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How should UK population surveys represent differences in terms of sex and gender?

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Abstract

This research investigated how UK population surveys should represent differences in terms of sex and gender, with some exploration of how sexuality is represented in relation to these concepts. It shows how essentialist ontologies manifest in the production of knowledge, leading to some populations being misrepresented or rendered invisible. Informed by a critical queer feminist lens, this work centres populations overlooked by large-scale surveys, such as those utilised in the UK censuses. Through this research, participants from these populations played an active role in knowledge production, co-producing new survey questions to meet the needs of overlooked populations.

To address the multifaceted issue of survey representation, a three-strand, exploratory, sequential, mixed-methods approach was employed. In Strand 1, the design of 27 UK population surveys were systematically analysed. This produced an understanding of current UK survey practices and identified four overlooked populations: people with variations of sex characteristics (VSC), trans people, non-binary people, and anyone whose relationship to sexuality could not be categorised as only bisexual, gay, heterosexual/straight, or lesbian. In Strand 2, focus groups were employed, engaging with these populations to understand what they thought should be represented by surveys, why, and how. The overlooked populations actively engaged in knowledge production by co-producing survey questions they felt better represented their populations. In Strand 3, these questions were tested using an online survey of 347 LGBTI+ people aged 16 and over across the UK. Alongside testing the co-produced questions, the survey indicated whether the overlooked population's perspectives on survey representation were shared by a broader sample. Finally, the three strands were integrated to create a comparison between current survey practices and the co-produced perspectives on how surveys should be designed. This comparison enabled direct recommendations on how to improve UK population surveys.

This research enables an understanding of how misrepresentation and invisibility occur in large-scale surveys, and how to challenge this. Centring overlooked populations meant working with them to identify not only what information they were willing to provide and in what contexts, but also what information was in their best interests to share. Through this, I produced question design standards and emphasised key principles for data production to guide survey designers towards approaches that prioritise the participants’ autonomy over their own identities. The overlooked populations engaged with in this research emphasised the importance of having the choice to be represented based on how they see themselves, for both maximising the participant response rate and producing data that can be used to meet their needs.

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Acknowledgments

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Author's declaration

"I declare that, except where explicit reference is made to the contribution of others, that this dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution."

Printed Name: ..Kirstie Ken English......................

Signature: ....

Glossary

The following definitions are how these terms are understood within the context of this research. They are not used prescriptively, meaning they are not an attempt to dictate how people should self-identify or behave. The "Ontology and language summary" section provides the reasoning behind the definitions given and the terminology chosen (see Section 1.4).

Sex characteristics: These are biological traits such as hormones, chromosomes, and genitals. In the context in this research resides (21st century UK), people are grouped into the categories male and female in terms of these characteristics. Some people have variations of sex characteristics (VSC), meaning that their body features traits from both of these categories. Some people with VSCs self-identify with the term intersex. Endosex is a term sometimes used for people without VSC.

Sex assigned at birth: The assignment of male or female on an individual's birth certificate. This is usually determined by genitalia.

Gender: How someone describes themselves in relation to categories such as agender, genderfluid, genderqueer, man, non-binary, woman, etc. Sex/gender will be used when discussing survey questions on who someone is regarding these categories due to the terms being used interchangeably in that context.

Gender modality: The relationship between someone's sex assigned at birth and their gender.

Transgender (trans): Someone whose relationship to gender differs from that expected based on their sex assigned at birth.

Cisgender (cis): Someone whose relationship to gender is that expected from their sex assigned at birth.

Non-binary: Someone whose gender is not fully captured by the categories man and woman. In this research, non-binary people will also be described as trans as they identify differently from how they were assigned at birth.

Gender expression: How someone's behavioural and physical expression relates to gendered ideas of masculinity, femininity, and androgyny.

Gender conformity or non-conformity: Whether someone's gender expression matches people's perceived expectations of what their expression should be.

Sexuality: The nature of someone's erotic attractions. Sexual orientation is used here to specifically discuss how these attractions relate to gender. My discussion of sexuality and sexual orientation will be inclusive of romantic attractions.

Sexual behaviour: The sexual acts people partake in. They are not synonymous with specific sexuality categories.

LGBTI+: Acronym used here to refer to anyone who does not fit cisgender/heterosexual (cis/het) normative standards. The letters stand for lesbian, gay, bisexual, transgender, and intersex. The plus sign denotes that someone does not have to strictly identify with these specified labels to be marginalised due to not meeting cisgender/heterosexual norms.

1. Introduction

The way that populations are conceptualised and counted is forever changing. The introduction of trans status (gender modality) and sexual orientation questions to the 2021/2022 UK censuses marks a shift towards UK populations being understood and categorised in terms of these concepts.[1] Queer and feminist understandings of how we categorise and count populations recognise the contextual nature of these processes and the active role they play in producing, rather than passively collecting knowledge (Browne, 2010;Compton,Meadow and Schilt, 2018b;Lindqvist,Sendén and Renström, 2021). This thesis highlights how debates over the design of the latest UK censuses further emphasises the contextual and politicised nature of survey questions and the data they produce. I investigated the production of knowledge on sex and gender with a focus on improving large-scale population surveys.

The core research question of this investigation was ‘How should differences in terms of sex and gender be represented by UK surveys?’. Some of these differences relate to sexuality as it manifests in conceptualisations of sex and gender. This research is built upon and contributes to data production literature and shows ways that differing ontologies of sex and gender manifest in UK survey design. A key element that distinguishes this work from others is its classification of populations overlooked by current UK survey practices and its focus on their perspectives. These perspectives emphasise the importance of being given the choice to be represented based on how you see yourself. Through this research, I found that current UK survey practices fail to do this in many ways.

This research focused on large-scale surveys such as those utilised in the three UK censuses or the Annual Population Survey. I approach survey

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[1] Normally, three censuses are run in the UK once every 10 years: one for Scotland, one for England and Wales, and one for Northern Ireland. Due to the COVID-19 pandemic, Scotland’s latest census was pushed back to 2022, while the other two were conducted in 2021.

representation via a queer feminist lens, which prompted the focus on population surveys and overlooked populations' perspectives. This introductory chapter begins by summarising the queer feminist theory that underpins this research and how it influenced the focus of this study (1.1).[2] From there, I summarise the exploratory, sequential, mixed-methods research design employed to investigate the multifaceted issue of survey representation (1.2). To establish the purpose of each strand of this research, Section 1.3 summarises the specific questions, aims, and contributions to knowledge of this work. To assist readers in understanding the way that language is used in this thesis, Section 1.4 provides a summary of the ontologies and language used. This chapter concludes with an overview of the thesis structure (1.5).

Before summarising the theoretical basis of this research, I would like to comment on how sexuality will be discussed. This research was originally designed to focus on sex, gender, and sexuality and featured valuable engagement with participants whose relationships to sexuality are currently overlooked by UK population surveys. However, as the research progressed, the immensity of the debates surrounding sex and gender representation in surveys became apparent. These debates are part of a broader context of division in which concepts of gender and anyone associated with them are demonised (Butler, 2024;Pearce,Erikainen and Vincent, 2020).[3] Chapter 2 highlights the ways that ontologies and normative assumptions of sexuality, sex, and gender overlap (Butler, 2002;Galupo,Henise and Mercer, 2016) (2.2.3.1). Therefore, to allow for adequate depth on matters of sex and gender, while still utilising the useful insights relating to sexuality from the research, this thesis primarily touches upon sexuality in terms of its relationship to sex and gender. This means that the data surrounding sexuality questions produced by each of the three

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[2] Throughout this thesis, relevant sections will often be cross-refenced in brackets. For example, the research question and aims section in the Introduction would be represented by (1.1). The purpose of this is to make navigating this thesis easier and to signpost relevant material if readers are looking for something specific.

[3] This primarily impacts trans people and people with variations of sex characteristics, but in *Who's Afraid of Gender?,* Butler (2024) also highlights how the "anti-gender ideology movement" weaponises moral panic surrounding gender in a vast range of populations.

strands will still be discussed, but the overall focus of the research is on sex and gender.

