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# Studying lived experience and automated systems

# Studying Lived Experience and Automated Systems: The Case of Universal Credit

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## ABSTRACT

This paper applies the concept of 'lived experiences' to understand people's subjective and everyday encounters with automated systems. We reflect on how qualitative longitudinal research methods are useful for capturing the affective and emotional dimensions of these experiences; these flexible methods also allow for iterative changes that can react to new findings and participant feedback. Using our empirical study on Universal Credit (UC), the UK's largest social security payment, we demonstrate how studying lived experiences via qualitative longitudinal research helps us reflect on both the topic of the research and our position as researchers in relation to study participants. We argue that the lived experience framework is extremely valuable for understanding the consequences of automated decisions for users of these systems and to redress the uneven power dynamics of representing the voices of those sharing these encounters.

## KEYWORDS

Lived experience; Automated and algorithmic decisions; Digitalisation; Qualitative longitudinal research; Digital social security systems

## INTRODUCTION

In this short paper we argue for using the concept of 'lived experiences' to understand people's everyday interactions with automated and algorithmic systems. This framework is also useful for reflexively considering research study design, as it calls for researchers to examine their own position vis-à-vis their object of study. We draw on the idea of lived experience to reflect on our ongoing study of an automated social security system in the UK. The study, Automating Universal Credit, deploys qualitative longitudinal research as its primary methodology.

We begin with an overview of literature theorising lived experience generally and more specifically in relation to automated and algorithmic systems. We discuss how this framework encourages researchers to consider their own experiences while interpreting and presenting the findings of a study, particularly as they undertake representing the lived experiences of others. We then introduce Universal Credit (UC) and describe the study's qualitative longitudinal methodology, which has proven useful for capturing the experiences of UC claimants and for allowing an iterative approach that can react flexibly to new findings and participant feedback. We find that the idea of lived experience centres participants' emotions as they interact with an impersonal but vital automated system of social support. This framework also helps us reflect on methodological approaches that can redress the uneven power dynamics of representing the voices of those sharing their everyday interactions with this system. These findings can be useful to the ASIS&T community interested in exploring the social values and ethics underpinning data-driven, algorithmic information systems and in incorporating participant voice into research design.

## THEORIZING LIVED EXPERIENCE

Studies of lived experience and everyday life focus "on ordinary, everyday events (language, rituals, routines) while privileging experience as a way of knowing and interpreting the world" (Boylorn, 2008 p. 490). The concept of lived experience proposes that we come to understand the world based on these everyday subjective events and interactions. Intimate components of our identity–our race, ethnicity, gender, class, religious or political affiliation–shape these experiences and, as a result, our ways of knowing. These studies are also attentive to how subjectivity and emotions are embodied and grounded in a person's historical and social context, including societal hierarchies and inequalities.

Studies on lived experience draw from philosophy, humanities and the social sciences, including the sociology of subjectivity and emotions and feminist theory. Scholars have grounded their understanding of the term 'experience' in 20th century phenomenology, which explores how we encounter phenomena as embodied beings (Young, 2005; Kruks, 2014; McIntosh & Wright, 2018). Simone de Beauvior's work centred female experience in this lineage of thought; later, intersectional approaches led by Black and lesbian feminism decentred female subjectivity from a presumed white, heteronormative identity aligned with earlier work (Ahmed, 2006; Alcoff, 2006).

Researchers bring rigour to these studies through systematic observation and data collection along with more humanistic approaches of poetry and drama. Many studies of lived experience focus on marginal subjects and unorthodox accounts ignored in conventional academic studies (Scott, 1991), such as researchers' own descriptions of working as strippers (Ronai & Ellis, 1989), as undergoing abortions (Ellis & Bochner, 1992), and as wheelchair bound with MS (Mairs, 1996). Studies of lived experience, according to critical auto-ethnographer Robin Boylorn

(2008), who documents experiences of black womanhood, seek "to understand why some experiences are privileged over others" (p. 490).

