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DEMOS

HOW PEOPLE TALK ABOUT POVERTY AND HARDSHIP ONLINE

A SOCIAL MEDIA LISTENING EXPLORATION

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INTRODUCTION

At Demos we work to find ways to better understand and centre the voices of those who are most affected by the outcomes of policymaking in those processes. This project is an exploratory investigation into how social media listening, a methodology which we have pioneered the use of, can be used to shed light on people's experiences of hardship in the UK. Our ambition is that this project can both inform and enable more people-centered approaches to policies to alleviate poverty.

This project combines our mission to understand and pursue healthier digital ecosystems with how we can build more relational public services that meet the needs of citizens.

JRF
JOSEPH ROWNTREE FOUNDATION

Joseph Rowntree Foundation (JRF) is an independent social change organisation, working to support and speed up the transition to a more equitable and just future, free from poverty, where people and planet can flourish.

At JRF we are currently developing an insight infrastructure which, powered by quantitative and qualitative data, will act as a satnav providing a series of possible routes to navigate from problem to solution. Such routes will be paved by data and insights generated through triangulation of data from different sources – established datasets (admin data); new sources (charity data); experimental data products (place-based insight hubs, banking data, consumer data); and lived experience of people (experiential insight, social listening). Data and insights products, which we will generate and disseminate in open collaboration with others, are going to support and sustain a shared movement promoting innovation, better use of evidence, and data-driven decisions to solve social and economic inequality in the UK.

One of the key aspects of the foundation's insight infrastructure's proposition is to improve our knowledge and understanding of people and communities experiencing hardship, poverty and related issues, in the public and policy debate at a national/regional/local level, on issues they have identified themselves. In this instance, by learning what people share about their experience on social media so to investigate how we can generate and disseminate new and timely insights into the lives of those with direct experience of the issues we care about.

Rosario Piazza, Chief Insight Architect, JRF
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JRF's Grassroots Poverty Action Group (GPAG) is made up of 14 people with direct experience of poverty from across the UK. Members of the group include people who are most impacted by the cost-of-living crisis, including people from Black and minority ethnic backgrounds, lone parents, Universal Credit claimants, disabled people and unpaid carers – those most at risk of poverty. The group works on, and supports, a variety of JRF's research and infrastructure projects. Group members bring their experience of living on a low-income but also the skills, knowledge, and experience they may have from employment, voluntary work, caring responsibilities, and community activism.

BACKGROUND TO THE PROJECT

In summer 2023, Demos and Joseph Rowntree Foundation collaborated to investigate:

1 **What can we learn from social media about people's experiences of poverty and hardship in the UK?**

2 **How can these insights be scaled or tested in the future?**

We carried out an exploratory project examining how people are talking about their experiences in online forums, and what insights social media listening can support for better policy development which puts people's voices and lived experience at its heart.

Our hypothesis was that social media forums would be a space where people were able to speak freely about their experiences, and that this would give insights into different aspects and dynamics of people's experiences than other research methodologies, as well as providing insight into the role that online forums and communities play in supporting people.

In this deck we present findings from our investigation and recommendations for designing and developing social media insights in this area.

We are grateful to Joseph Rowntree Foundation and the members of the Grassroots Poverty Action Group for their guidance and input at the beginning of this project, and to CASM Technology for their support with Method52 technical infrastructure.

PROJECT METHODS

PART 1:
Forum Selection. We selected 3 forums which provided relevant and accessible data, and collected data with input from JRF's Grassroots Poverty Action Group.

PART 2:
Broad Themes Analysis. We trialled a variety of computer-aided Natural Language Processing (NLP) techniques. This (i) gave initial insights which guided later analysis and (ii) suggested potential techniques and considerations for future uses of social media data.

PART 3:
Specific Themes Analysis. Using the NLP outputs we selected key themes of interests; filtered the data to posts and comments which used keywords related to these themes; and manually analysed these posts and comments to understand how these themes appeared across the forums.

PART 4:
Outcomes & Recommendations. Based on both the research process and results, we propose key considerations and ideas for future uses of social media data.

More details can be found later in this deck in the methodological appendix

KEY FINDINGS - EXPERIENCES

1 **PEOPLE ARE EXPERIENCING SERIOUS EMOTIONAL DISTRESS AND TURN TO ONLINE FORUMS FOR SUPPORT**
There is a vicious cycle between emotional distress and hardship.

2 **SERVICES AREN'T ALWAYS ADAPTABLE TO PEOPLE'S INDIVIDUAL EXPERIENCES AND NEEDS: WHICH CAN LEAD TO CONFUSION, UNCERTAINTY, AND ERRORS**
People are seeking support with understanding how to navigate 'the system' and what it means for them. People are seeking support outside of the social security system when it doesn't work.

3 **POLITICAL SYSTEMS ARE NOT ADDRESSING THESE ISSUES WELL ENOUGH**
There are divisions over whether MPs can help. People feel they are misrepresented in political and media discourse. Policy is seen as failing to meet people's needs.

4 **PEOPLE'S RELATIONSHIPS ARE A KEY FACTOR WHICH CAN EXACERBATE OR SUPPORT THEM THROUGH THEIR EXPERIENCES OF HARDSHIP**
Relationships breaking down can lead to financial precarity. Financial precarity is meaning people have to stay in relationships when they do not want to, and this exacerbates the risk of harmful relationships.

KEY FINDINGS - METHODS

1 **IDENTIFYING RELEVANT, PUBLIC AND ACCESSIBLE DATA IS KEY**
Forum selection is crucial in determining what research questions can be addressed.

2 **NLP APPROACHES ALLOW DATA ANALYSIS TO BE CARRIED OUT AT MUCH GREATER SCALE AND SPEED TO IDENTIFY GENERAL THEMES WITHIN THE DATA**
However, it can be resource-intensive to initially set up and test, given the specificity of the subject matter which means that bespoke models are more likely to be successful.

3 **QUALITATIVE ANALYSIS ALLOWS FOR GREATER ANALYSIS OF THE COMPLEXITIES' OF INDIVIDUAL USERS' EXPERIENCES.**

4 **A MIXED METHODS APPROACH, AS WE HAVE TAKEN, ENABLES THE BENEFITS OF BOTH OF THESE APPROACHES TO BE COMBINED.**

KEY FINDINGS

WHAT ARE PEOPLE SAYING ONLINE ABOUT THEIR EXPERIENCES OF POVERTY AND HARDSHIP?

NB: All example posts in this section have been bowdlerised (changed to prevent identification of the author) and are indicative of the content of the post rather than verbatim - i.e. the meaning of the post has been preserved but wording or syntax changed. This is so that the author cannot be identified via text matching.

THE FORUMS

Data for the below analysis came from 3 online forums, selected by an iterative process (outlined later in this deck).

- A group on a large social media site which was related to people interacting with government services (referred to throughout as GovernmentHelp - a pseudonym)

- 3 subforums from a community forum targeted at supporting families (referred to throughout as FamilyHelp)

- 6 subforums from a forum focused on providing financial advice and support (referred to throughout as FinancialHelp)

Data was collected from all posts and comments made on these (sub)forums over 60 days between May and July 2023.

Data was then analysed using a variety of computer-aided text analysis methods, including recent advances in large language models (details in appendix), which produced 'clusters' of topics.

Then datasets were identified for analysis through an iterative process of identifying keywords related to a series of relevant themes emerging from the computer-aided analysis.