1.1. The theory: Queer feminism

The lines between the feminist and queer elements of my work are not clearly defined; nor, as Jagose (2009) argues, are the theories' endeavours, which "have a stake in both desiring and articulating the complexities of the traffic between gender and sexuality" (Jagose, 2009, p172). By saying that I take a queer feminist approach, I am recognising some of the theoretical context my perspective is built from, not claiming that feminism and queer theory represent homogeneous viewpoints that this research neatly sits within or takes an uncritical stance on (3.2).

Starting with my ontological position on the nature of sex, gender, and sexuality, I was heavily influenced by the intersecting perspectives of feminism, post-structuralism, and fluidity within queer theory. Crenshaw's (1989) concept of intersectionality and its wider application within feminism has promoted the idea that there is no one objective way to be a woman or experience womanhood due to the way that race, class, disability, sexuality, and other factors of oppression and privilege intersect. Part of the reason I see population survey questions relating to sex and gender as important is that these surveys feature other demographic questions, so improving these questions can enable better intersectional analysis where issues are not only investigated in terms of one axis of power and oppression. The theoretical underpinning of this research inherently destabilises essentialist notions of sex, gender, and sexuality, not only via the recognition of intersectionality, but also post-structuralist accounts of meaning.

Through the queer feminist perspective I hold, there is a lack of objective perception on what sex, gender, and sexuality are, not only due to intersections of experience, but also due to the way that meaning is continually reconstructed. This impacts our conceptions of selfhood. Foucault's (1978) post-structuralist perspectives on sexuality and knowledge production more broadly are often seen as a key starting point for queer theorists (Callis, 2012). When reviewing previous literature, I engage with Foucault's perspectives on sexuality (2.2). The key point which I emphasise in my approach is this: sexuality is not an independent objective concept, but rather continually constructed as a mechanism through which power is enacted over people's lives and that this construction of meaning is an important area of investigation (Foucault, 1978). In other words, there is no one objectively "true" conceptualisation of sexuality and sexuality categories, and who gets a say on what these things are is important, as it means they have power over other people's lives. Butler (2002) applied this anti-essentialist account to gender, recognising the ways that gender and sexuality are interconnected. The epistemological ramification of this is that we should not make assumptions based on definitions of categories such as non-binary, woman, bisexual, gay, or straight, since not all participants will share the same understanding of them. Attempts to define and police categories lead to measurement invalidity and can reproduce invisibility of and/or misinformation about overlooked populations.

Three collections which heavily influenced the approach I took in this research are *Queer Methods and Methodologies* (Browne and Nash, 2010), *Other, Please Specify* (Compton,Meadow and Schilt, 2018a), and *Imagining Queer Methods* (Ghaziani and Brim, 2019). Each of these collections show what taking a queer approach to research could look like. The first collection concludes with Kath Browne (2010) applying Foucauldian perspectives of biopower and governmentality to governmental statistics such as the census. This paper is one of the main reasons why I specifically focused on population surveys, as Browne argued that:

> "Census data and government collection tools create rather than simply record, calculate or measure, thus moulding collective identities such that social power relations can be created and played out through the production of government data, where identity groupings and collectives are not simply 'waiting to be counted', what government collection tools do is profound" (Browne, 2010,p234).

This process of creation not only influenced my focus on population surveys, but also the emphasis on overlooked populations' perspectives. I wanted these populations to be actively involved in producing knowledge about themselves. Recognising the existence of people who break cisgender, heterosexual, and bodily norms can be seen as queering (Browne, 2010;Baumle, 2018). This emphasis on co-production was also driven by the feminist foundations of this research. Standpoint theory has been utilised within feminism for decades to emphasise the subjective situated nature of knowledge and the importance of recognising specific standpoints (Collins, 2002;Haraway, 2020;de Vries, 2015). Rather than seeing outsider researchers as objective and placing them on a pedestal, these feminist perspectives recognise the beneficial insights that specific experiences can grant. It is this recognition that drove my engagement with overlooked populations. A more straightforward practical reason to focus on overlooked populations is that I aimed to produce recommendations to make surveys more inclusive, and to do so, I had to identify and work with populations currently not being included. When reviewing the literature on this topic, I show the limited research that has been conducted to engage with the people with VSC and trans people over their representation in surveys (2.4). This research adds to that body of work and functions as a bridge between the reality of how people experience sex, gender, and elements of sexuality and the endeavour to produce useful statistics on these demographics.

Although this research was motivated by the recognition that LGBTI+ people are generally overlooked by population surveys, my focus on them was not a certainty. Unlike other research in this area, I began this work by systematically identifying who is overlooked by current survey practices (Ansara and Hegarty, 2014;Badgett et al., 2014;Broussard,Warner and Pope, 2018;Guyan, 2022a;Harrison,Grant and Herman, 2012) (4). These populations then became the target populations for Strand 2. Having a clear rationale behind my focus on these populations makes this research more persuasive and provides useful insights for others designing surveys or working with survey data (1.3).

A key reason for the focus on large-scale surveys is the shift surrounding the 2021/2022 UK censuses' representation of sex, gender, and sexuality, making this area topical and granting this research meaningful impact opportunities. In 2019, I became increasingly aware of the census debates across the UK. Being agender, trans, polyamorous, and queer, I am regularly overlooked by surveys in several ways. Given my quantitative methods training and activism within the LGBTI+ community, I was aware of how impactful accurate statistics on sex, gender, and sexuality could be as well as how census debates could interact with the UK’s “gender war” over trans rights (Hines, 2020a;Pearce,Erikainen and Vincent, 2020). I could see that the latest UK censuses represented both a chance for considerable progress and risks of setbacks to how LGBTI+ people are represented in data and understood.

Questions designed to work with the general population are also the most versatile form of survey questions, meaning that recommendations from this research could have a broad range of applications, including the use of survey questions in equality monitoring and smaller research projects. The discussions surrounding sex and gender data are not only tied to the census; for example, in 2019, the Scottish Government announced the formation of the Sex and Gender in Data Working Group (SGDWG), with the purpose of producing recommendations on how public bodies should record data on sex and gender. Other examples can be seen throughout this thesis as I engage with academic publications discussing survey questions on sex, gender, and sexuality in various contexts including health (Conron,Scout and Austin, 2008;Macapagal et al., 2017), education (Garvey, 2019) and the third sector (Meyer and Elias, 2022). I focus on questions for large general populations, hoping that my recommendations could be relevant across these different contexts.

A key benefit of surveys aimed at the general population, particularly censuses, is how they can minimise some of the sample issues faced by LGBTI+-specific research. Research such as this often relies on under-representative convenience samples, tending to include those with fewer barriers to participation, often white, middle-class men from urban areas with strong community links (McDermott,Roen and Piela, 2013;Humphrey,Easpaig and Fox, 2019;Meezan and Martin, 2003). In the Methodology chapter of this thesis, when discussing the limitations in this research’s sample, I highlight how the National LGBT Survey (2018b), which is the largest survey of LGBTI+ people in the UK, was dominated by white, younger people from urban areas (3.7). Research that engages with a general population rather than LGBTI+ people may have fewer barriers to initial participation, although, without specific efforts to sample LGBTI+ people, they may be omitted by these surveys altogether. It is also the case that simply being included in a sample does not inherently mean being represented as LGBTI+, which is the area this research seeks to investigate.

By looking at large-scale surveys from the perspective of overlooked populations, I hope to highlight issues with how surveys currently conceptualise and produce data on sex, gender, and sexuality. This can be seen as part of a larger endeavour of “queering” the categorisation and quantification of human behaviours, feelings, and identities. Although this research has a specific sex and gender focus, it has potential for influence over quantitative categorisation far more broadly. My attempt at queering is executed via an exploratory, sequential mixed-methods design, which will now be summarised.

