships
- Data, working relationships and professional identity

- Data in shared and co-operative leisure activities

#### *Shared Interactions with Data*

- How is the meaning and value of data jointly established/interpreted?
- How do we get beyond competition when sharing data?
- What are the social and cultural norms structuring data practices?

#### *Data & Identities*

- How are past, present and future identities bound up and shared with data?
- How can quantified data be a mode of personal expression?
- What can we learn about others and ourselves through sharing data?
- What can data *not* tell us about ourselves?

#### *Data Inequalities*

- How do people challenge or resolve problematic data?
- How do actors' relative agency and power-balance play out when mediated with data?

#### *Systems/Platforms for Sharing*

- How can we design for sharing data in different situations and contexts?
- What are examples of good/successful shared data features/platforms?

#### *Methods for Studying Data Relationships*

- How can we study natural/in-the-wild social interactions with data?

### **Pre-Workshop Plans**

We have already begun to approach experts in this field to serve on a broad international program committee to help us review a wide range of submissions. This PC will be listed shortly on our website.

Each PC member will review up to three submissions, on their quality and relevance to the themes of the workshop. The organisers will then meet to discuss all submissions, and agree those to be invited to the workshop. Beyond the quality and relevance of submissions, we will aim to ensure an interdisciplinary and balanced group of researchers in this field. Our PC will also help us solicit widely and internationally for contributions to the workshop. We will also directly approach previous attendees of the Beyond Personal Informatics workshop, inviting them to submit. We intend for 20-25 participants at the workshop. This will both support the interactivity of the speed dating activity and also reflects the historically widespread interest in personal informatics workshops at CHI.

The workshop website will be:

<https://openlab.ncl.ac.uk/datarelationships/>. This will communicate all relevant details about the workshop and once accepted and revised, will host participants' workshop submissions prior to, and after the workshop. We will also use a Twitter account to publicise the workshop, before and after the event.

### **Workshop Structure**

We recognize that a principal reason participants attend workshops is to meet and interact with other researchers working in the same area. Our one-day workshop will be highly interactive, while allowing researchers brief time to present their own work.

### **'Speed Dating' Activity**

Sharing cards that represent each participant's interest in data and relationships we will ask each 'date' to rapidly ideate and respond to the following prompts:

*Who is involved? What is their relationship?*

*What kind of data is at play?*

*Where does it take place? Co-present, or technology mediated?*

*An example of a scenario (positive or negative)*

*What research questions emerge from this?*

#### *Morning Session – Discussion Panels*

This will comprise rapid presentations (5 minutes, 3 slides max) by each participant. These will be thematically structured into approximately three panels, for shared questions and discussion.

#### *Afternoon – Creating a Catalogue of Data-Relationships*

Our afternoon activity is designed to be highly interactive, and work towards generating an indicative catalogue of relationships with data. We hope that this sets out a compelling research agenda to pursue after the workshop. Inspired by previous successful examples of 'dating with data' [6] and speed-dating as a generative design activity we propose to use the first half of the afternoon as a speed-dating activity (see sidebar). The overall aim of this activity will be to rapidly generate the kernels of a number of compelling examples of relationships with data.

We will ask participants to choose up to five cards, which represent their interests in data and relationships. These will include particular roles (e.g. parent, teacher); data or technologies (e.g. heart rate, Nest Thermostat); and social experiences or values (e.g. remembering, caring). The cards will be generated prior to the workshop based on submissions, and expanded during the morning's panel discussions.

Participants will share these cards on 5 minute 'dates' with fellow attendees. On each date, attendees will be asked to choose two or three cards between them, and use these to generate the outline for a scenario of how quantified data could mediate a relationship. To guide them, they will be asked to jointly respond to the prompts shown in the sidebar.

The speed of the dates is intended not only to push the quick description of ideas, but we imagine attendees leaving our workshop with several unfinished conversations they might seek to take up again during and after the main conference.

Anticipating around 20-25 participants at the workshop, each participant will enjoy 10-12 'dates', and after one hour's activity, the outline of up to 100 possible data relationships would be generated. Working next in small groups (4-6), these 'sketches' of possible relationships would be refined through small-group discussion, and the best developed in more detail. Lastly, these would be passed on to a fellow group for critical annotation.

Finally, rejoining as one group the workshop participants and organizers would review the examples of data relationships together, and decide upon those to be refined after the workshop, for inclusion in a catalogue of data relationships. Our hope is that this catalogue highlights the messiness, intricacies and sensitivities required in human relationships with data. Later refined, this catalogue will be the primary output of the workshop, and present in a concise and compelling way, the need for a critical and socially oriented perspective towards a data-driven life

#### **Post Workshop Plans**

Our aim in the workshop is to use a thematic focus on data relationships as a means to open up research opportunities for more socially oriented approaches to studying data.