Importantly, much of this literature argues for researchers to reflect on how their interpretations of what they study are also grounded in lived experience – researchers in this tradition commonly interrogate their own positionality. Researchers may deploy auto-ethnography, detailing intimate accounts of an experience, or they may bring the relationships they build with research subjects to the fore of the research design. Such approaches offer a way to understand "the positions from which we speak" and shed light on the often-hierarchical dynamic between researcher and research participant (Ellis & Bochner, 1992, p. 6). This framework therefore aligns nicely with qualitative longitudinal research methods, which, as we detail below, allow a reflexive, iterative approach to research design and ethics that can support reflecting on the dynamic between researcher and research participant.

## Lived Experience and Automated Systems

Directly relevant to our research are the small number of studies that have applied the concept of lived experience to algorithmic and automated systems. This work often focuses on how these systems are now part of quotidian life; they also alter our fundamental understandings of what we mean by 'experience' itself, as they turn instances of everyday life into quantified units that can then be processed and used to control those interacting with them (Pink et al., 2022). Nikidehaghani et al. (2022), for example, write about welfare recipients in Australia who confront a punitive automated debt recovery system programmed to ignore the individual lived experiences of recipients. In her in-depth ethnography Virginia Eubanks (2018) intimately details the personal toll of those subject to automated decision-making in social security, childcare and housing benefits systems in the U.S. Other studies in this vein examine people's situated, mundane interactions with algorithmic systems, such as users talking to Amazon's Alexa (Strengers & Kennedy, 2022) and news teams maintaining a news ranking algorithm (Svensson, 2022). Ziewitz and Singh (2021) use their study on credit scoring to highlight both the potential and difficulties of studying the lived experiences of data subjects who interact with opaque algorithmic systems.

People's lived experiences with automated systems also entail their emotions as they engage with them (Evans et al 2021). Shank (2014) states that "the use of technologies can be intricately tied to affective processes, both with emotions altering technology use patterns and technology use altering one's emotional state" (n.p.). Drawing on Latour's actor-network theory, Stark (2019) conceptualizes digital technologies as emotive actants that can intensify the "experience and expression of human feeling," and he calls for further research on affect and emotions related to digital and computational media (p.118).

Our research responds to Stark's call by studying the lived experiences participants have with an automated system, with a focus in this paper on the emotions this system elicits. In the next section, we offer some detail about our study of Universal Credit using longitudinal qualitative methods before drawing on the lens of lived experiences to present our findings on participants' emotional engagement with UC and to reflect on the study design itself.

## QUALITATIVE LONGITUDINAL RESEARCH OF AN AUTOMATED SOCIAL SECURITY SYSTEM

Our project investigates how recipients of Universal Credit experience its digital and automated features. UC is a conditional social security benefit in the UK introduced in 2012, and it is digital-by-default: recipients apply for it through a website and communicate with case managers through an online account. Recipients also use the online account to submit necessary documentation and check the statement they receive reporting their upcoming UC payment. In-person interactions related to this benefit are limited, though recipients not able to carry out tasks online may opt for phone calls instead. Conditions of receiving the benefit may include the requirement to work or to look for work, in which case recipients will have regular face-to-face meetings with work coaches in Job Centres.

UC is also partly automated: claimants' monthly payment is based on an automated system that calculates entitlements based on personal circumstances, monthly income and deductions made by the Department for Work and Pensions (DWP) (such as for past benefit overpayments, advance UC loans and so-called third-party deductions, which may include rent and utility arrears). Despite personal circumstances, such as number of children or disabilities, being quite stable over time, factoring in recipients' monthly income and deductions can lead to hugely fluctuating UC payments. Recipients' monthly income is determined based on data pulled from HMRC's (HM Revenue & Customs, the UK's tax agency) Real-Time Information (RTI) system, which reflects reported earnings by employers, or recipients themselves, in the case of self-employed people. The monthly income is taken into account in the calculation of one's next monthly entitlement: above a certain threshold, the more a person or household earns, the less UC payment they will receive.

