

# Designing for Data Legibility, Negotiability and Agency in Personal Data Driven Media Experiences

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## ABSTRACT

Novel media experiences are currently witnessing a shift towards personal data leverage which is helping produce highly customised content that is relevant and relatable to the audiences. But while personal data affords many capabilities for media service enhancement, it simultaneously introduces a number of socio-technical challenges into the scheme. Concepts such as data legibility, negotiability and agency could be useful in addressing some of these challenges. Nevertheless, the contextualisation of these principles within the scope of media and exploration of design measures within this space remains an active challenge. This workshop aims to explore this space by bringing together media enthusiasts, designers and researchers in order to help clarify these contextualised definitions and apply them by looking into practical design responses to these challenges.

## CCS CONCEPTS

• Ubiquitous and Mobile Devices • Interaction Design Process and Methods • Empirical Studies in HCI

## KEYWORDS

Data-Driven Media, Personal Data, Design, Legibility, Negotiability, Agency

## 1 Introduction

Modern media experiences are increasingly shifting towards data driven templates that leverage user personal data for experience enhancement. Such formats include an array of diverse interactive and adaptive media experiences usually encountered in virtual and augmented reality applications (Damiani, 2017; Robertson, 2017), physiologically driven stories (Pike et al., 2016; Ramchurn et al., 2019), data storytelling (Harris and Kamvar, 2006; Reich, 2015) and geolocative or geo-aware experiences (The Silent History, 2012; Holladay, 2013; Hazzard, Benford and Burnett, 2015). With the introduction of ubiquitous technologies such as the smart phone and IoT devices in the home, the potential of expression of this “data driven-ness” of media experiences has become impressively granular. This granularity, arising from the ubiquitous use of technology in the users’ everyday lives, has resulted in the creation of intimate knowledge about media audiences. Such increased understanding about the users helps with the creation, customisation and presentation of media experiences which have the potential of speaking directly to the interests of audiences and therefore become increasingly more relevant to the consumption of such media.

But while such extensive involvement of personal data affords media experiences with capabilities never before seen or imagined, they also present a set of socio-technical challenges that call to be considered (Sailaja, Crabtree and Stenton, 2017). These challenges need to be responded to and alleviated substantially if the adoption of such

media experiences are to be made feasible (Sailaja et al., 2019). Here, proper legibility, negotiability and agency (Mortier et al., 2014) over personal data has been called forth in previous literature as a means of said alleviation of challenges.

But while the potential of these principles in assuaging challenges introduced by personal data has been suggested on a gross scale in previous literature (Mortier et al., 2014), there is still the call for exploring their practical realisation and the subtleties associated with this process when considering the scope of media experiences. Here, the possibility of using design as a vehicle for investigation of this process whereby practicalising data legibility, negotiability and agency within media experiences through design is a space that presents much promise.

While there is one recent example of such work in the Living Room of the Future (Sailaja et al., 2019), with the varied range of media experiences audiences engage with and the different socio-technical scenarios that arise from these, this emergent space marks the need for further engagement, particularly from media enthusiasts and HCI researchers who hold the tools for making such design interventions a reality. Thus, this workshop intends to open up this very space to probe researchers and designers to envisage practical design responses sensitive to the personal data collection and use within modern data driven media experiences.

## 2 Aims and Objectives

This workshop intends to explore design realisations and responses to data legibility, negotiability and agency within media experiences through the following two aims:

### **2.1 Understanding how data legibility, negotiability and agency manifests in the context of media experiences**

While data legibility, negotiability and agency have been proposed as general guidelines to help respond to the challenges introduced by personal data use, their definitions and perspectives change across disciplines and context. Therefore, we believe there is the need to ground and contextualise what these terms mean within the scope of media experiences by deriving definitions that help apply these principles effectively into the everyday practical design of media experiences.

### **2.2 Exploring design possibilities for inclusion of data legibility, negotiability and agency within media experiences**

Using the previously derived definitions of data legibility, negotiability and agency within media experiences, we plan to explore practical applications of design recommendations and design suggestions that could be adopted by designers, media creatives and researchers in the future.

These aims will be worked upon in a chronological manner, as explained in the next section.

## 3 Draft Schedule

The format of the workshop will roughly be designed inline with the aims presented above.

### **3.1 Activity 1: Introduction**

The workshop will begin with an introductory section that presents data driven media experiences and the socio-technical challenges identified here. This talk will be led by the workshop organisers.

### **3.2 Activity 2: Group Brainstorm**

The presentation would be followed by a group brainstorm of the participants eliciting possible responses to these challenges.

### **3.3 Activity 3: Defining Data Legibility, Negotiability and Agency for Media Experiences**

After the brainstorm, the principles of data legibility, negotiability and agency would be presented and the results of the brainstorm would be categorised under these concepts by the participants, led by the facilitator. This grouping would thus help unpack what the three concepts mean to researchers and practitioners working with media experiences, thus edging closer to a more 'practical' and contextualised definition of these concepts.