PEOPLE ARE EXPERIENCING SERIOUS EMOTIONAL DISTRESS AND TURN TO ONLINE FORUMS FOR SUPPORT

We developed and expanded a list of negative emotion keywords to explore how people's circumstances and experiences were affecting them mentally and emotionally.

The keyword list we developed included:

- **Words suggesting fear or anxiety:** anxious, stress, stressed, afraid, nervous, scared, distress, distressed, worried, worrying, frightened

- **Words relating to self-perception and self-worth:** ashamed, embarrassed, guilty, lonely, jealous, resentful,

- **Words suggesting experiences of events/**

processes: annoyed, disappointed, grief, frustrated, frustrating, exhausted, tired

- **Words suggesting sadness, anger, and other negative emotional states:** angry, crying, depressed, sad, miserable

Note that words were not necessarily associated with only one of the above points; the points merely helped us ensure a coverage of experiences. Filtering the datasets by these keywords gave us the following number of posts/comments:

- GovernmentHelp: 366
- FinancialHelp: 591

THERE IS A VICIOUS CYCLE BETWEEN EMOTIONAL DISTRESS AND HARDSHIP

People report emotions and practical issues intersecting in many ways and in multiple directions. For instance, money issues creating stress/anxiety, even exacerbating mental health issues; or stress/anxiety affecting work or assessments which creates further financial concerns. Only a minority of items contained purely emotional expressions with no associated practical problem.

We are facing redundancies and have to interview for our jobs… I have other stresses in life, I have been able to work but not without problems (brain fog etc.)… must I still go through the interview? My brain isn't working properly.

I was an insomniac too so the extra distress caused poor sleeping patterns. It did exacerbate my anxiety and I had a lot to deal with my parent's issues … I am still mad thinking how noone helped me for about a year.

People often reported emotional issues relating to long-term uncertainties and insecure positions; but in many other cases it was a sudden and unexpected development which 'tipped people over the edge'. People reported anxiety about things that were out of their control (e.g. waiting), but also stress at potential consequences of their decisions (e.g. asking questions of official systems, which risked inadvertently changing their circumstances).

I'm a stressed, anxious, panicky mess. When you need relief from some of that stress you beg but there's no help. I need time to get my mental health returning to normal but I just can't get it without the looming risk of sanctions.

I received a text today telling me I need an assessment… They've been told I'm not well but haven't listened. The last assessment caused a relapse and I needed intensive therapy.

There were various discussions about emotional responses to case workers etc. This included controlling (even faking) moods during assessments, and disagreement about whether expressing online anger towards case workers or other such people was appropriate or not; occasionally people were criticised for coming onto the forum 'just to rant' (though in other cases this was permitted).

I wanted to do maximum damage complaining about my advisor's abuse and dirty tactics…. Makes me sad for getting people sacked but some people really deserve it if they mistreat vulnerable people. Respect is respect

You're clearly here just to rant…. a lot of these "stupid people" that you're talking about come to this board trying to help people.

Thanks for your reply. You are right, they are also stressed and overworked and not enough money. Thank you for helping me realise that as it's difficult for me to see things while I'm depressed. I'll try to remember that when I talk to them in the future. Although I still think him telling me I'm wasting his time is totally wrong and it's made me feel like I can't trust him anymore.

People valued the support of others on the forums, finding their reports of experiences 'reassuring'. Supportive comments often mixed practical suggestions with references to emotional experiences of particular situations (e.g. 'that must be hard…', 'you'll feel better if…', 'I felt x now I feel y').

Many also flagged the importance of offline, in-person support (e.g. taking a friend to an assessment to help with anxiety. However offline relationships (in particular situations with partners and family) could also be a source of or factor in money issues and negative emotions (see more in relationships section).

The media are reporting that most families on universal credit have received their COL payments. I don't have any friends so can't find out if others are still waiting. Thank you for reading and hope you can reassure.

Congrats on your success. I'm still worried but am less worried after other commenters saying they didn't get any notice.

Thanks so much - I can't imagine how stressed I'd be without your assistance.

It's a very good idea to take someone with you to the assessment for support. You should talk for yourself but if you struggle they can help.

SERVICES AREN'T ALWAYS ADAPTABLE TO PEOPLE'S INDIVIDUAL EXPERIENCES AND NEEDS: WHICH CAN LEAD TO CONFUSION, UNCERTAINTY, AND ERRORS

Based on clusters indicating discussion of interacting with government services and navigating 'the system', we developed a keyword list to explore these discussions in more detail.

The keyword list we developed included:

- **Terms of the service or service provider users were engaging with:** NHS, DWP, job centre, Capita, Maximum

- **Forms of communication:** letter, email, appointment

- **Terms indicating decision-making processes:** decision, complaint, appeal, tribunal, assessment

- **Terms for various benefits:** LCWRA, DLA, UC, WHD, PIP, child benefit, carers' allowance

- **Terms of individuals that users were interacting with:** assessor, doctor, case worker, work coach

Filtering the datasets by these keywords gave us the following number of posts/comments:

- GovernmentHelp: 4244 (with a 10% random sample reviewed qualitatively)

- FinanceHelp: 5869 (with a 10% random sample reviewed qualitatively)

- FamilyHelp: 46

PEOPLE ARE SEEKING SUPPORT WITH UNDERSTANDING HOW TO NAVIGATE 'THE SYSTEM' AND WHAT IT MEANS FOR THEM

Many people were seeking help understanding the systems they were interacting with - whether that was understanding how their personal circumstances meant that their eligibility for certain benefits might change, or knowing who to contact, or what different forms were and were for. Discussions included complex cases where people had multiple intersecting conditions or rapidly changing circumstances where they were left uncertain as to what rules now applied to them, or where a rules-based system means that some people end up falling through the gaps.

Users commonly would discuss their personal circumstances in great detail, including their health conditions and health history (particularly relating to e.g. DWP assessments), or specific details of their and their family's finances (particularly relating to eligibility for tax credits or benefits). Although we did not find evidence of this, there is a risk that vulnerable users sharing personal information in these forums could become targets of fraud.

I don't know what the WCA is - I don't really know much about any of this.

Go to your GP to get a confirmation letter - it's worth a try, I've been in a very similar place.

Advice to those who have tried and told no because you do not have an EPC is - call them again!

Online forums are very active in supporting people and offering advice. This indicates that forums are a crucial resource which enable people to gain personalised advice and crowdsource information from other users, particularly when they are feeling anxious or overwhelmed, or they have received official communications (such as letters) that they don't understand, or heard different accounts from different people.

Although some users specified that for e.g. legal advice, lawyers should be consulted, or signposted to other support services who could provide more information, such as Citizens Advice, or sharing links to official sources of information or other resources, many others offered information directly. We were unable to verify the quality of the information offered: so although this suggests that these forums play a role in enabling people to be better informed about their obligations and entitlements, or about processes to engage in, it is possible that this also risks compounding misinformation or misunderstanding.

The information that people share is greatly appreciated by other users, however, who speak about the value of the forums.

I learnt a ton from this forum when I started out on Universal Credit - now I'm paying that forward.

Thanks so much - I can't imagine how stressed I'd be without your assistance.