Our study uses one-off interviews and qualitative longitudinal research to understand the experiences of recipients interacting with this dynamic system. Qualitative longitudinal studies are a powerful way to understand lived experiences, as they track changes over time (Patrick et al., 2021; Dwyer & Patrick, 2021; Neale, 2016) and can allow trust to build between researcher and participants (Millar, 2021; Holland, 2006; Lewis, 2007); they also

provide an opportunity to invite participants to retell their stories (Pulkingham et al., 2010) and for researchers to reflect ethically on the dynamics constructed through research contact (Neale & Hanna, 2012; Treanor et al., 2021). Longitudinal qualitative studies allow researchers to be flexible and adjust the research design through participant feedback and as findings come to light (Holland, 2006; Hollstein, 2021); thus, they also are an ideal method for reflecting on the positionality of the researchers, as called for by the literature on lived experience.

We began recruiting participants for the study in spring of 2022 with the help of local charities who advertised the project on social media, newsletters, on physical leaflets and invited us to attend in-person events. The longitudinal study seeks out UC recipients who are working or are actively looking for work and agreed to participate for six or twelve months. We have 25 participants in the cohort who take part in approximately 30-45-minute-long entry and exit interviews, for which they receive £25 per interview, in addition to providing us with roughly bi-weekly prompted updates via text message asking about their interactions with UC (a common text message prompt is: "Hi [participant's name] – hope all's been well. Just checking to see if you've had any interaction with UC in the last few weeks."). Participants primarily respond via text, with some sending screenshots of their UC accounts and interactions over the UC journal with UC staff. The interviews and the bi-weekly updates provide us with rich material for understanding recipients' everyday experiences with Universal Credit. The screenshots in particular show context and archival-style data, giving us insight into a rarely seen aspect of social security: the interaction between case worker and benefit recipient. A few participants have also chosen to ask for phone calls to share updates. We have additionally conducted 19 one-off interviews with UC recipients who did not qualify for the longitudinal study; they received £25 for taking part.

## REFLECTING ON OUR STUDY ONE YEAR ON

In this section we draw on the literature on lived experiences to highlight two issues of analytical importance that emerged during the first year of our study: the role emotions played while recipients interacted with UC and our own positionality vis-à-vis our participants.

### Reflecting on Participants' Lived Experiences

Participants expressed minimal emotions towards UC so long as it functioned as expected (just like most infrastructures that recede into the background unless they break, per Star and Ruhleder (1996)). Most emotional expressions we encountered, consequently, occurred when participants experienced errors or unexpected behaviors. Our longitudinal study allowed us to trace participants' emotional reactions to anomalies in UC's automated payment in their communication with us and as captured by screen shots of their responses to UC case workers. In the following paragraphs we highlight some high-level findings on two types of unexpected UC behaviors that generated these emotions.

First, some participants told us they felt frustration, powerlessness and anxiety due to unexpected errors caused by automated features of the UC payment calculation. During our study, some participants' employers misreported monthly earnings to the HMRC's RTI system, which automatically shared the resulting errors with UC. Catching these mistakes, initiating procedures to fix them and "chasing" the matter – as one participant put it – is almost always up to the recipients. Cases of overreported earnings led to a reduced UC payment and impacted participants' budgeting for everyday necessities, including food; some described the stress of borrowing funds as a result. Such mistakes can take a toll on the mental health of UC recipients. A participant shared with us a screenshot of a conversation in which she was explaining to her case manager that not being able to resolve the error "[adds] to [her] mental health as [she is] not sleeping worrying."

Second, generating some of the most intense emotional reactions in our participants were problems occurring in the process of applying for childcare costs reimbursement (UC will pay 85% of childcare costs in arrears after recipients present receipts). Despite the subset of participants engaging with this procedure being very small (n=4), we were able to record that this duty caused anxiety when expected reimbursement did not show up in claimants' payments. This occurred either due to error or the demands of complex reporting procedures, which include tight deadlines for reporting costs. For instance, one participant described her frustration of having to "chase" the reimbursement in "half [of] the months," and this has remained a reoccurring theme in her updates for the study. Someone else shared her story of trying to query a reimbursement she did not receive, updating us on new developments via text messages over a three-month period. This participant concluded this experience by being "quite gutted" over not being able to get all her costs back.

