



# Extending the PIM-B Concept: An Exploration of How Nonbinary People Maintain Personal Information Over Time

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**Abstract.** This paper reports early results from an ongoing study exploring the personal information management of nonbinary people in Ireland. Data collection has been stalled due to an unforeseen issue which is described, and results presented are based on three semi-structured interviews. Cushing [1, 2] and other PIM scholars have found that that personal information is partly maintained because it represents an individual's identity to themselves and others. In the context of inequality, Cushing, and Kerrigan [3] found that PIM can be perceived as a burden, abbreviated as a PIM-B. This study furthers PIM-B work through exploring the lived experiences of nonbinary individuals that must maintain personal information that does not represent their identity in order to engage in society. Nonbinary people often find themselves in the position of maintaining personal information that does not represent their gender identity because of the traditional binarised structure of society more broadly. How does the requirement to maintain this information that is not representative of gender diversity mediate PIM? Using reflexive thematic analysis, our early analysis of 3 interviews suggests that nonbinary people in Ireland perceive both the information use and the exertion of control over distribution of *personal information management as a burden* (PIM-B). This finding can be used to refine the concept of a PIM-B [3] while also using PIM-B as an indicator of the inequalities that gender minorities face.

**Keywords:** Personal information management · Gender · Qualitative

## 1 Introduction

Frequently situated between human computer interaction and information behaviour, personal information management (PIM) has generally been defined from two perspectives that differ in how personal information is defined. Jones [4] and Jones and Teevan [5] consider personal information to include unique information, but also information that the individual consumes and information about an individual created and managed by someone else (ex. Medical records created by a doctor, held at a hospital, about an individual patient). Bergman and Whittaker [6] define personal information as only the unique information that the individual creates and as such, this unique information must be carefully curated. Regardless of what personal information includes, both PIM models agree that maintaining information is vital to the practice of PIM. Cushing [1, 2, 7]

has explored the maintenance of personal digital information over time, finding that this information often represents the individual's identity to themselves and to others. This paper adopts Jones' [4] definition of PIM as "the practice and the study of the activities a person performs in order to acquire or create, store, organise, maintain, retrieve, use and distribute the information needed to meet life's many goals and to fulfill life's many roles and responsibilities" (p. 5) with focus on the activity of maintaining personal information over time.

If representing one's identity is a vital component of the effort to maintain personal digital information, what happens when individuals must maintain personal information that does not represent them, in order to engage with society more broadly? In particular, how does this manifest when individuals find that their identity is at odds with broader society and that there is no way to represent their identity accurately through personal information? How does this affect how they represent their identity to themselves or others? How can these experiences further our understanding of maintaining personal information over time?

Considering these questions, the main research question guiding this paper is as follows: *how does managing personal information serve as a burden for nonbinary people?* Relying on Cushing and Kerrigan's [3] themes of personal information management as a burden (PIM-B), this paper seeks to address gender diversity and nonbinary identity, specifically noting the ways in which nonbinary individuals must manage their personal information and information infrastructures more broadly. Through interviews with members of this gender diverse community, we sought to explore the ways in which managing personal information can serve as a burden in PIM, when this is not the case for those who identify within the traditional gender binary.

## 2 Literature Review

One of the most widely cited definitions of PIM is from Jones and Teevan [5], who define PIM as "both the practice and the study of the activities people perform to acquire, organize, maintain, retrieve, use, and control the distribution of information items such as documents (paper-based and digital), Web pages, and email messages for everyday use to complete tasks (work-related and not) and to fulfil a person's various roles (as parent, employee, friend, member of community, etc.)" (p. 3). Since 2007, several authors have expanded the definition of PIM to include "nonwork" personal information, especially in discussions of personal archiving, where the focus is on maintaining personal information over time [7–10]. In a 2019 study of personal information from activity tracker technology, Feng and Agosto [11] found that the PIM activity tended to focus on what Jones' [4] previously labelled as "meta level activities". This included organisation, maintenance, managing privacy, measuring and evaluating and making sense. Bergman and Whittaker [6] believe that curation is the central activity in PIM, which overlaps with the ways in which Jones [4] describes organising and maintaining.