PEOPLE ARE SEEKING SUPPORT OUTSIDE OF THE SOCIAL SECURITY SYSTEM WHEN IT DOESN'T WORK

We saw people turning to the forums to seek help when something had gone wrong through their interaction with services. Conflicting information, unclear chains of responsibility, and negative interactions with government services lead to mistrust, anger and frustration. This included, for instance: where people felt that assessors had ignored or overlooked crucial information about them in making decisions; where errors had been made; where complaints had been made or tribunals were occurring; or where people felt that they had been badly treated by those they had interacted with. It was not always clear, however, where people were objecting to a rule they felt was unfair or detrimental, as opposed to where they felt the rules that do exist had not been implemented correctly.

They got a letter saying change in circumstances mean they will have to repay £150 a month...The letter ends saying there can't be an appeal, and doesn't give a reason...It's terrible that letters will fall on an older person's doorstep on the weekend and they have to fret all weekend...We are all as confused as they are.

I have the same problem - I didn't get the letter, I gave the WHD helpline my info, confirmed that I certainly qualify, no credit came in, power company cannot chase it as there isn't a reference no. because I didn't get the letter.

Many people felt that their health conditions or circumstances were not properly understood or taken into account in assessments:

> *I got zero points and there's nothing wrong with me! A bunch of the decision makes it sound as if they are talking about someone else - I didn't seem to be fatigued or anxious.*

> *It is almost like they've confused my son for another person - reading the report sounds like he's not particularly disabled and is functioning OK in life - when the telephone assessment didn't go like that.*

> *I am preparing for there not to be an award in this instance and maybe needing to go to tribunal - that seems to be occurring in lots of fatigue case.*

Users described their struggles to engage with or understand the system, unable to interact with services because of barriers such as health conditions that made attending appointments in person difficult, trouble with English as a language, or difficulty filling in required forms. And that the burden of trying to navigate these systems meant that sometimes it was better just not to try:

> *This is such a huge mental burden for someone to be undergoing, not least someone who has suffered bereavement who is told the government guidance isn't right and keeps changing, by the people on the phone!*

> *Is going to a tribunal worth it...should I keep applying until the time that I get a person who will read what I wrote?*

> *That's exactly why I have no desire to apply for PIP - if I've had difficulties with other benefits, then PIP will be a thousand times worse.*

There was also mistrust, suspicion and anger towards government services, either as entities or the individuals who had been interacted with, with users feeling that they were just a target to be met or a money-making opportunity, feeling spoken down to or ignored, allegations of bullying, and advice being offered on how to navigate a hostile system, such as recording appointments in case the outcomes need to be contested later. People also often discussed their feelings in relation to navigating the system - including anxiety, worry, depression or anger. Comments included people discussing how their mental health conditions or those of their loved ones has worsened as a result of the challenges they have faced in engaging with services.

At your initial appt, be wary of the things you say to the adviser - they'll make judgements about you'.

Utterly idiotic scheme, it's run by fucking inept and incompetent people.

One of my friends had a telephone assessment...the advisor pretty much ignored the whole conversation in their report...this led to a period of depression which was so severe the deadline passed for asking for their claim to be reevaluated.

I was really lucky with my work coach - it sounds like they went over and above to be helpful...

We also saw evidence of people employed in these services (such as work coaches) offering their own advice to users, and it is worth noting that people also shared positive experiences of interacting with e.g. their work coaches, with there being accommodations made. Although we cannot conclude that these experiences are representative, it remains evidence that there are those who are seriously struggling in their interactions with government services.

POLITICAL SYSTEMS ARE NOT ADDRESSING THESE ISSUES WELL ENOUGH

Based on clusters indicating discussion of people's interaction with and feelings towards politicians and politician structures, we developed a keyword list to explore these discussions in more detail.

The keyword list we developed included:

- **Terms referring to political parties:** Tory, Labour, Conservative

- Terms referring to specific MPs

- **Terms more generally referring to politics:** Politics, politicians, politician, MP, MPs, the government

Filtering the datasets by these keywords gave us the following number of posts/comments:

- GovernmentHelp: 115

- FinanceHelp: 318

- FamilyHelp: N/A (no relevant material)

THERE ARE DIVISIONS OVER WHETHER MPS CAN HELP

Some people had discussions about the practical role their MP could or could not play in dispute resolution, primarily in the context of benefits claims. Opinions here varied - some people thought that their MP was an advocate with whom it was worthwhile engaging to support them, particularly when they felt had exhausted all other avenues. There were examples given by some who had positive experiences like this. Others, sometimes also drawing on personal experiences, were convinced that the role of MPs was to shift policy at a national level meaning their ability to support people on an individual basis was limited.

There is no point asking your MP for help - they are bound by what the relevant government tells them to do.

I have contacted my local MP for the same issue as mentioned above, and suggest you also contact your MP. I sent a formal complaint to DWP but don't think this will go anywhere, so have turned to my MP as the best option. If more people raise the issue then hopefully there is more chance that this problem won't happen again in the future.

PEOPLE FEEL THEY ARE MISREPRESENTED IN POLITICAL AND MEDIA DISCOURSE

There was other discussion of MP's and their ability to understand the needs of vulnerable people. Some referenced statements from MP's or questions in parliament as evidence of their feelings that MP's were detached from their reality, and the problematic implications this has for policy and decision making. Others referenced the impact that how MP's view and talk about vulnerable people or those on benefits can have on broader societal discourse, when it is done in a stigmatising way.

The media and DWP are trying to turn people against people who claim benefits. It's really worrying and distressing.

Dreadful comments in the media by politicians about disabled and sick people in the media are getting more common, which encourages members of the public to rant about it - like the ones in TV audiences.

They talk about 'workshy' benefits claimants - I am one of those people and trying to get back into work through an IT bootcamp. They have made it possible for companies delivering the government programmes to exclude people on long term benefits if they want to, which makes it harder to actually access the scheme.

POLICY IS SEEN AS FAILING TO MEET PEOPLE'S NEEDS

This overlaps with another key theme around criticism of government decision making and policy - the warm homes discount and a) how it had been poorly rolled out and b) the implications for other benefits entitlement, came up repeatedly. Some felt that policy decisions were politically motivated to isolate and stigmatise the poorest and most vulnerable. It was also interesting to observe that, in some comments, this played out as people comparing different groups of vulnerable people (e.g. families on UC compared to individuals disability benefits) to one another. This brought in questions around 'deserving' and 'undeserving' people in poverty.

The government and the DWP should be ashamed of themselves. No one cares about disabled people, because we are out of sight and mind.

I've been watching some of Parliament TV and the DWP have no idea, they are talking nonsense! There was one very confused idiot who doesn't care about anyone let alone disabled people. [...] I think Labour will probably win the next election but don't hold your breath, we know that they're against claimants, they said that.

The people in government are mostly rich and want everyone to be in work, that's their narrative. Some people then agree with that and don't bother to think twice about it.

The entire Universal Credit system is completely messy: politicians, charities, orgs and people know that, and knew before it happened that it'd be. Imo it shouldn't ever have been introduced.

PEOPLE'S RELATIONSHIPS ARE A KEY FACTOR WHICH CAN EXACERBATE OR SUPPORT THEM THROUGH THEIR EXPERIENCES OF HARDSHIP

Based on clusters indicating discussion of both romantic and familial relationships, we developed a keyword list to explore these discussions in more detail.