1.2. Research design: An exploratory sequential mixed-methods approach

I have summarised how the queer feminist lens of this research led to my focus on population surveys and overlooked populations’ perspectives. This focus produced two broad areas of investigation required to answer my overall research question: How do current survey practices represent participants in terms of sex, gender, and sexuality, and how do overlooked populations think sex, gender, and sexuality should be represented? Answering these two questions enabled a critical comparison of current and potential survey practices. This comparison allowed me to produce specific recommendations on improving how sex, gender, and sexuality are represented in UK surveys. These recommendations not only take into consideration the current UK survey norms, but are also data-driven, directly based on the perspectives of overlooked populations. There are specific sub questions and aims within these broad areas of investigation, which are further discussed in Section 1.3. Prior to that, I summarise the methods I adopted to address these areas of investigation. I discuss the methods before the specific sub questions due to the questions being linked to specific strands of the research that must be explained first.

Sequential mixed-methods research features multiple quantitative and qualitative strands, which are conducted one at a time with each informing the next (Tashakkori and Teddlie, 2009). This aids in the queering of surveys, as it enables the development of a design process which considers both the perspectives of overlooked populations and the current survey practices. This research featured three strands, the first developing an understanding of current practices, the second exploring overlooked perspectives, and the third determining whether these perspectives are held by a larger sample of LGBTI+ people (Creswell and Clark, 2007). An exploratory approach is taken due to my focus on overlooked populations and my desire to be reflexive on my own biases. Taking an exploratory approach built primarily around qualitative data helps minimise the risk of this research simply recreating the survey issues it aims to address. Figure 1 outlines what the three strands of this research are and how they relate to each other.

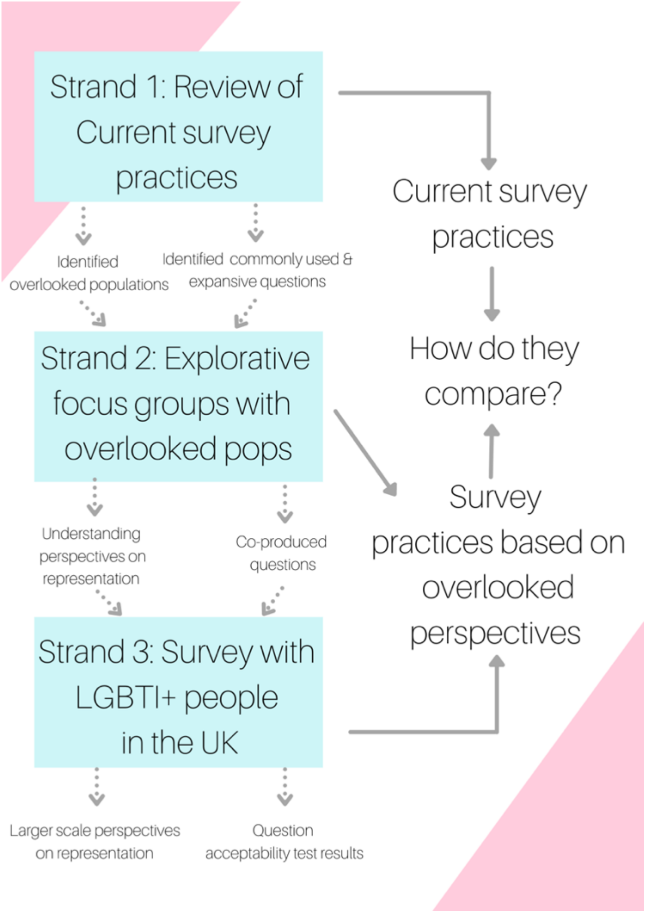

Figure 1: Summary of my exploratory sequential mixed-methods approach

Strand 1 provided a systematic analysis of how surveys currently represent sex, gender, and sexuality by reviewing 27 large-scale surveys conducted since 2011 up to and including the latest UK censuses (Appendix 1). Via this snapshot, I was able to identify who current surveys overlook and how sex, gender, and sexuality are not represented in current practices (4). The overlooked populations identified became the target populations for Strand 2.

The second strand was exploratory in nature, utilising focus groups to engage with the four most overlooked populations (5). In order to sort the participants into relevant focus groups and to discover more about the context of their perspectives, they were asked to fill in an online questionnaire (Appendix 4). The questionnaire accompanied the participant information sheet and consent form and featured open demographic questions. In the online focus groups, the participants discussed perspectives on whether they wanted their relationships to sex, gender, and/or sexuality to be represented by surveys. They were given the opportunity to co-produce questions that they thought would represent people overlooked in the same way as them. A benefit of this approach is that it minimised the researcher/participant power imbalance by directly involving participants in the design process. This attempt to stabilise the power between myself and the participants was further reinforced by the adoption of feedback sheets, which enabled further engagement with Strand 2 participants to ensure that this research centred on the perspectives of the most overlooked populations (Appendix 6).

In Strand 3, the questions designed by the focus group participants were shared with a larger sample of 347 LGBTI+ people over the age of 16 who live in the UK (6). Using an online survey, these participants were asked what information should be included in population surveys and their perspectives on the questions designed by the focus group participants (Appendix 7).

The data from Strands 2 and 3 were integrated to create guidelines for representing sex, gender, and sexuality in surveys. The qualitative nature of Strand 2 provided insight into the reasoning behind these guidelines and the scale of Strand 3 helped indicate how they could apply to larger groups. These guidelines were then compared against the understanding of current survey practices gained from Strand 1. The comparison helped highlight any good survey practices already in use and produce practical recommendations for how to address issues.

The overall contribution of this research is its enhancement of the understanding of knowledge production – specifically how different ontologies of sex and gender manifest in the design of population surveys. Based on the engagement with overlooked populations, ways to progress knowledge production that prioritise participant autonomy via reflexive and transparent approaches were developed. This accumulated as a queer feminist approach to data production with the potential to maximise the benefits of data production while minimising harm for the most overlooked populations in UK data.

The value of this research lies in how it breaks down elements of survey design in terms of the impact on participant representation. Here, survey design limitations are referred to as either preventative or procedural (7.3 and 7.3). Preventative issues are conceptualised as survey designs that do not allow certain experiences to be represented. Procedural issues are those that impact how a survey presents an issue, which can impact responses but does not inherently prevent certain information from being represented. This research primarily focuses on preventative issues, while providing some insight into procedural ones. To properly explore procedural issues, a much larger study would be required, suggestions for which I indicate in the conclusion of this thesis (8.2.1).

As would be expected from research findings collected from participants who willingly engaged with research, the participants were generally in favour of being represented by surveys. However, they did identify the potential risks in this representation and did not want to be forced to misrepresent. This led to an emphasis on including “prefer not to say” options for all questions to give participants the choice to disclose or not. This research follows the logic of “if it must be done, do it well”. It does not assume that the production of data relating to sex and gender (or sexuality) is inherently beneficial, but does highlight ways to mitigate some potential risks of poor representation.

Along with their emphasis on autonomy over whether to disclose, the participants saw a need for expansive options, the ability to tick more than one box, and text boxes so they are not forced into inaccurate categories or non-participation. A survey participant commented that they would sometimes tick “prefer not to say” when they would “love to say” due to there being no appropriate options for them. This emphasises a key significance of this research: giving people the option to be represented by surveys on their own terms.

Throughout this thesis, I contribute to discussions on how ontologies link to knowledge production and investigate how survey design can be improved by involving overlooked populations in the knowledge production process. In this sense, a key output of this research is not only the recommendations on improving survey designs, but also the insights into the design process itself. Throughout this thesis, I will outline how I engaged with overlooked populations, any hurdles that came up along the way, and the key benefits of this approach. This work promotes involving marginalised groups in the process of producing knowledge not only about them, but for them.

1.3. Research questions, aims, and contributions

Here, I summarise the specific research questions for each element of this research and their aims (see Table 1). The overall question this research asks is “How should differences in terms of sex and gender be represented by UK surveys?”. In the previous section, I indicated two broad areas of investigation within this research: how surveys are currently designed and what overlooked populations think about survey representation. Strand 1 primarily addresses the first issue, while Strands 2 and 3 investigate the second. In this section, I highlight the subquestions within these broad areas of investigation and how they are brought together.