Explorations of personal digital archiving often overlap with PIM activities, but the central focus remains on maintaining the personal information over time. Marshall [12] identified that maintaining and organising personal information over time can take considerable effort on the part of the individual. Cushing [1, 2] found that individuals

are more likely to engage in maintaining digital personal information over time if the information is considered a digital possession, which are characterised as providing evidence of the individual, representing the individual's identity, recognised as having value and exhibiting a sense of bounded control.

In contrast, in their study of LGBQ parents attempting to obtain birth certificates and personal identity information for their children in Ireland, Cushing and Kerrigan [3] found that the effort to organise and maintain this personal information is perceived as a burden due to the perception that the PIM activities serve as representations of inequality and lack of recognition for same-sex parenting. Cushing and Kerrigan [3] draw on previous work in information behaviour which explores the concept of invisible information work, marginalisation, and information overload [13–18] to identify 4 themes of a PIM-B: 1) additional PIM tasks, 2) negative affect, 3) lack of self-extension to digital possessions, and 4) additional information seeking.

The experience of nonbinary individuals serves as an example to further explore the concept of PIM and marginalisation. Research pertaining to PIM and nonbinary communities is currently minimal. Emerging research in broader areas is beginning to focus on the ways in which nonbinary people navigate technological infrastructures. To that extent, Spiel's research [19] focused on how these technological infrastructures encode gender as fixed and binarised, which consequently prevented nonbinary people from registering their correct gender identity, even though they may have received legal recognition. This is an instance where varying obstacles emerge around PIM and nonbinary identities. Other studies, such as that by Quinan et al. [20] have examined the implications of potential new measures for inclusion on state documents for nonbinary communities, such as that of an X marker to indicate a nonbinary status. This form of declaring personal gender identity on state documents was considered by Quinan et al. [20] as facilitating state regulation of gender-diverse individuals, noting how individuals grafted their own meanings onto this non-binary marker. In other instances, research has demonstrated how the declaration of personal information on input forms on websites or online services has resulted in many nonbinary individuals not being able to select their correct gender category. As Schuerman et al. [21] note, digital health forms, social media websites and dating apps did not recognise non-binary identities, which was particularly acute for online health forms where this gender information is crucial for healthcare. Schuerman et al. [21] conclude by noting that designers of online gender web forms need to be sensitive to the information needs of non-binary people. This paper speaks to this gap in the literature through attempting to understand the lived experiences of nonbinary individuals and their experiences of PIM.

### 3 Method

We used semi-structured interviews to gather data from the lived experiences of nonbinary people living in Ireland to understand their experiences of maintaining personal information that does not represent their identities. We developed an initial set of interview questions based on consultation with a PhD student and nonbinary person who is conducting parallel research about information seeking in transgender and nonbinary populations. We also developed questions based on our experience with our PIM-B

study [3]. We then pilot tested questions with an individual identifying as nonbinary based outside of Ireland, as a means of not using potential participants from our targeted sample population. Based on the pilot, we revised the questions before official data collection began. We used word of mouth, postings on social media and with permission, solicited participation on several private social media pages with the stated mission of supporting nonbinary people in Ireland. No one was contacted directly based on their gender identity status, we relied on individuals to contact us if they were interested in participating in an interview. Interviews were conducted via Zoom, beginning in early August 2022. One or both authors completed the interview, using the same questions.

Reflexive Thematic Analysis was used to analyse the data [22]. We used a combination of inductive and deductive processes to identify themes using Braun and Clarke's [22] six steps, including: familiarising oneself with the data through reading and rereading transcripts, generating initial codes, collating codes into potential themes, reviewing themes, defining, and naming themes and producing the final analysis report (findings).