### **3.4 Break**

### **3.5 Activity 4: Video Presentations**

The facilitators will present videos of previous design responses to the discussed challenges (Living Room of the Future (Sailaja et al., 2019) and GoggleBox (Gogglebox of the Future, 2019)) and explain how these projects realised the definitions of data legibility, negotiability and agency through design.

### **3.6 Activity 5: Design Sprint**

The aim of this session will be to encourage the participants (in groups of 3-5) to actively think about and come up with design responses to the proposed challenges within media experiences. The facilitators would provide support materials like ideation cards, iconography or other physical/digital probes that would help the participants with this process.

### **3.7 Activity 6: Wrap-Up**

The workshop is then wrapped up by the groups feeding back their ideas and reviewing/discussing the design solutions presented.

## **4 Solicited Submissions/Contributions**

For participating in the workshop, interested individuals should fill in an online application form/expression of interest which would be linked to all advertisement material (emails, tweets and other social media posts) sent out. The form would ask for the individuals' name, organisation, position within the organisation, research background [maximum 300 words], why they are interested in taking part in the workshop [maximum 500 words] and what they expect to take-away from their participation in the workshop [maximum 300 words].

## **5 Plans for Attracting Participants**

The workshop is a multi-partner initiative, with involvement from the Universities of Nottingham and Lancaster and BBC R&D. Within the University of Nottingham, the Mixed Reality Laboratory and Horizon Digital Economy Hub are centres of interest in media research (with a continuous track record of engagement with the TVX/ IMX community), personal data use and the social implications of personal data use. The workshop would be advertised to the researchers within these communities through lab meetings, presentations and social media. The same approach would be adopted at the Imagination Lancaster at the University of Lancaster who are particularly interested in design-led responses to the social challenges introduced by personal data use. Also, BBC R&D has rendered support to the workshop, allowing for dissemination of workshop invites to practitioners working on similar media technologies in their everyday research. The social media platforms of the said institutions and cross-university researcher mailing lists (both within the U.K. and international) would also be leveraged for reaching out to external researchers with potential interest in the field to express their interest and attend the event.

## **6 Organiser Bios**

### **6.1 Neelima Sailaja**

Neelima Sailaja, University of Nottingham: Neelima is a PhD student at the University of Nottingham with an invested interest in the use of personal data in media experiences, particularly the socio-technical implications of this shift. Her PhD research is "Understanding the Challenges of Using Personal Data in Novel Media Experiences" where she works with the BBC to uncover and explicate these socio-technical challenges from the perspective of both the users and service providers.

### **6.2 Derek McCauley**

Derek Robert McCauley is a Professor of Digital Economy in the School of Computer Science at the University of Nottingham and director of Horizon Digital Economy Research, an interdisciplinary research institute funded through the RCUK Digital Economy programme. He acted as a Specialist Advisor to the House of Lords European Union Committee into online platforms, and Chief Innovation Officer during the founding of the Digital Catapult. His research interests in this workshop includes the use of personal data in media experiences and the socio-technical implications of this process.

### **6.3 Adrian Gradinar**

Dr. Adrian Gradinar is an interaction and experience research designer within Imagination Lancaster at Lancaster University. Adrian is a strong believer that today we live in a mixed-reality space, found at the crossing of the digital world we experience daily and the physicality and materiality of the lives we actually have (and hopefully like). Based on these beliefs, his main research interests are focused on the design, interaction and overall experience of mixed-reality objects and spaces. In doing so, he mostly employs a practice-based approach to this research, exploring ideas around interactivity, personalisation, artificial intelligence, data privacy, immersion, more-than-human design approaches and better design of Internet of Things objects. This, so far, has generated

several public exhibits in venues such as The Tate Modern, The V&A London, FACT Liverpool, The Building Research Establishment in Watford, UK and PlayUK in Skopje, Macedonia.

#### 6.4 Paul Coulton

Paul Coulton is Professor of Speculative Design within the exploratory design-led research centre, Imagination, at Lancaster University. His research explores potential future applications of emerging technologies with consideration to the cultural landscape in which they may be deployed. In his most recent work he has pioneered the use of Design Fiction as a means of considering potential future technology adoption and the consideration of more-than-human perspectives in design processes. His work has been featured in the national and international press and won a number of international awards for innovation, including from Adobe and Nokia.

#### 6.5 Rhianne Jones

Dr Rhianne Jones leads a programme of research that deals with critical questions arising from the increasing use of data at the BBC and in public service broadcasting. She works with university and industry partners to conduct timely research that can inform technical and policy developments at the BBC. Rhianne's interests include the use of personal data in media, intelligent AI in media and Human Data Interaction in data driven media. Rhianne's previous research activities span a range of topics including social media platforms, algorithmic media and digitally networked publics. Rhianne has five years experience teaching in Higher Education and is currently an Honorary Research Associate at the University of Salford.

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