The language of “how” is not used here to assume that survey representation is inherently beneficial, but to denote that this research was likely to primarily engage with people in favour of data representation in some capacity, given that they were willing to participate in this research. In this sense, I approach this issue with the attitude that if surveys are going to collect demographic data, they should do it well, in a way that enables all participants to provide data on their experiences and identities if they wish.

Table 1: Research questions and aims connected to strands

Strands	Research Questions	Aims
Strand 1	1. How do current large-scale UK surveys represent sex, gender and sexuality? 2. Who is overlooked by current survey practices?	1. Providing a systematic review of current survey practices to enable comparison and direct, pragmatic recommendations for making surveys more inclusive 2. Identifying the most overlooked populations whose perspectives are centred in this research
Strand 2	3. What do overlooked populations think about current survey representation? 4.What do overlooked populations think surveys should represent? 5.Why do overlooked populations think certain traits/experiences should be represented by surveys? 6. How do overlooked populations think people like them should be represented? 7. Why do overlooked populations think some question designs are better than others?	3. To understand some of the perspectives overlooked populations have on survey representation 4. To involve participants in the knowledge production process by co-producing survey questions with them 5. To understand some of the perspectives overlooked populations have on current survey practices to improve them
Strand 3	8. What traits/experiences do LGBTI+ people think surveys should represent? 9. When are LGBTI+ people comfortable disclosing information on different traits/experiences? 10. What does a larger LGBTI+ sample think of the co-produced survey questions?	6.To determine whether the perspectives shared by the most overlooked populations are shared by a larger LGBTI+ sample 7. To test whether the co-produced questions could be understood, answered by, and used to represent a larger LGBTI+ sample
Integrated data	11. How does the survey practices based on Strands 2 and 3 compared to the current practices found from Strand 1?	8. To produce practical recommendations on how to improve UK survey practices that centre overlooked populations' perspectives 9. Undertaking and sharing this exploratory sequential mixed-methods approach to provide

		an example of how overlooked populations can be more involved in the knowledge production process surrounding survey design

The contributions of this research are broad due to the way that it engages with and develops work surrounding ontological debates and survey design, and then illustrates the links between them, highlighting ways that different conceptualisations of sex and gender create barriers which are enforced via surveys as some populations are completely overlooked or squeezed into ill-fitting boxes. This builds upon the work of Browne (2010) by providing examples of how survey design is part of a process of biopower in which categories of being are constructed and used to control. Part of this was making explicit the assumptions made in current survey designs, showing the boundaries they create. Another element was highlighting the mechanisms of biopower via the work of other scholars such as Collier and Cowan (2021), and engagement with overlooked participants, to understand the impacts that representation or lack thereof has on them.

Between the Ontology and Language section (1.4) and the Literature Review (2.2) my ontological positionality is discussed. However, rather than an ontology featuring firm boundaries surrounding sex and gender, my perspective, with a basis in post-structuralism and queer theory, emphasises the contextual nature of meaning (Browne, 2010;Foucault, 1978;Butler, 2002). This means that instead of spending this thesis establishing a firm definition of sex and gender and arguing why this is the basis through which surveys should be designed, I instead focus on how we can produce knowledge respecting different subjectivities and the autonomy of participants to know themselves. Given this, my research contributes to the ontological debates over sex and gender in two ways. First, it links ontologies to specific forms of knowledge production, making explicit what different survey designs are dictating about the world. Second, it critiques ontologies, and the questions based on them, in terms of their ability to include and understand a vast range of experiences rather than creating rigid and exclusionary boundaries.

As stated previously, this research, unlike others looking at sex, gender, or sexuality survey design, systematically identifies overlooked populations and centres the research around their perspectives (Ansara and Hegarty, 2014;Badgett et al., 2014;Broussard,Warner and Pope, 2018;Guyan, 2022a;Harrison,Grant and Herman, 2012). This was carried out to draw attention to precisely who is being overlooked or misrepresented by current approaches. In and of itself, my identification of overlooked populations will be useful for other researchers in this area, survey designers, and survey data users as it helps them understand who may be missing from current samples and how. When integrated as part of this research, the broader contribution of the identification of overlooked populations is in the promotion of working with these populations to produce knowledge about them. Although the methodology of this research was not originally intended to be a contribution in itself, the importance of working with overlooked populations grew throughout the research process, so this research can be seen as an example and call for further survey design work which works with the groups it aims to represent, particularly those most commonly overlooked.

Throughout this thesis, I emphasise the significance of survey representation. This is achieved in two interconnected ways. The first is by recognising that survey debates are part of larger debates over the nature of sex and gender. Butler (2024) emphasised the scale of these debates in their latest book *Who's Afraid of Gender?,* in which they presented the "anti-gender ideology movement" as a diverse, sometimes contradictory, range of arguments that span a number of geographic contexts, but all share a demonisation of notions of gender and anyone associated with it. The second is by producing data on how the participants in this research felt about their representation. This is useful, both for emphasising the reasons why survey representation matters and how it can help us understand the purpose of surveys from the participants' points of view, which can influence how they are designed.

The final contributions of this work are in the recommendations it produces to improve the way surveys are utilised to produce knowledge in terms of sex and gender. Throughout this thesis, but particularly in Section 2.4 of the Literature Review, I engage with previous work on how surveys should be designed. This research provides a new empirical insight into survey design that works with overlooked populations and attempts to bridge the gap between queer realities and quantification.

When designing the recommendations, I categorised survey design issues as either preventative or procedural (7.3 and 7.3). This is beneficial for other researchers and survey designers engaging with this work as it draws attention to the different types of limitations that survey design elements can create. Some issues are preventative, meaning that they completely prevent certain populations from being represented as they are. Some are procedural, meaning that they impact how participants engage with questions, which may lead to differing responses.

The recommendations themselves are broken down in terms of general Data Production Principles and the TEMPS Question Design Standards. The Data Production Principles help researchers to produce data in a transparent, reflexive, and consensual manner (7.2). TEMPS is an acronym to denote the elements of question design that survey designers should strive for based on this research (7.2). Using the TEMPS question design helps maximise respect for participants' autonomy and ability to know themselves and produces data that better reflects them. The comparative element of this research where the co-produced data production practices based on Strands 2 and 3 are compared to current practices allows any useful survey designs already in circulation to be identified and further promoted. Emphasising useful approaches already in use has the benefit of these approaches having already been tested at a large scale. This means that we know they work for population surveys and may face less resistance to implementation compared to completely new question designs.

Despite this research's focus on sex and gender, its recommendations could potentially be useful in a range of data production contexts, particularly since they require survey designers to inform themselves about the populations they are seeking to represent, meaning that they should be able to apply them in appropriate ways.

1.4. Ontology and language summary: The words I used and why

In this research, how participants' relationships to sex, gender, and other demographic factors are understood will be based on how they self-identify. However, when discussing these concepts more broadly, a clear ontological position and approach to language use must be taken. My approach to ontology as it pertains to language use will be briefly summarised here. Chapter 2 features engagement with ontological literature surrounding conceptualisations of sex, gender, and, to a lesser extent, sexuality (2.2). I aim for my language use to be descriptive rather than prescriptive to avoid creating barriers surrounding ways of being. This section should be viewed as a clarification of my perspective rather than a judgement of how people should conceptualise their identities. The way people conceptualise their identities is extremely personal and contextual; within research and policy, how language is used has the power to influence and exclude (Browne, 2010).

Vincent (2020) described a conflict between two ontological approaches to the conceptualisation and use of labels such as trans and non-binary. This relates to the divide between essentialism and social constructionism, which will be outlined in Section 2.2. For now, one approach to labels is presented that ascribes set definitions to them, meaning anyone who fits these definitions is labelled that way. The other approach places more emphasis on the social conceptualisation of these terms and who identifies with them; for example, trans people would be defined as anyone who says they are trans. Throughout this research, there is a strong focus on how identities are constructed and contextually dependent (2.2) and an emphasis on the autonomy of survey participants (5 onwards), which means, on the individual level, I use the second approach. However, in terms of discussing the ways people are overlooked by surveys, it can be useful to utilise collective terminology. This section will highlight how terminology is used to describe ways that populations are overlooked while acknowledging that not everyone overlooked in these ways will identify with these labels as well as other issues with collective uses of terminology.