The keyword list we developed included:

- **Terms referring to romantic relationships:** partner, wife, husband

- **Terms referring to immediate family members:** mum, dad, mother, father)

- **Terms indicating the break down of a romantic relationship:** ex, split up, divorce

- **Specific references to potentially abusive relationships:** domestic violence, domestic abuse, toxic relationship

Filtering the datasets by these keywords gave us the following number of posts/comments:

- GovernmentHelp: 579

- FinanceHelp: 2500 (with a 10% random sample reviewed qualitatively)

- FamilyHelp: 76

Discussions of relationships were often highly complex and challenging, with friends, family and romantic partners acting as both vital networks for support for some, while being a primary or significant sources of distress for others.

Individuals frequently discussed navigating caring responsibilities for children or elderly relatives, often with significant mental and physical health challenges.

As a single parent and carer for a child with severe mental health problems I'm totally overwhelmed with meetings, appointments, letters [...] I have no help, no family - I do it all myself. *[...] Most people in my shoes would have completely broken down by now.*

RELATIONSHIPS BREAKING DOWN CAN LEAD TO FINANCIAL PRECARITY

There was significant overlap with other key themes, especially interactions with the system. Many were struggling with disputes over custody and child support in the event of relationship breakdown, as well as navigating changes to Universal Credit and other government support.

I understand how you feel. For 10 years I have been struggling to get child maintenance from my ex. They finally got enough evidence recently to take our case to the courts. [...] do not give up. Eventually he will face the law, and you know you did everything you could for your child.

I thought I would post to see if anyone else hasn't received their cost of living payments yet. I have been claiming for a couple of years after my husband left, I'm on UC, I have 2 kids…I needed to cancel a grocery order as money wasn't available…I'm seriously struggling.

Financial difficulties led to or exacerbated many other challenges - in the most extreme cases, individuals found themselves in acute mental distress due to financial instability and inability to find safe housing.

FINANCIAL PRECARITY IS MEANING PEOPLE HAVE TO STAY IN RELATIONSHIPS WHEN THEY DO NOT WANT TO

We found multiple discussions relating to the impact of dealing with financial stresses and navigating institutional support systems on relationships, across varying levels of severity.

My ex husband is the only named tenant of our one bed flat. I lived together with my ex and 3 children (now pregnant with fourth) for years. I left a few months ago and am now homeless with 3 kids. [...] I tried to get help from the council to leave a few years ago but they made me go back to him and threatened to contact social services. [...] I don't have my name on the tenancy agreement and I don't want to be with him. I can't afford to rent privately, can the council help? I don't want to be forced into going back.

Well it's a bit complicated me and my ex broke up but we're still living together, as he needs my money for bills and I can't afford to move out.

…AND THIS EXACERBATES THE RISKS OF HARMFUL RELATIONSHIPS

We combined two sets of keyword filters to dig into this area further, exploring the overlap of our Navigating Systems and Relationships themes. The resulting datasets were smaller and more focused.

- GovernmentHelp: 438

- FinanceHelp: 1462

- FamilyHelp: 18

These posts included some individuals trapped in abusive relationships and unable to leave due to a lack of resources, with systems often hindering rather than helping those fleeing domestic violence, as they feared being considered voluntarily homeless and therefore ineligible for support. One user posted about having

become trapped when they had to turn to sex work due to financial difficulty and the only place they could find to live was to rent with a client, even though they wanted to live outside of the client's control.

EXPERIENCES: CONCLUSIONS

1 **People's conversations in online spaces cover a huge variety of topics.** But the common thread is how one aspect of hardship - such as financial precarity - can be exacerbated, amplified and worsened by a multitude of factors, from health to family. People's experiences of poverty and hardship are complex and dynamic, and our political and service institutions are not well equipped to deal with this: not only too often failing to remedy the problems, but in some cases even making them worse.

2 **These insights support the case for a more relational model of public service delivery and design.** Instead of siloed public services in which people have to navigate multiple departments, officials that they perceive as hostile and overwhelming mountains of paper work to access support, relational public services recognise that both service users and providers are human beings, and centre services around the relationships between service users and providers, to foster trust and more effective support.

EXPERIENCES: CONCLUSIONS

3 **Online spaces provide not only emotional support, a place for people to share their frustrations or discuss opinions, but also to collectively work through the challenges and confusions of how to navigate situations and systems that are exacerbating their experiences of hardship.** Importantly, given the highly personal and complex nature of individual challenges, they provide access to people who may have had similar (combinations of) challenges and experiences, in a manner that the offline world may not as easily provide.

4 However, although this means people have access to valuable resources and important spaces, and maintaining, developing and moderating these kinds of forums should be continued, **this should not be seen as a replacement for addressing the systemic issues that lead people to need to seek advice, support and help.**

METHODS

HOW DID WE SURFACE THESE INSIGHTS AND WHAT DOES IT MEAN FOR FUTURE RESEARCH?

METHODS: FORUM SELECTION

KEY TAKE-AWAYS:

Based on multiple inputs we selected 3 forums which provided a variety of public, relevant and accessible data.

A longer list of forums could be included in future work, but would require more scoping and time to build partnership with the forums.

IDENTIFYING RELEVANT, PUBLIC AND ACCESSIBLE DATA IS KEY

In identifying which forums we would examine, we considered the following factors:

- **RELEVANCE:** Which forums were most likely to have relevant conversations, and are used by people whose experiences we wanted to learn more about? Many forums are not dedicated specifically to supporting people in poverty, but address issues which intersect heavily with it - such as health issues, family support or financial difficulty. This may include specific subforums within larger forums. Forums selected were balanced to ensure we had a good mix of types of forum and likely topics of discussion.

- **DATA ACCESSIBILITY:** Whether data could be accessed e.g. via an Application Programming Interface (API) or by scraping publicly available data (using custom-built scrapers developed in Python with support from ChatGPT).

- **PRIVACY:** What expectations users might have about the privacy of their data on the website; for instance, if the website Ts&Cs or robots.txt restricted data collection or research; or whether the site / posts could be seen without an invitation or logging in. We also considered the size of, and therefore anonymity of individuals on, the forum.

FINDING AND SELECTING FORUMS

Potential sources came from:

- Web and social media sites run by organisations supporting people in hardship, and community forums serving particular demographics.

- Input from JRF's Grassroots Poverty Action Group, including asking participants directly for potential online sources they or other use; as well as key terms to use in data searches.

- Independent web searching, including with ChatGPT.

This gave us a longlist of approximately 15 forums. Based on further discussions with JRF, we selected 3 forums to investigate and collected data between May and July 2023. To preserve user privacy, we are not

naming these forums but they included:

- A group on a large social media site which was related to people interacting with government services (referred to throughout as GovernmentHelp)

- 3 subforums from a community forum targeted at supporting families (referred to throughout as FamilyHelp)

- 6 subforums from a forum focused on providing financial advice and support (referred to throughout as FinancialHelp)

FORUM RECOMMENDATIONS

Recommendations for future research:

1 With a longer research timeline, more forums could be selected as some permit data collection pending application or approval from the host organisation.

2 The trend towards closing APIs, such as X (formerly Twitter) charging inaccessibly high prices for API access and ongoing worries about Crowdtangle access (which provides data for Facebook and Instagram), is of deep concern to the research community. Regulators should address this in order to preserve these essential routes of conducting research in transparent ways.

3 Bespoke web scrapers can be built where websites do not have APIs, and generative AI is lowering barriers to entry for less skilled coders; however such approaches may carry higher risk than APIs e.g. of technical errors, code quickly becoming outdated.

DATA COLLECTION

Data collected consisted of posts and comments made across 60 days *(7 May - 5 July)* on selected (sub)forums.