## 4 Early Findings

This project is still in progress; thus far we have conducted three interviews, upon which we base our initial findings discussed below. Our data collection slowed after one month, which could be related to several key news pieces that dominated news headlines in Ireland at this time.<sup>1</sup>

As a result of this cultural climate, we are finding that there is less interest to participate in the research project. We hope that these volatile events for gender minorities will dissipate, but in the meantime, it has led to an (understandable) slowdown in data collection. This experience demonstrates that research which relies upon participants from marginalised communities can be impacted directly by a cultural climate and constructed moral panic being distributed by news headlines and social media.

Based on our three interviews, our initial findings suggest that the concept of maintaining information that does not represent an aspect of one's identity (their gender queer status) was also discussed as being a burden (Table 1).

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<sup>1</sup> On 30 August 2022, news broke that a Secondary School had put teacher Enoch Burke on administrative leave because he refused to comply with the school's newly adopted gender affirming policy for students, refusing to refer to a student by their they/them pronouns. Once placed on leave, Burke refused to stay off school grounds, leading the school to obtain a restraining order, which Burke repeatedly ignored. On the last occasion, Burke entered school grounds, confronted the school Principal, and was ultimately arrested for violating the restraining order. Several media outlets have reframed Burke's arrest for violation of a restraining order as a teacher being arrested for refusing to use "they" instead of "he" [23]. The social media accounts of Burke, his family and friends, and his supporters, position him a victim of 'woke culture' gone 'too far'. As this story has continued to make headlines in Ireland, an anonymous nonbinary person who did not want to participate in this study suggested to us that the case had engendered a climate of fear in the nonbinary community in Ireland. This case has not occurred in a vacuum and there has been an ever-increasing amount of media reportage purporting gender critical frames, with gender critical generally describing a belief that an individual's sex is biological and unchanging and cannot be combined with someone's gender identity. For

**Table 1.** Participant ages

Participant No.	Age
1	42
2	67
3	45

#### 4.1 Furthering the Concept of a Personal Information Burden

Cushing and Kerrigan [3] identified four themes of a PIM-B: personal information associated with 1) additional PIM tasks, 2) negative affect, 3) lack of self-extension to digital possessions, and 4) additional information seeking. The authors use the PIM-B concept to demonstrate how managing personal information over time can vary based on marginalization (such as sexual orientation, which Cushing & Kerrigan investigated), which reinforces feelings of inequality and triggers feelings of burden. Below, we attempt to understand how nonbinary individuals experience inequality via PIM and how this connects with the concept of a PIM-B.

Most participants described that their chosen name that they go by is often not their name on official documents such as passports. The name assigned to the participants at birth, rather than their chosen name, was also present on government benefit information such as social protection, medical information and was also their registered name with An Post, the State-owned provider of postal services in Ireland. As a result, when participants needed to engage with these government entities, their chosen names and nonbinary status was not recognised. Accordingly, the participants frequently requested changes be made to data collection procedures, which often fell on deaf ears. Participant 1 described how “breaking a chain” in personal information collection is more difficult with banks and medical providers who often require “official” identity documents such as a birth certificate or passport, whereas an online shopping company may let you create a shipping address without the need for you to state a gender or use the same name found on an “official” document:

...my passport is the thing that identifies me for my driving license, and that identifies me for my bank account, and so on. Well, we started with one name, and I don’t have any way of breaking that chain” (Participant 1).

The concept of viewing personal information as a chain of information is novel and has the potential to impact the way researchers approach PIM. How does PIM mitigate the ways in which different examples of personal information connect with other examples within a personal information collection? In the context of a PIM-B, addressing the feeling of burden may require modelling personal information as a chain, as a way to understand the root of the burden. If feelings of burden associated with PIM can be isolated, PIM research may be able to be developed to alleviate these feelings

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example, the Trans Writers’ Union has called for a boycott of *The Irish Times* for “anti-trans rhetoric” and gender critical news articles [24].

experienced during PIM. While the traditional focus of PIM has been efficiency, future PIM research could focus on how to make PIM a more enjoyable experience, or at the least, feeling like less of a burden. However, if the root of feelings of burden stem from the acknowledgement of systemic inequality, it is unlikely technology or methods associated with PIM can “solve” this problem. As such, understanding the role of PIM in policies, specifically government policies that are meant to provide citizens equal access to benefits and services, may address feelings of PIM-B that marginalised individuals’ experience.