Fugard (2020) emphasised that when producing data on sex, gender, and sexuality, it is important to be clear about what specific elements of these concepts are being represented. For this reason, the first four subsections of this discussion address different elements of sex, gender, and sexuality. I conclude by reconciling the fact that there is no objectively perfect way to use language and, at the very least, whatever approach I take will quickly become outdated, which must be considered when designing surveys.

1.4.1. Biology

When considering language around biology, it is important to recognise that even material traits that would exist without human interpretation are categorised and ascribed meaning within a social world. In the first Literature Review section (2.2.2), I delve into this type of social meaning surrounding the sex/gender distinction that was popularised within second-wave feminism via the work of Millett (2016), Oakley (2015), and Rubin (1975a). It is based on Stoller's (2020) perspective that:

> "Gender is a term that has psychological or cultural rather than biological connotations. If the proper terms for sex are "male" and "female," the corresponding terms for gender are "masculine" and "feminine"; these latter may be quite independent of (biological) sex" (Stoller, 2020, p9).

This distinction was important in challenging gender inequality as it recognised it as a social phenomenon rather than a biological certainty. Within sexology, it also related to a shift in focus from issues of sexuality to sex, making space for the idea that who someone can be is distinct from their sexed body (Hines, 2020b). While this research will investigate the extent to which and ways in which people use sex and gender distinctions in their understandings and how they are incorporated into survey designs, I will not hold the assumptions of a uniform ontological sex and gender divide. This is primarily due to the fact that the sex/gender distinction does not account for the categorisation and understanding of biology (sex) that exists and changes within social contexts or the relationship between the perceptions of our biology and the gendered expectations placed upon us (Butler, 2004;Fausto-Sterling, 2012;Farrell and Lorber, 1991;Nicholson, 1994).

When discussing biological traits, I will follow the approach recommended by Freeman and Lopez (2018), which is to refer to specific **sex characteristics** rather than the sex categories of male and female. This is because these categories do not encompass the vast variety of different configurations of sex characteristics people can have due to how they were born, medical conditions, ageing, or medical treatment (Freeman and López, 2018). Vincent (2020) utilised this approach because:

> “the erasure of complexity – by using ‘male’ and ‘female’ as shorthand for common clusters of structures (for example, ‘male’ indicating penis, testes, testosterone, particular body fat distribution and hair growth patterns, XY chromosomes) – flattens the variety of human variation, and is disadvantageous to anyone (trans, intersex, or not) whose combination of traits defies gendered/sexed expectations” (Vincent, 2020, p6).

Avoiding ambiguous, limited categories like male and female allows for greater clarity and is beneficial for discussing some of the survey design methods suggested by participants in this research, which focus on specific sex characteristics rather than categories.

When discussing people with sex characteristics that vary from the expected combination of traits for males and females, I will use the terms **variations of sex characteristics (VSC)** and **intersex**. VSC will be utilised as a general term for anyone whose characteristics differ from those assumed of males and females. Intersex will primarily be used when referring to community movements surrounding VSC and people who specifically identify as such. People without VSC will be referred to as **endosex** people, meaning that their sex characteristics appear to meet those associated with either the male or female category. Intersex and disorders of sex development (DSDs) are two common ways of referring to people who have VSC (Davis, 2015a). Intersex was used solely by medical professionals until activists adopted it, setting off the contemporary intersex movement in the early 1990s (Holmes, 2016). Many people with VSC have what are considered normative relationships to sexuality and gender and do not identify with intersex’s associations with lesbian, gay, bisexual, transgender, and queer activism. The term DSD was introduced to the lexicon in 2005 by intersex activist Cheryl Chase to improve medical care for people with VSC (Davis, 2015a). However, the language of “disorder” was seen to problematise the bodies of people with VSC (Spurgas, 2016). This went against intersex activists’ goal of challenging the notion that their bodies needed fixing (Spurgas, 2016). The term VSC has been growing in prevalence. It was used on a UK Government Equalities Office (2019) call for evidence and an Intersex Day of Solidarity gathering organised by the Equality Network (2019a). Using the term VSC could potentially allow for engagement with people who have specific diagnoses that are not always considered to be intersex and/or they personally do not consider to be intersex. This is beneficial in the context of this research given its focus on differences of sex regardless of categorisation.

At the chromosomal level of differences, an example of contestation surrounding classification can be found. People with Klinefelter Syndrome have XXY chromosomes deviating from the more common XX or XY. There is no consensus on whether people with such variations should be categorised as intersex (Dreger and Herndon, 2009). Dreger and Herndon (2009) note that some people with chromosomes that deviate from the expected XX/XY configuration can show no visible sign of being intersex and would not have been categorised as such prior to chromosome testing. There could be many people with variations in their chromosomes who never know, due to not having been tested. Despite the biological foundation of these traits, our categorisation of them is socially situated and can impact how we understand and experience them. In *Inferior*, Saini (2017) addresses how the current categorisation of sex characteristics has obscured biological research, as many scientists have either disregarded sex differences or placed them on a pedestal above other biological differences.

Here, I highlight how biological traits such as chromosomes, hormones, and genitalia will be referred to as sex characteristics. VSC is used to refer to people whose sex characteristics cannot be neatly categorised as male or female, and endosex is used for those that can. As stated previously, this type of labelling is not used to indicate who people are, but rather how they are overlooked due to the assumption that humans fall into two biological categories; when there is no question on sex characteristics, people with VSC are rendered invisible (2.4). I emphasise that there is no consensus on who is categorised intersex and who is not. The categorisation of intersex people is contextual, but I discuss it in this section to make it clear that having a variation of sex characteristics is distinct from matters of gender and how gender relates to sex assigned at birth. Both people with VSC and endosex people can have genders that are or are not the ones associated with their sex assigned at birth.

1.4.2. Sex/gender categorisation, modality, and expression

I will now move on to discuss sex and gender categories, the concept of gender modality, matters of expression, and perception. As stated previously, categories like male and female are often perceived as inherent parts of us. However, it overlooks the fact that, by the very nature of being a category designed by humans, there can be no sex/gender categories without social context.

Sex assigned or registered at birth will be used when discussing how people were categorised when they were born. In the UK, everyone is assigned male or female on their birth certificates, even if they have VSC (ONS, 2017). Fausto-Sterling (2012) emphasised the process through which children with visible signs of VSC are categorised as male or female as extremely gender normative and heteronormative. The ability to either give or receive vaginal penetrative sex is often the key concern when categorising children with VSC (Fausto-Sterling, 2012). This process of categorisation has often included non-essential surgeries on the genitals of children who cannot consent. This highlights how categorisation can relate to practices of normative enforcement of binary categories. It is for this reason I utilise the terminology of “assigned” or “registered” at birth rather than simply saying sex, as that could undermine the social contexts in which sex categorisation is made. I will, however, avoid acronyms such as AFAB (assigned female at birth) and AMAB (assigned male at birth) to distinguish between different types of bodies due to the issues with the specificity of female and male categories discussed previously.

When discussing how people see themselves, I will primarily use the term **gender**, except when discussing existing survey questions on this subject in which case I will use **sex/gender**. This is because the 27 surveys reviewed as part of this research use these terms interchangeably without clearly distinguishing them. This was also found to be the case in other research on data collection practices (Westbrook and Saperstein, 2015). When discussing someone's gender, I will avoid writing in terms of "identifying". Vincent (2018) wrote how this type of language can be a form of microaggression when only applied to people who do not identify with their sex assigned at birth, undermining their ability to know and state who they are for themselves.

Much of the framing surrounding the relationship between sex assigned at birth and gender is relatively new, particularly given that these concepts are new in themselves. Due to this, new concepts such as gender modality are being developed to have a way to communicate the significance of this relationship. Ashley (2021) defined **gender modality** as:

> "how a person's gender identity stands in relation to their gender assigned at birth" (Ashley, 2021, p1).