Compounding these experiences, participants expressed frustration over the lack of in-person contact with case managers and UC staff in general (with the exception of those with regular job coach meetings). In our small sample, people who had no troubles with their claim and received a stable amount of UC payment (for instance, due to stable monthly income) appeared content with the system and appreciated not having to travel for in-person meetings. Contrary to this, those experiencing errors reported frustration and annoyance due to the lack of opportunities for in-person meetings or phone calls with their assigned case managers. As one participant put it: "I

can't physically speak to a bloody human being on the Universal [Credit] phone [helpline]." Overall, the frustrated helplessness participants expressed towards UC relates to their identity as low-income claimants of social security negotiating the fundamental power imbalance between themselves and the state.

## Reflecting on the Researchers' Lived Experiences

While the lived experiences of recipients bring to the fore the emotions elicited by an automated system they feel they have little control over, reflecting on our own lived experiences also requires us to confront issues related to power – this time in relation to participants themselves. All phases of our research process are shaped by existing societal and interpersonal power dynamics: as researchers we have a dominant role in decision-making about the study and reap benefits of the research through academic recognition, such as journal publication, in ways that our participants cannot.

Our position also gives us representational power. Social policy scholar Peter Beresford points out that modern social policy research expects experts to mediate the knowledge and experiences of others (2016): their voices are interpreted and reported by the researchers, just as we did in the section above. Beresford calls for researchers to redress this dynamic between so-called expert and subject by "equalizing the relations between the two" (p. 223) through participant involvement in the research, by using multiple and adaptable methods that can respond to participants' changing needs, and by only undertaking research that has a practical benefit to those taking part. The latter requires a political commitment to the research that disavows positivist claims of scientific objectivity and instead acknowledges the interpretive nature of all research practice, as well as the value of first-hand experiential knowledge of recipients.

We cannot overcome the "epistemic injustice" entailed in conducting research on behalf of a UK higher education institution with participants without this affiliation (Fricker, 2007). However, we do believe we can mitigate some of the potential harms by following some of the tenets of Beresford's (2016) call for "user-controlled research" (p. 223). We see three ways forward. The first is to incorporate the views of the participants by asking whether our descriptions of their cases and quotes reflect their views prior to publications – our ability to do this is helped by the ongoing relationships we have formed with participants through the longitudinal research design, and we have now begun consulting participants before our publications go to print. The second is to make sure our research is fed back to policymakers themselves in attempts to make practical changes that could benefit our recipients; so far we have done this by turning our research into reports that we share with contacts at the DWP, submitting findings to special inquiries held by the Scottish and UK governments, and pitching findings to the press (see Booth, 2023). Finally, we can carry out research in partnership with user-advocacy organizations that have a long history of activism in social security reform, positioning ourselves more firmly as political allies of our participants. We are currently working on the latter in the second year of our study.

## CONCLUSION

This paper has argued for using the lens of lived experience to understand how people interact with an automated welfare system and to reflect on our roles in telling these accounts. Rather than investigating the policy or design level, we have focused on the mundane experiences of people encountering a somewhat unpredictable system. Our study found that errors, complex rules, and the impersonal nature of UC created enormous frustration, sense of helplessness and stress for recipients. For recipients who work while receiving UC, the monthly payment reacts dynamically to their pay and to circumstances such as childcare needs. Instead of a straightforward calculation, the discrepancies in pay due to any errors or claimant misunderstanding create anxiety, especially if claimants must worry whether they will have enough money to pay basic bills and for food each month. We also reflect on our own lived experiences as researchers and how to mitigate the epistemic hierarchies created by the research process. We propose three ways to incorporate these reflections on power dynamics into the study itself, a process that is greatly aided by our methodology of qualitative longitudinal research, which allows for adaptations and participant input.

We hope this article contributes to the growing interest within the ASIS&T community around data-driven systems and algorithmic fairness and justice (Rosenbaum & Fichman, 2019; Udoh & Yuan et al., 2022; Hoffmann & Roberts et al., 2019). Theories of lived experience and qualitative longitudinal research may also be of interest to LIS (library and information science) scholars of everyday information behaviours and practices interested in incorporating reflexive and iterative research design into their studies.

## ACKNOWLEDGEMENTS

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