N.B. A '**post**' begins a topic on a subforum. '**Comments**' are responses to a specific post.

FORUM	ALL	POSTS	COMMENTS
GovernmentHelp	6533	768	5767
FinancialHelp	2050	255	1795
FamilyHelp	158	30	128

FORUM	SUBFORUM TOPIC	ALL	POSTS	COMMENTS
Finance	Benefits	1720	207	1513
	Disability	167	20	147
	Child Support	42	10	32
	Family finance	43	5	38
	Family finance	31	3	28
	Redundancy	47	10	37
Family	Budgeting	26	7	19
	Money advice	40	4	36
	Benefits	92	19	73

BROAD THEMES ANALYSIS AND EXPERIMENTS IN NATURAL LANGUAGE PROCESSING

KEY TAKE-AWAYS:

Testing various computer-aided text methods allowed us to efficiently surface key concerns and important keywords across the forums.

Outputs were dominated by specific finance / bureaucracy topics. Developing bespoke classifiers for more experiential topics, with sufficient accuracy, could be feasible but would require more resource.

COMPUTER-AIDED TEXT ANALYSIS: IDENTIFYING KEY THEMES AND TRENDS

Our data collection produced **100s of posts and 1000s of comments** - too much read in full. Traditionally, sampling methods would be used to select data to analyse in more detail.

However developments in computer-aided text analysis - particularly Natural Language Processing (NLP) can be used to (i) display large-scale patterns and recurrences in text data and (ii) reveal key themes to guide further analysis.

In line with the experimental and innovative intent of this project, we trialled multiple methods:

- Topic modelling using a pre-trained language model

- Clustering using statistical patterns in collected text

- Contextual word analysis focussing on terms selected by analysts

- Deriving experiential language using pre-trained emotion classifiers and training our own classifiers

In this project, we used these methods as ways to identify avenues for further exploration, rather than to draw general conclusions about the trends in the overall dataset: the latter is a more resource intensive process, and as our forum selection could not be representative, there were limitations on how far these generalisations would have been useful indications of broader trends.

TOPIC MODELLING WITH PRE-TRAINED LANGUAGE MODEL

Each text item (post or comment) is given a location in 'semantic space' depending on its linguistic content, using the pre-trained language model all-MiniLM-L6-v2 (part of the BERT family of models from Google).

Items are algorithmically clustered into topics (shown by colours).

ITEM 1	ITEM 2	ITEM 3	...	ITEM 10,000
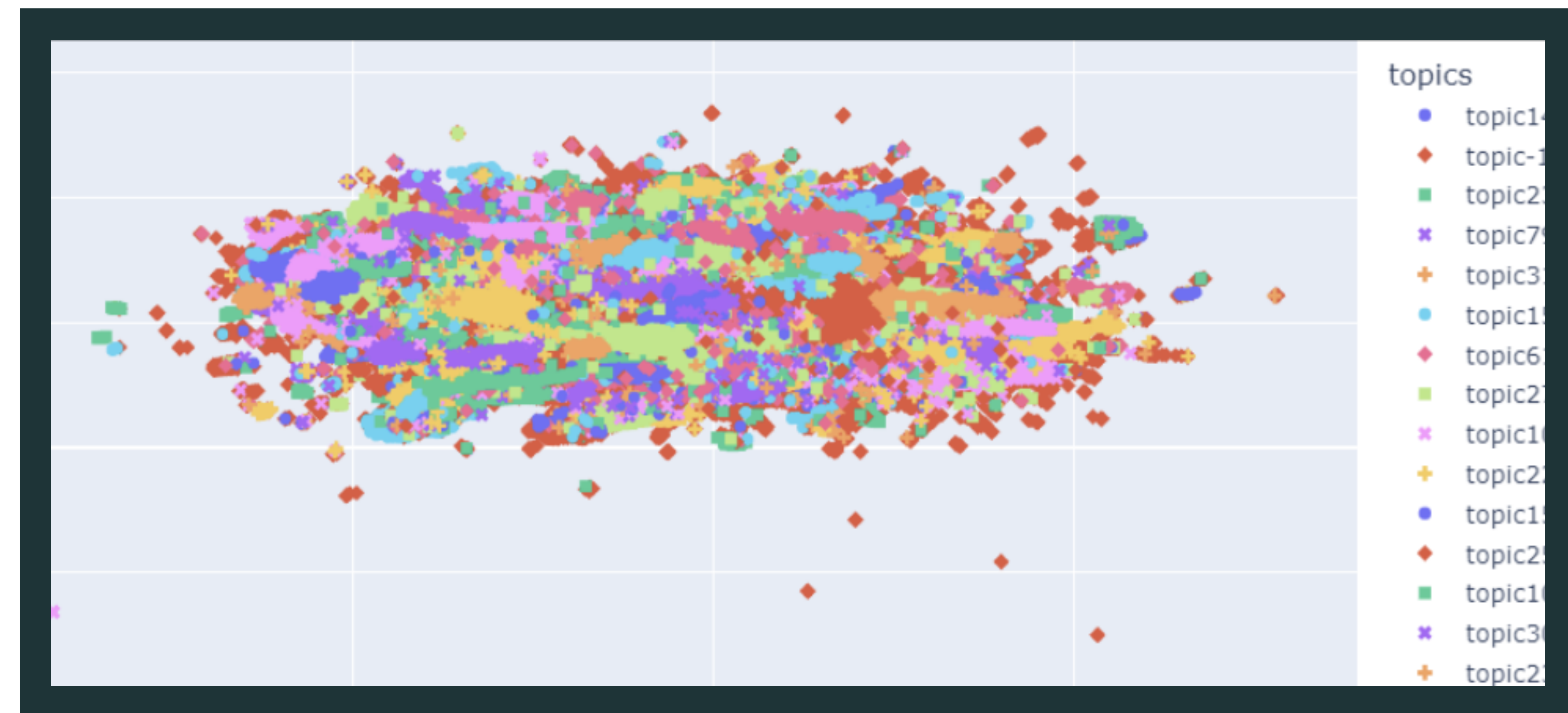
ITEM 1	ITEM 2	ITEM 3	...	ITEM 10,000
TOPIC 5	TOPIC 63	TOPIC 37	...	TOPIC 5