Cisgender (cis) is used when referring to people whose gender is the one expected based on their sex assigned at birth. **Transgender (trans)** is used to refer to people whose relationship to gender deviates from that associated with their sex assigned at birth. Section 2.2.2.1 features a greater discussion of the development of language surrounding trans people in particular. The key thing to keep in mind is that language surrounding gender modality is constantly developing, contextual, and deeply personal. Gender modality has also been referred to as trans status/history, meaning whether someone is trans or cis (Guyan, 2022b). The key benefit of Ashley's (2021) conceptualisation of "gender modality" is that it provides a way to discuss the relationship between sex assigned at birth and gender, which is a basis on which many trans people are discriminated against, without focusing solely on the otherness of trans people. Later in this thesis, I will further discuss how framing questions on gender modality as trans status questions or simply gender identity questions reinforce the notion of cis people as the default (7.2).

As is the case with all labels discussed here, I will not be assuming that everyone referred to as trans or cis describes themselves as such. Rather, when I refer to people as cis or trans, I am denoting their relationship to cisnormative assumptions. Cisnormativity is the assumption that everyone's gender is dictated by their sex assigned at birth. This interacts with the male/female categorisation of bodies to reinforce the assumption that everyone fits within the two binary genders (Bauer et al., 2009). Due to this cisnormative assumption when data is not collected on gender modality, it is the gender modalities of trans people that are rendered invisible due to it not being the assumed default; Strand 1 of this study found that questions on gender modality were rare (4.2).

It should not be assumed that everyone relates to the notion of gender, has an unchanging gender, or that there are only two genders. The two often assumed genders, or the "binary", are man and woman. Some people do not have genders easily captured by these categories, either existing outside or between them or not relating to gender at all. Some people have multiple genders, which cannot be represented by questions that only allow participants to select one option. The term "**non-binary**" will be utilised in this thesis to denote anyone whose relationship to gender is not fully represented by the categories "man" and "woman". The development of the term non-binary will be further discussed in Section 2.2.2.1; the key thing to note is that it does not describe a homogeneous third gender category and that, given that no-one is assigned non-binary at birth, non-binary people are considered trans in this research.

Darwin (2020) argued that the cis/trans binary is fictitious as many non-binary and genderqueer people are not cis but also feel uncomfortable labelling themselves trans. Although this research includes non-binary people under the trans umbrella, the issue raised by Darwin (2020) had to be considered as part of the recruitment for Strands 2 and 3 to ensure that suitable participants were not excluded due to my language use (3.6 and 3.7).

By the same token, there are also people who do not fit neatly within the categories "man" or "woman" and relate more to the term "trans" than "non-binary", who also had to be considered. The author Juno Roche provides a clear example of this when describing their relationship to gender, as follows:

> "I don't feel like a woman (or a man) anymore; nor do I feel nonbinary as it includes the word 'binary'; and nor do I feel fluid as it still posits two binary poles for me to become fluid between.

I feel trans" (Roche, 2019, p11).

In *Trans Power*, Roche (2019) goes on to position trans as a tool for resisting binary assumptions of gender and all forms of gender-based assumption. This is just one example of how the use of labels such as "trans" can also have greater political meaning.

One of the reasons why non-binary people are included under the term trans in this research is due to non-binary people often having the same material needs as trans men and women. As a member of the Scottish Government's Non-Binary Working Group (NBWG), I and other members tried to communicate to the Scottish Government that many of our recommendations would be applicable to the wider trans community, stating that:

> "Many but not all non-binary people are also trans, and some, but not all, trans people are also non-binary: the two categories have a big overlap. Many of the issues faced by non-binary people are inseparable from those faced by trans people who are not non-binary, so many of our recommendations are of value to all trans people." (NBWG, 2022)

This statement was made with the understanding that some of the experiences of non-binary people differ from those of trans men and women, but that separating non-binary people from the larger trans population fails to recognise the shared struggle against cisnormativity and transphobia.

Gender expression is how someone's behaviours and appearance relate to social ideas of gender. **Gender conformity** regards how well someone's expression meets the assumptions placed upon them. Your expression can be seen as non-conforming with either the sex assigned at birth people assume you are, or the gendered presentation people think you are presenting. For example, a non-binary person who wears dresses and skirts may be read as a woman and perceived as gender conforming. However, some may assume that, being non-binary, they must present androgynously so they would be gender non-conforming in that case. It is also the case that how someone perceives their own gender expression and how others perceive their gender can differ. The concept of "passing" is sometimes used in reference to the gender presentation of trans people. Passing has also been found in reference to race (Hobbs, 2014), disability (Abrams and Abes, 2021), class (Foster, 2005), and sexuality (Pfeffer, 2014), and refer to when someone from an oppressed group is perceived as being from a more privileged group. For trans people, this means being seen as cis. This is sometimes sought to affirm the individual's gender identity, but is often a matter of safety as well. To be seen as cis is not possible or desirable for all trans people and may mean being misgendered based on their sex assigned at birth. Nicolazzo (2016) emphasised the way that intersections of race and disability can impact someone's experience of passing as they navigate multiple forms of passing and the way that transphobia, racism, and ableism can overlap. If non-binary people are cis-passing, they are automatically being seen as a gender they do not identify with, which can be dysphoria-inducing (Vincent, 2020). Given all of this, when discussing presentation in relation to cisnormative assumptions, I will employ the phrase "cis assumed" rather than "cis passing". Being cis assumed may or may not be an active choice by the individual, and although it can provide the privilege of physical safety, it can also lead to dysphoria and the stress of potentially being discovered to be trans. I hope by using these terms in this way that I can emphasise that meeting or not meeting gendered expectations is extremely contextual, as are any related costs and benefits.

In this subsection, I have highlighted how categorisation surrounding sex, gender, and presentation will be discussed in this thesis. The development of the terms discussed here, and their history, will be more thoroughly explored in the ontological debates section of the Literature Review (2.2).

1.4.3. Sexuality, romantic and sexual attractions, and behaviours

Butler's (2002) heterosexual matrix is an account of the relationships between sex assigned at birth, gender, and sexuality, which informed my use of language in this thesis. They describe the heterosexual matrix as the:

> "grid of cultural intelligibility through which bodies, genders, and desires are naturalized" (Butler, 2002, p194).

The heterosexual matrix, therefore, outlines how sexes assigned at birth and the assumed genders associated with them dictate normative assumptions about sexual desires. Through the matrix, if you are a man, you should be attracted to women and if you are a woman, you should be attracted to men.

Anything other than that deviates from the assumed norm (Butler, 2002). Through this lens, men and women are presented in opposition to each other and attraction to the opposite gender (heterosexuality) is seen as the norm and attraction to the same gender (homosexuality) is seen as the deviant other. Better and Simula (2015) discussed gender's key role as the defining factor of sexual orientation and how the heterosexual/homosexual binary and rigid sexual identities do not adequately capture the diversity of human sexuality. Bornstein's (2016) concern is that the dominance of gender when defining sexuality can lead to other elements of sexuality being overlooked, such as if someone feels sexual or romantic attractions, or how many partners they wish to have. In this research, **sexuality** will be used to discuss how people identify in relation to different elements of sexual attraction and desire for different types of relationship. **Sexual orientation** is understood here as a subsection of sexuality specifically related to how gender relates to attractions.

Just as with gender, it should not be assumed that everyone has a sexuality or that their sexuality is static. Some people have little or no sexual attraction; the term asexual, as opposed to allosexual, is sometimes used by people to denote their lack of sexual attraction (Hille, 2022). Aromantic and alloromantic are used to denote whether someone experiences romantic attraction (Rachlin, 2019). When discussing sexuality, I will include these relationships to romantic and sexual attraction along with matters such as the types of relationships people seek. Monogamy is the dominant type of relationship within the UK context; this means that people only have one sexual/romantic partner. Polyamory means having more than one partner. Other terms such as ethical non-monogamy are also used.