Workshop participants will be invited at the close of the session to join the organizers in consolidating the

## Workshop Schedule

09:00 – 09:15

*Welcome*

09:15 – 10:00

*Panel 1*

10:00 – 10:45

*Panel 2*

10:45 – 11:00

*Coffee Break*

11:00 – 11:45

*Panel 3*

11:45 – 12:15

*Prepare Speed-Dating Cards*

12:15 – 13:45

*Lunch*

13:45 – 14:45

*Speed-Dating Activity*

14:45 – 15:00

*Coffee Break*

15:00 – 16:00

*Group Scenario Work*

16:00 – 17:30

*Shared Critique and Reflections*

17:30 - evening

*Optional dinner & drinks in Denver*

examples of data relationships that were developed at the workshop, for reporting in publication at a high impact HCI venue. This collaborative process will also offer a concrete first step in sustaining a community of interest after the workshop.

We also propose that the relationships and scenarios in this catalogue communicates beyond academic circles, and could adopt a number of formats – from magazine style, newspaper, comic strip, or even film scripts. Our intention would be to develop these over time, as boundary objects to engage a wider range of practitioners and researchers within HCI and beyond.

### Organizers

**Chris Elsdén** is a doctoral student at Open Lab, Newcastle University. His research employs qualitative and speculative methods to investigate experiences of identity and remembering in a data-driven life. He was the lead organizer of the successful CHI 2015 workshop 'Beyond Personal Informatics'. He is the lead organizer and contact for this workshop.

**Abigail Durrant** is a senior research associate and Leverhulme Fellow at Open Lab. Using phenomenological and practice-based methods, Abigail's research explores how personal expressions of identity can be supported by digital and Internet-enabled technologies. She has a track record of successfully organizing and facilitating previous CHI workshops, offering design expertise to help scaffold creative workshop activities.

**Aisling O'Kane** is a post-doctoral research fellow at the UCL Interaction Centre. Her research focuses on the personal use of mobile devices for health and

wellbeing. She has organized three CHI workshops, most recently leading the CHI 2015 workshop on DIY health.

**Paul Marshall** is a senior lecturer in the UCL Interaction Centre. A current focus of his research is on the everyday use of data technologies by individuals and in communities. He has previously organized four well-attended CHI workshops.

**Rowanne Fleck** is a lecturer in Human Computer Interaction in the HCI group at University of Birmingham. Her work explores the nature of collaborative reflection around different forms of personal and public data in order to promote learning from experience and the understanding of issues around work-life-balance.

**John Rooksby** is a research associate in Human Computer Interaction at the University of Glasgow. He is interested in the design of novel self-tracking technology and how this technology is used in everyday life. He has published several papers at CHI on this topic, and has organized several workshops in the UK, designed to bring together researchers from health, data science, and HCI.

**Deborah Lupton** is Centenary Research Professor in the News & Media Research Centre, Faculty of Arts & Design, University of Canberra. She is the author of *The Quantified Self: A Sociology of Self-Tracking*. Her current research focuses on critical approaches to data and digital health technologies.

## Call for Participation

This highly interactive workshop aims to gather a mix of researchers and practitioners from academia and industry, with a shared concern and critical perspectives on a data-driven life and its connection to social relationships.

'Relationships' provide a focal point for understanding the social implications of personal informatics, but this is deliberately wide-ranging in scope. We particularly encourage work and work-in-progress which are drawn from practical, empirical or design-led experience working with data in social contexts. This may include (or go beyond):

- Case studies, ethnography or 'vignettes' of data situated in particular relationships;
- Novel technology deployments in social contexts;
- Research through design or speculative design projects;
- Reflections on socially-oriented methods;
- Reflective or critical pieces.

Participants are asked to submit a *4-page position paper* (in CHI Extended Abstract format) – by email to [datarelationshps@outlook.com](mailto:datarelationshps@outlook.com) – presenting aspects of their own work that respond to the areas of interest above. Submissions should also include a short paragraph describing two 'data relationships' the authors are especially interested in discussing at the workshop, as well as a short personal biography (max 200 words).

Through panel discussions and a series of 'speed dates' with other participants, the workshop will generate a compelling catalogue of 'data relationships', which richly describe the messiness, intricacies and sensitivity of human relationships, as they are mediated by data.

At least one author of each accepted position paper must register and attend the workshop. All participants must register for both the workshop and for at least one day of the conference.

## Website

<https://openlab.ncl.ac.uk/datarelationshps/>

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