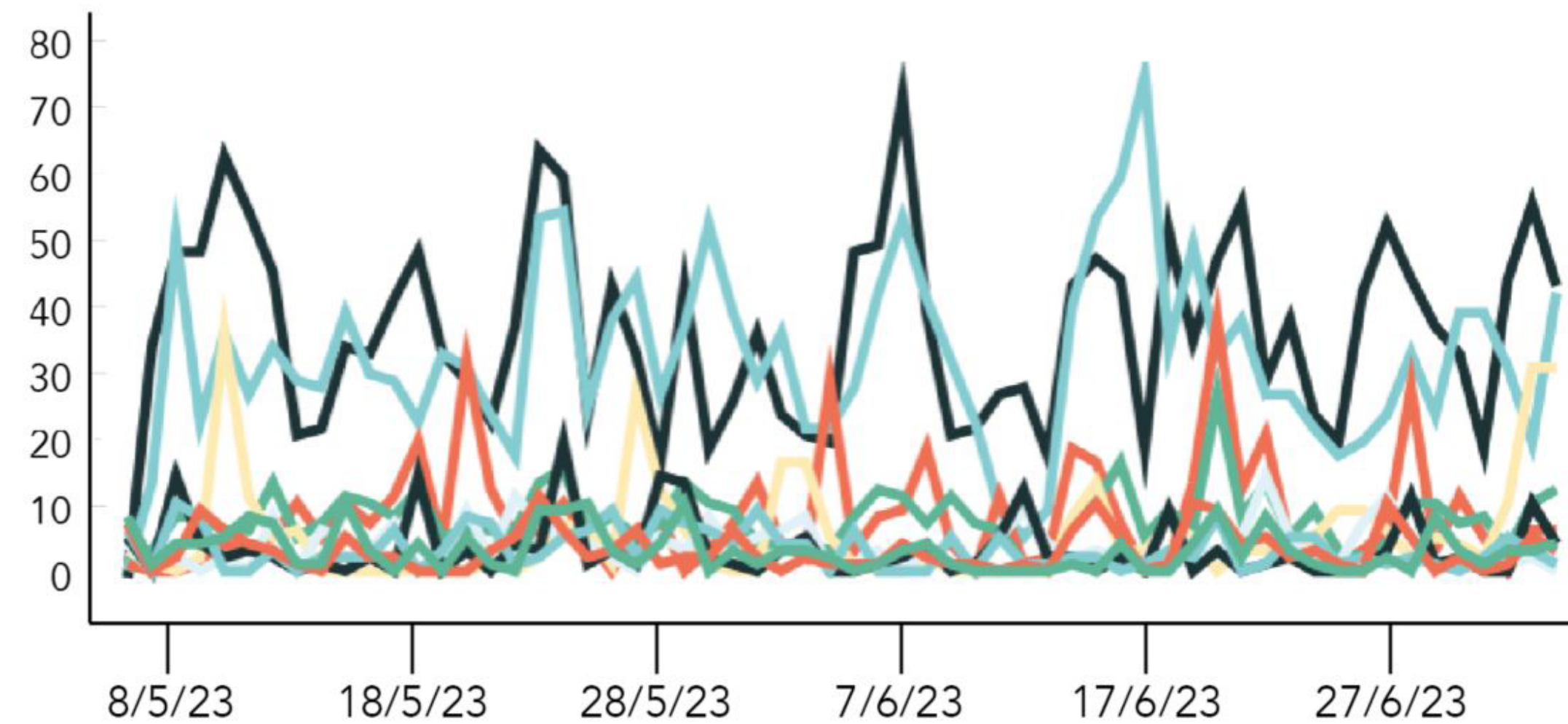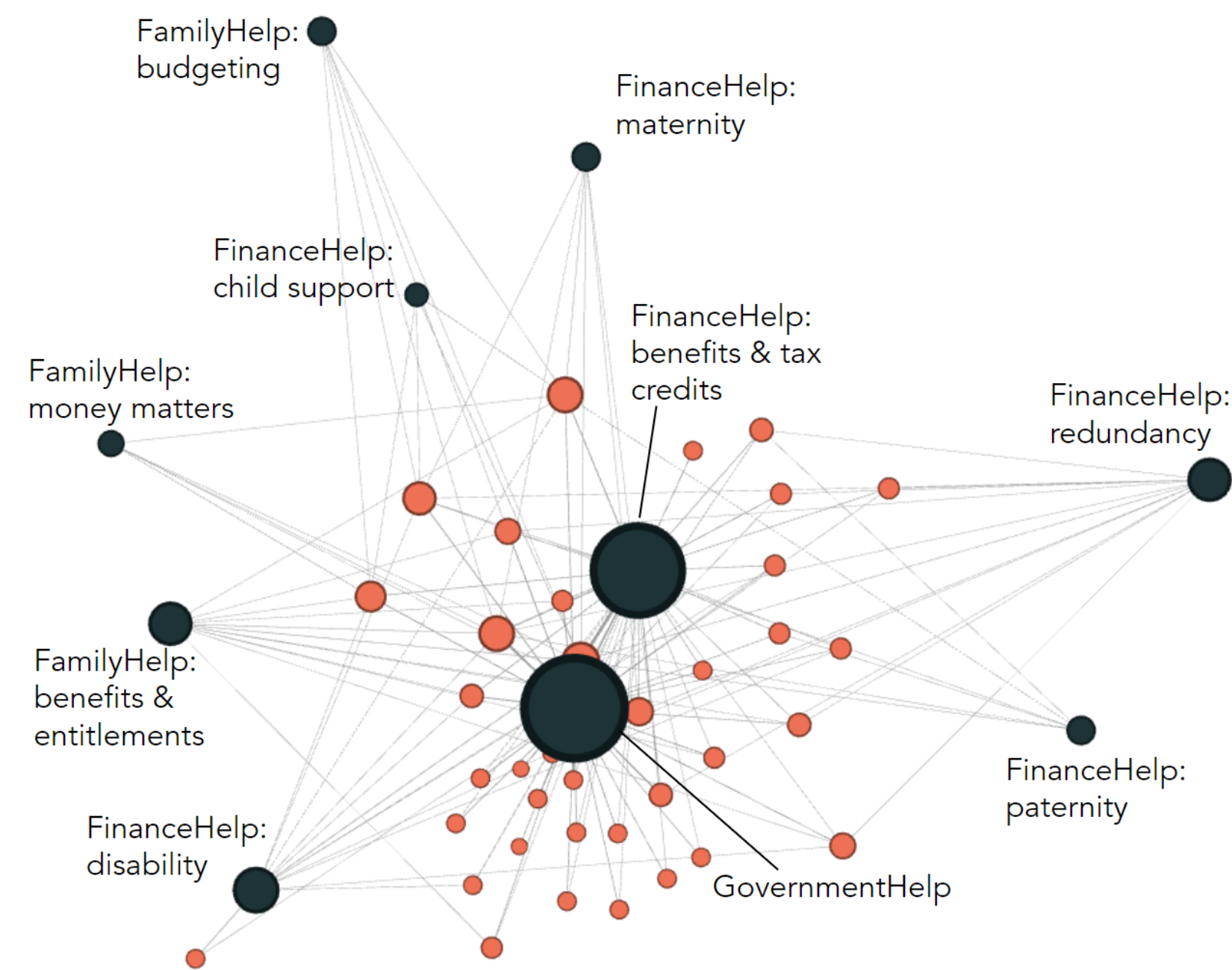**The workflow produces outputs like the below. Human analysts can then read multiple lists of representative words and multiple sample text items for each topic, to apply labels to each theme.**