Sexual identity is separate from **sexual attractions and behaviours**, though may be closely linked. How someone openly identifies may differ significantly from how they feel or behave, often due to stigma and the context in which they are being asked to disclose their identity. In the past, terms such as men who have sex with men (MSM) and women who have sex with women (WSW) have been implemented to discuss sexual behaviour (Young and Meyer, 2005). Not only do these terms reduce sexual behaviour to sex with specific genders, but they also make assumptions about the definition of sexual acts and gender identities (Young and Meyer, 2005).

Here, I have described how sexuality and gender relate and how I will discuss realms of sexual and romantic feelings, behaviours, and relationship types. In the next section, I will highlight collective terminology for people who do not meet normative assumptions surrounding bodies, genders, and sexualities and privileged depictions of these populations.

1.4.4. Umbrellas with privileged depictions

This study focuses on the perspectives of overlooked populations. I previously mentioned how binary male/female “sex” categorisation overlooks people with VSC and how cisnormativity means that, unless actively represented, trans gender modalities are rendered invisible in data. I now wish to touch on the concept of heteronormativity and collective terminology for everyone who does not meet these normative assumptions. I will end this subsection by highlighting a cautionary point on collective language (umbrella label) use, which I try to be aware of throughout this thesis.

In *Fear of a Queer Planet*, Michael Warner (1993) used the term “heteronormativity” to discuss how the assumption of heterosexuality is used to reinforce homophobia by presenting straight people as the assumed default. Heteronormativity has been discussed in relation to the demographic visibility of same-gender partners, as the legitimacy of their relationships are undermined by data collection exercises (Walther, 2013). This research aims to examine people excluded due to both the cisnormative and heteronormative influences on survey designs.

In recent years, paradigms used to discuss people who do not meet cis/het norms have changed, reflecting the fact that not everyone who deviates from these norms fits within the lesbian, gay, bisexual, or transgender (LGBT) paradigm (Marinucci, 2016). Marinucci (2016) used Kuhn’s (1970) account of paradigm changes to argue that the new addition of letters to the LGBT acronym may indicate the need for a new paradigm that does not centre around specific identity labels. “Queer” is presented as a possible way to refer to people who do not meet cis/het norms, but comes with the problem that, for some, “queer” is considered a slur and may discourage participants (Browne, 2010;Compton, 2018). Here, **LGBTI+** will be used to refer to anyone marginalised due to their relationship to sex, gender, or sexuality. The “I” stands for intersex, which, as mentioned previously, is a weighted term. However, this research wants to actively engage with people with VSC, so denoting them in the acronym is required so they know they are included. The “+” denotes that this research does not seek to limit who it engages with, but rather wants to represent anyone who is overlooked by surveys due to their sex characteristics, gender, gender modality, or sexuality, regardless of the specific terms they use to describe themselves.

I have emphasised throughout this chapter that terminology such as LGBTI+, trans, cis, non-binary, and VSC will primarily be used to denote ways that people are overlooked in data unless referring to an individual who actively describes themselves using any of these terms. However, it is still important to emphasise the geographic context of these terms: the fact they do not denote homogeneous groups and the dangers of privileged presentations of these groups.

Binary essentialist understandings of sex assigned at birth, gender, and sexuality are colonial constructs that have been used to control people under colonial rule (Schiwy, 2007;Oyěwùmí, 1997). Terms such as non-binary, transgender, and the acronym LGBTI+ were developed within a Western/Anglo-centric context to describe people who fall outside binary essentialist and heterosexual norms. Third gender, much like non-binary, denotes people who are not strictly men or women but, unlike non-binary, it describes identities outside the Western/Anglo-centric context (Towle and Morgan, 2002). Towle and Morgan (2002) criticise the term “third gender” for being used to describe many identities outwith the binary, grouping vastly different identities in an overly simplistic manner. They also highlight that some of these identities relate more closely to sexuality than gender (Towle and Morgan, 2002). Towle and Morgan’s (2002) perspective on the use of the term “third gender” is important for this discussion surrounding terminology for two reasons. First, it indicates the importance of context. The approaches to representation in data discussed in this research are specific to the UK and should not be applied to other contexts without proper consideration of their cultural understanding of gender and sexuality. However, when discussing the findings of this research, I will argue that we should strive for flexibility in our survey questions, particularly via the use of text boxes, which would allow everyone to write the accurate terms for describing themselves. The second reason why Towle and Morgan's (2002) criticisms of the term third gender is useful here is that it highlights how collective terminology can be overly simplistic. The term "third gender" functions as a collective "other" category, which only serves to recognise populations in terms of how they deviate from normative genders and sexualities. Understanding that binary essentialist perspectives of sex assigned at birth, gender, and sexuality are not universal, nor is the modern Western/Anglo-centric lexicon of difference, is important for not taking categories for granted and understanding the oppressive power behind them.

In *Decolonialising Trans/Gender 101*, Binoaohn (2014) criticises introductory texts on trans people aimed at a cis audience and the use of trans as a collective term for the tendency to oversimplify and reduce people with a vast array of identifies to their most cis/het-acceptable form. This reduction tends to present white, cis-assumed, and otherwise privileged trans men and women as the default version of being trans, ignoring the needs of others under the umbrella. The issue they highlight is also apparent in research using acronyms such as LGBT, yet primarily focusing on sexual orientation, mostly ignoring the T (2018). Nölke (2018) found that media portrayals of LGBT people predominantly centred on privileged groups with a lack of people of colour (POC) and disabled people in particular. As mentioned previously, there is some hesitance amongst people with VSC to be associated with the wider LGBT community. One of the reasons is the concern that the needs of people with VSC are different and will be overshadowed by the needs of LGBT people (Koyama, 2010). These issues highlight that the terms discussed here should not be presented as representing homogeneous groups and the importance of recognising how intersections of oppression and privilege can impact who is presented as the default way to be different. To help mitigate these issues, I aim to be transparent about who I engage with and their positionalities as well as my own.

1.4.5. Concluding thoughts on language

In the preface to the second edition of *Whipping Girl,* Serano (2016, pXXV) discusses the “Activist Language Merry-Go-Round”, which she describes as the process of language describing stigmatised groups quickly becoming stigmatised itself due to heightened levels of scrutiny. Due to this, the language used in this thesis will quickly become outdated. I state this not to suggest that my choice of language is unimportant, but to highlight hurdles for survey designers. Whatever terminology and conceptualisation of sex, gender, and sexuality is utilised in a survey may quickly become outdated and need to be revised.

1.5. Thesis structure

Here, I provide a brief outline of this thesis. This is broken down into four elements: Past work, my approach, findings and analysis, and conclusion and where to go from here. The purpose of this section is to help readers navigate this thesis, highlighting the focus of each of the four elements.

1.5.1. Past work: Literature review

Survey representation in terms of sex and gender is a multifaceted topic with relevance across a range of disciplines, making engagement with previous work no small task. Due to this, the Literature Review chapter is broken into three core sections. Section 2.2 engages with literature on ontologies of sex and gender (with a discussion of sexuality) that influence survey representation. Section 2.3 moves on to the matter of knowledge production, specifically the process of categorising and quantifying people. Finally, Section 2.4 engages with previous work and debates surrounding sex and gender representation.

The Literature Review provides readers with a grasp of relevant ways that sex, gender, and elements of sexuality are conceptualised, why survey representation matters, and current survey debates surrounding these traits. This sets the stage for the contributions of my research.

1.5.2. My approach: Methodology and theory

The critical, queer feminist lens through which I view this topic made it apparent early in the development of this research that a sequential mixed-methods approach was required. Given this, the Methodology chapter is broken into seven sections (3). The first three sections provide context to the methodology as a whole, and the final four outline the three research strands and how they are integrated. Throughout this chapter, the ethical considerations of each of the strands are outlined, my positionality reflected upon, and the impacts of the COVID-19 pandemic on this research addressed. Key information on the surveys reviewed in Strand 1 and the samples of Strands 2 and 3 are discussed in this chapter.

1.5.3. Findings, analysis, and where to go from here

Chapters 4, 5, and 6 outline the initial findings of each strand. Each strand has its own key aims and provides useful insights. However, the true value of this research is seen when they are integrated, so the full discussion of my findings is provided in Chapter 7’s analysis of the integrated data. By integrating the data of the three strands, I was able to compare the perspectives of overlooked populations to current survey design practices.