When asked about official avenues of name change, our participants instead preferred to go by a shortened version of their given name, or the Irish version of their given name. As background, it is not uncommon in Ireland for people to go by the Irish language version of a given English language name. In fact, as Participant 2 notes, they fostered the Irish version of their name as it reduced feelings of dysphoria from the name assigned to them at birth alongside the fact that the name tended not to be gendered more broadly, with the exception on occasion of Irish speakers. Participant 1 similarly notes how abbreviating their name by shortening it reduced their feelings of dysphoria with their gender identity. In managing personal information in this way, participants noted how it led to better wellbeing outcomes for themselves.

In discussing PIM as burden, most participants agreed that there was some level of additional burden associated with personal information and nonbinary status, but participants described this burden differently. For example, Participant 1 spoke of how there is a feeling of *cognitive burden* when faced with a gender drop down box on a web form that list only male or female. Extending from this, the participant noted the difficulties and emotional turmoil of having to think about which gender to select and the ramifications of selecting each gender choice every time personal information is collected, served to be “a cognitive and emotional load:

It’s a cognitive burden because I have to make these choices every time. And I’m sitting there and the doctors, and there’s this free text box that was a paper form [previously]. There’s a box where I can write it in. It says gender, and I’m there for five minutes. What do I put? And yeah, the majority of people don’t have to have that kind of cognitive load, and it is an emotional load as well (Participant 1)

Participant 2 was more severe in their description of burden:

It’s absolutely exhausting, and I guess I have two twin emotions about that. Sadness, that it is that way. It’s also anger, or it just pisses me off. But I’ve learned over a lifetime of using my anger as fuel, you know, to make change and rattle cages (Participant 2)

On follow up, when Participant 2 was asked what it might feel like if the burden was removed, they responded “Oh my God! I think I could breathe.” Interestingly, Participant 3 applied less strength in their discussion of burden, describing it as: “an annoyance, it’s kind of frustrating, but I don’t know if I would call it a burden.” This suggests that a range may exist in the experience of a PIM-B. Future research could explore this range of the experience of burden.

## 5 Discussion

Our early insights into data from three interviews focused on whether our concept of a PIM-B could be applied to a similar, but different population, and if the concept could be further refined. Our early analysis indicates that the concept of a personal information burden (PIM-B) extends to personal information management of our sample of nonbinary people in Ireland. However, the burden is not limited to information seeking or maintaining personal information as with our sample population in Cushing and Kerrigan [3], but the burden extends to the way in which individuals use and control the distribution of personal information, including name and gender identity, to interact with other people and their official data gathering instruments. Cushing and Kerrigan [3] characterised a PIM-B using four themes: 1) additional PIM tasks, 2) negative affect, 3) lack of self-extension to digital possessions, and 4) information seeking. While our research is ongoing, our early data analysis suggests that the concept of a PIM-B may need to be expanded to include information use and the control of the distribution of information. In addition, the concept of a personal information chain will continue to be explored: if it is specific to a PIM-B, or if it is referenced in additional literature in different contexts. We also aim to develop future trajectories for this work, including range of feelings of burden experienced, how to limit the experience of a PIM-B via methods and tools, as well as understanding the role of PIM in government policy.

## 6 Conclusion

As this study began to recruit participants, the political and cultural climate for the gender-diverse community became extremely volatile and contentious within Ireland, with a number of high profile, ‘gender critical’ incidents occurring that has left much of the community in fear of systems of power, not to mention researchers in academic institutions. While our data collection has currently stalled, we will continue to collect data via semi-structured interviews, to further refine our concept of a PIM-B and develop tools and methods to address the concept of a PIM-B, as well as understand the role of PIM in government policy.

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