Themes	Topic	Count	Name	Representation	Aspect1	Aspect2
Disability/illness, housing, heat	-1	7251	-1_pension_allowance_income	['pension', 'allowance', 'income	['work', 'time', 'people', 'money	['pension', 'allowance', 'paymer
Health, illness, disability, PIP	0	698	0_assessment_assessments_pi	['assessment', 'assessments', 'p	['pip', 'award', 'assessment', 'fo	['assessments', 'pip', 'disability'
ESA UC Carers Allowance, persc	1	542	1_pension_allowance_income_	['pension', 'allowance', 'income	['earnings', 'business', 'income'	['pension', 'allowance', 'uc', 'de
Pensions	3	385	3_pension_pensions_allowanc	['pension', 'pensions', 'allowanc	['pension', 'state', 'credit', 'tax',	['pension', 'disability', 'eligible',
Housing benefit, LHA, PIP, UC	4	335	4_tenancy_tenant_tenants_lan	['tenancy', 'tenant', 'tenants', 'l	['rent', 'housing', 'council', 'pro	['tenancy', 'rented', 'council', 'e
Redundancy, job loss, benefits,	13	206	13_redundancies_redundancy_	['redundancies', 'redundancy', '	['redundancy', 'redundant', 'rol	['redundancies', 'dismissal', 'co
Child support, separated famili	14	196	14_afford_childcare_income_p	['afford', 'childcare', 'income', '	['child', 'maintenance', 'cms', 'n	['afford', 'childcare', 'debt', 'csa
ESA, pensions, disability, benefi	16	180	16_esa_income_esathe_incom	['esa', 'income', 'esathe', 'incom	['esa', 'income', 'contribution', '	['incomebased', 'pension', 'disa
UC, CoL payments	17	178	17_payments_payment_barcla	['payments', 'payment', 'barclay	['payment', 'payments', 'bank',	['payments', 'barclays', 'banking

● This method can quickly (< week) allow a large dataset to be visualised and pull out large-scale topics, relationships, etc. It also allows analysts to be surprised as topics are not pre-determined.

● We conducted this workflow multiple times on different configurations of data (e.g. all forums, one forum at a time, changing input parameters etc) in order to see alternative outputs. The above is just one example.

● A common overarching pattern was the workflow generally drew out specific forms of financial / benefits related issues, though a minority of topics showed themes such as gratitude.

A very initial analysis of the below visuals suggest that topics were dispersed across the groups (left) and did not show any pronounced changes or peaks over time (right). This suggests that topics are dispersed throughout multiple conversations, rather than concentrated in particular groups / at particular times. However analysis over the longer term and/or with more forums would be needed to corroborate and extend this analysis.

Edges show number of posts/comments on that topic on a subforum. Nodes sized by their total number of edges.

CLUSTERING

A longer-standing method than using pre-trained language models is to determine statistical patterns within collected text.

We tested if this revealed different patterns and alternative insights to the topic modelling using two different statistical approaches (Latent Dirichlet Allocation and Reinert's Method).

This approach produced less sophisticated topics than topic modelling (as it is less sensitive to the context-dependent meaning of words, and can be more strongly swayed by words which convey little meaning). However it did produce longer lists of words to guide the direction of more targeted data filtering.

Cluster 0		Cluster 1	
Term	**P**	**Term**	**P**
Information	0.028	child	0.021
post	0.025	south	0.014
dwp	0.016	forms	0.010
uk	0.014	HTTPLINK	0.009
rules	0.014	it's	0.008
decision	0.012	time	0.008
stated	0.012	miles	0.008
official	0.010	national	0.008

Example using Latent Dirichlet Allocation, via CASM Technology's Method52 platform. Note that this is just a segment of a longer list of words, and only 2 of 10 clusters.

CONTEXTUAL WORD ANALYSIS USING WORD EMBEDDING (SVD)

SVD, or Singular Value Decomposition, is a method of representing text as vectors which indicate the frequency with which given words co-appear in different contexts within the corpus. Using this method, we selected specific target words of interest, and found their 'nearest neighbours' - words which are most likely to co-occur with our selected term within a given context window (for example, within 6 words before or after our target word).

SVD is a relatively simple method which has been largely superseded by more sophisticated (if time intensive) methods such as fine-tuning language models. In this instance, SVD was used as a means of emploratory analysis focusing on specific words and gathering additional relevant terms for keyword filtering.
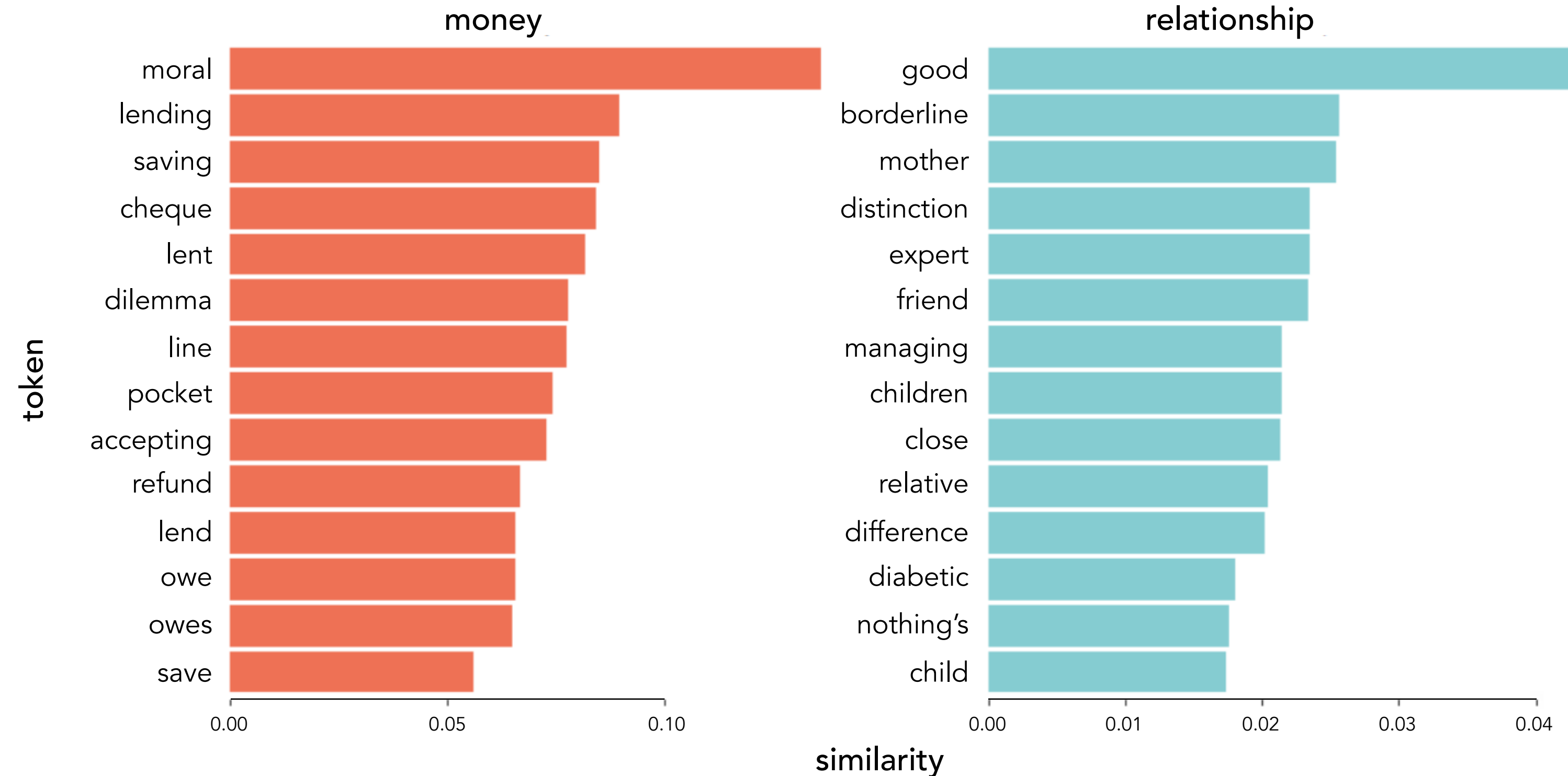
DIRECTED CLASSIFICATION

The previous approaches aimed tended to surface quite 'practical' or 'literal' themes - e.g. particular financial, bureaucratic, or medical situations.

We also tried more directed methods to draw out more 'experiential' themes, such as emotions and experiences of the system, by using:

- (i) pre-trained emotion classifiers from the Huggingface repository and

- (ii) training bespoke classifiers on Method52, using our own data.

However with available time and data we were not able to satisfactorily produce accurate enough classifications (<70%, as determined by testing against baseline of human classification).

This may have been due in part to the fact that many posts were extremely long and complex, and covered many intersecting themes in different ways. The relatively small size of some of the datasets also meant that relevant data was limited with which to train the classifiers. This could potentially be addressed through a more extensive pre-preparation phase of the data.

Computer-aided analysis has (within limits, and in conjunction with human analysis) been effectively used to study emotions and experiences in other contexts. However our tests suggested that for our purposes, we would need to develop more bespoke models first.

SUMMARY OF TESTS

1 NLP is a trade-off between speed (using "out of the box" language models or simpler statistical analyses) and relevance (fine-tuning or training bespoke models).

2 Our experiments showed that faster approaches were able to detect key overarching themes - often, though not always, focused on specific practical problems - and lists of keywords to guide filtering for manual analysis.

3 More bespoke approaches to focus on emotional and experiential issues may be feasible, but would require more time (we would estimate at least a month) to develop and test more bespoke models and classifiers.

4 Once trained such models could be used in a similar manner to the above workflow, but with results more focused on particular aspects of the forums.

QUALITATIVE ANALYSIS: DIVING INTO THE DETAIL

To draw out specific features of interest and relevance for this project, we conducted then analysed the initial themes and word lists produced by the NLP.

This analysis indicated that there were clear topics which people discussed on these forums - related in no small part to the topics the forums were dedicated to. These broadly fell into the categories of:

- **Housing** (accommodation, mortgages, heating, insulation)

- **Finance** (financial planning, debt, benefits, engagement with government and financial services, pensions)

- **Food** (grocery shopping, budgeting tips, foodbanks, recipes)

- **Work** (employment, jobseeking, redundancy)

- **Family** (childcare, relationships, divorce)

- **Health** (experiences of healthcare and health services, impact of physical and mental illness, disability, related benefits)

Across the topics that emerged from the high-level analysis, and exploratory reviews of sample data, we identified likely 'horizontals' - themes in what experiences people were talking about that reoccurred across the different topics.

These formed the basis of the bulk of our detailed investigation and analysis to understand people's experiences in more detail.

- **Emotional reaction to situation, often negative** - anxiety, worry, distress, anger

- **Relationships affecting their situation** - people's decisions about staying or leaving relationships affecting their financial stability, access to benefits, housing etc.

- **Seeking support** - people looking for advice, signposting, talking about the forums themselves

- **Navigating the system** - people's interactions with public services, questions about their interactions

- **Politics** - people discussing the political institutions providing those services

Once we identified these broad themes, we began to segment the dataset into relevant subsets using keyword filtering, starting with a naive keyword list drawn from an initial overview of the outputs of the NLP topics. This list was expanded iteratively through in-depth qualitative analysis, with the final datasets reached once adding additional keywords to the list was no longer locating additional relevant material. Seeking support ended up being a theme that came out across the other datasets, with relatively little content specifically focusing on the role of the forums, and so we focused on the four remaining themes.

The final datasets varied dramatically in size, with the largest being 5869 and the smallest 46 posts.

These were then reviewed, either in full or random samples according to size, by analysts to identify key themes through qualitative inductive thematic analysis, the results of which are presented in Section 1.

LIMITATIONS

We only examined English language posts within a specific time span, from a small selection of forums. As such, these findings should be regarding as providing insight and developing avenues for further enquiry, rather than representative of all people experiencing poverty in the UK.

Forums are also self-selecting, in that people who are digitally excluded, who did not feel comfortable posting on a public forum, or who did not relate to the specific focus of the forum are less likely to be represented.

We primarily examined posts in isolation, although in some cases it was clear where conversations were occurring: but this means that in some cases, context may have been missed.

The anonymity of the forums meant that although in some cases, people spoke about their experiences in a way which indicated things about their circumstances or history, robust demographic sampling for instance, was not possible.

We also could not verify at scale how far the forums were used by people experiencing a particular degree or form of hardship or poverty, although we aimed to identify highly relevant forums through the initial scoping to find where people were often speaking about significant levels of hardship. In some cases it was very clear from their description of their circumstances, but in other, more general conversations or questions, it was not always identifiable what degree of hardship they were experiencing.

METHODOLOGY: CONCLUSIONS

1 **Social media listening offers insights into how people are experiencing hardship day-to-day**, in real time, and responding to social, economic or policy changes: in open forums, where people feel able to share their feelings and experiences often anonymously, there is a huge amount of information and understanding that can be gleaned from what people are saying in these spaces.

2 **Forum selection is crucial in determining what questions the research will be able to answer:** the purpose, popularity and community of an online forum determine what data will be available for analysis and has a significant impact on what kind of topics or experiences will be shared.

3 **Combining the application of NLP techniques to identify key avenues of exploration enables a more systematic approach** to be taken to close qualitative analysis of social media content, and for unexpected themes to emerge, but generalises over a highly diverse dataset. Qualitative analysis allows for greater analysis of the complexities' of individual users' experiences.

METHODOLOGY: CONCLUSIONS

4 **NLP approaches allow data analysis to be carried out at much greater scale and speed;** however, it can be resource-intensive to initially set up and test, given the specificity of the topic which means that bespoke models are more likely to be successful. Different skill-sets are also well suited to different approaches, with technical expertise necessary for the computational analysis, with policy expertise and lived experience useful for the qualitative analysis. A mixed methods approach, as we have taken, enables the benefits of both of these approaches to be combined.

5 **Further research could be made more by supplementing social media listening with in-depth engagement with affected communities,** meaning that findings could be explored, tested and validated. In an ongoing project, the outcomes from this in-depth engagement could then be fed back in to inform the parameters of future social media monitoring.

FRAMEWORK FOR FUTURE RESEARCH

WHAT IS MISSING FROM INSIGHTS INTO
PEOPLE'S EXPERIENCES OF POVERTY?

GENERAL: WHAT ARE PEOPLE TALKING ABOUT IN ONLINE SPACES?

SELECT: A diversity of types of forums which will be used by different users for different purposes

ANALYSE: Using techniques like topic modelling and NLP classification on a large dataset to provide a birds-eye view of what is occurring in a dataset

SPECIFIC: HOW ARE PEOPLE EXPERIENCING OR REACTING TO SOMETHING?

SELECT: Forums which are likely to be relevant to that subtopic in particular, at a specific point in time or over a longer period as a form of ongoing monitoring

ANALYSE: Using techniques such as NLP classification and/or iterative keyword filtering to subdivide large datasets into more relevant datasets

ANALYSE: Combine with qualitative and thematic analysis of outputs and/or random sampling

ANALYSE: Analysis of metadata of those datasets - e.g. frequency of posts within those categories, frequency of keyword occurrences, number of unique users etc.

SPECIFIC: HOW IS THIS AFFECTING A SPECIFIC DEMOGRAPHIC OF USER?

SELECT: Very specific forums targeted at a particular group or which have high numbers of posts using specific keywords

ANALYSE: Complement but not replace in depth engagement with people

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