Chapter 4 is where this research’s depiction of current UK survey practices resides. It is based on the first strand’s systematic review of 27 UK surveys. This provided insights into what current population surveys practices surrounding sex, gender and sexuality are in the UK (4.2). It also highlighted the four most overlooked populations by current survey practices, which made up the target populations of Strand 2’s focus groups (4.3). The data from Strand 1 is then used to contextualise current debates over the UK census in terms of commonly used survey questions.

In Chapter 5, Strand 2's qualitative exploratory engagement with overlooked populations is discussed. The chapter is broken down primarily in terms of participant perspectives on survey representation (5.2) and survey design (5.3). Alongside collecting data on overlooked populations, perspectives on survey representation, and design, the focus groups provided a space for the participants to co-produce survey questions to represent people like them. Chapter 5 summarises these co-produced questions (5.4) and highlights how the findings of Strand 2 influenced Strand 3 (5.5).

The initial findings of Strand 3's online survey are discussed in Chapter 6. This chapter has a similar structure to the previous chapter on Strand 2, being broken down primarily in terms of representation (6.3) and design (6.4). However, it starts by discussing how the survey participants utilised multiple identity labels, as previous question designs that prompted participants to select one option would struggle to fully represent these participants. The discussion on survey design focuses on the 347 survey participants' perspectives on the co-produced questions created in Strand 2.

The findings from the three strands are integrated and discussed in more detail in Chapter 7. Strands 2 and 3 are combined to conceptualise co-produced survey practices based on overlooked populations' points of views(7.2). This is then compared to Strand 1's depiction of current UK survey practices (7.3).

The conclusion of this thesis summarises what I set out to do, how I approached it, my key contributions, and where to go from here (8). After a summary of my approach, it features two core sections: the first discusses the limitations of this research (8.1) and the second highlights its contributions and how it sets the stage for further work (8.2). The conclusion highlights the vast range of contributions this research makes in terms of knowledge surrounding the significance of survey representation and how to utilise it in ways that recognise the fluidity of identity and respect participants' ability to know themselves.

In the later stages of writing this thesis, data from the 2021/2022 UK census started to be shared. I include an Epilogue to discuss some of this data and reactions to it (9). This contextualises this work and further emphasises the links between survey representation and ontological debates.

2. Literature Review: Connecting ontologies and epistemologies to survey representation

2.1. Literature review introduction

The way I engage with survey representation in this research aims to draw attention to the underlying assumptions made by different survey designs, while emphasising the power behind this type of knowledge production. Given this, I start by reviewing the literature surrounding ontologies of sex and gender and how they link to understandings of sexuality. This is to highlight the conceptualisations that different survey designs aim to represent. From there, the costs and benefits associated with categorisation and quantification are considered. This is to contextualise why population surveys matter and to discuss the queer feminist lenses I call upon to investigate them. The final section considers previous work surrounding survey design, highlighting how this research contributes.

The ontological discussions in Section 2.2 are broken down in terms of sex, gender, and sexuality. This literature reviews and thesis as a whole is anti-essentialist. Thus, I begin this review by briefly outlining how essentialism is understood in this work both in terms of biological and social or cultural essentialist perspectives (2.2). Given my anti-essentialist stance, my engagement with ontological literature starts by focusing on biological conceptualisations of sex, which make up the foundation of many of the essentialist viewpoints I argue against. I discuss these ontologies in terms of how they view, or neglect to view, people with VSC (2.2). This ontological discussion emphasises the ways that people with VSC have been forced into binary boxes, disregarding their autonomy (Davis, 2015b;Holmes, 2016;Fausto-Sterling, 2012) (2.2).

From there, this chapter moves beyond biological traits and looks at the way that the sex/gender divide has manifested within feminism (2.2). The sex/gender discussion features a subsection specifically focusing on matters of gender modality and ontologies surrounding trans people and gender diversity more broadly (2.2). This section highlights issues with essentialist ontologies that place great emphasis on sex assigned at birth, arguing that either biological traits or gendered socialisation determines who someone will be (Raymond, 1979;Jeffreys, 2014b;Chodorow, 1978). These ontologies are later tied to survey designs and debates, which I critique in terms of their methodological limitations (4.3 and 7).

The final ontological section touches upon sexuality. It primarily focuses on how sexuality first became an element of identity, calling upon Foucault's (1978) *History of Sexuality*, with its emphasis on the contextual nature of meaning and the lack of fixed identity. This type of post-structuralist account can be seen as incompatible with survey methods, which categorise people in terms of their identity. However, in the methodology of this thesis, I highlight how the contrasts within the demography of sexuality, as described by Baumle (2018), inspired this work (3.2). Here, I seek to use contrasting critical experiences and perspectives to hold survey design to higher standards. This is why I centre on the perspectives of populations overlooked by surveys when trying to improve survey design. In the second section of the sexuality ontological discussion, I highlight some key assumptions made around sexuality, which manifest in how surveys represent it (2.2.3.1).

The overall purpose of Section 2.2 of the Literature Review is to inform readers of the ontological context in which current survey practices are built and informed. It also highlights some of the contradictions within essentialist ontologies, the impact of which become more apparent as the thesis progresses and highlights how ontologies link to survey approaches.

From there, this chapter engages with the pros and cons of categorisation and quantification (2.3), beginning by reviewing critical accounts of quantitative methods before considering ways that they can still be useful despite these criticisms. My argument is that a transparent and reflexive approach to quantitative methods, which does not overstate its significance with unjustified claims of objectivity, can be useful.

This chapter concludes by engaging with specific survey representation debates and approaches (2.4). I summarise the cognitive, acceptability, and quantitative tests through which survey questions are developed, particularly in the UK censuses (2.4.3). This discussion of current question testing focuses on sex, gender, and gender modality representation as it is the area of greatest contention in current census debates.

2.2. Ontologies and the categorisation of sex, gender, and sexuality

How sex, gender, and sexuality are understood and categorised has changed throughout history and across geographies. Ontologies directly influence epistemologies and how methods such as surveys are applied in the production of knowledge. The purpose of this section is to review the literature on ontologies of sex, gender, and sexuality, with a particular focus on how they have been used to categorise people.

There are three core subsections addressing ontologies. The first focuses on ontologies of sex, specifically the development of the binary sex model and its impact on people with variations of sex characteristics. The second section moves past biology to consider the sex/gender binary and conceptualisations of gender modality. Throughout, the ontological discussions on sex/gender sexuality is touched on briefly; the final ontological subsection discusses how sexuality became a concept of identity and highlights assumptions associated with it. It concludes by noting the gendered nature of assumptions surrounding sexuality.

These subsections are in a non-chronological order, with understandings of sex, gender, and sexuality developing in interconnected ways. Arguably, the sections could be arranged in any order, but I choose to begin with matters of binary sex biology as it is often used as a basis for essentialist views on sex, gender, and sexuality, which this research argues against.

Anti-essentialist is one of the key ways I would describe this research. This is due to the way that essentialism manifests in survey design debates and the harmful walls it creates. To help guide readers, I will begin with a summary of the differences between essentialist and social constructionist perspectives. It is important to note that neither essentialism nor social constructionism represent coherent perspectives, but are rather labels applied to perspectives owing to a few distinct traits they possess. Many of the essentialist perspectives engaged with in this research are biological in nature. However, later in this literature review, I will also argue against essentialist perspectives which feature a social mechanism (2.2.2).

There are many different accounts of what makes a perspective essentialist or constructionist. Some present it as a divide between views on how differences are produced. Are they biologically or socially determined? The focus on this divide may be a product of the proliferation of biological accounts of sex and sexual differences that began in the late 19th century. However, like Bohan (1993) and DeLamater and Hyde (1998), I do not present the divide in terms of the origins of sex, gender, and sexuality, but rather the existence of unshifting universal essences and the location of differences. In regard to essences, DeLamater and Hyde (1998) state that:

> "Essentialism relies on a notion of true essences, with an implication (found in positivism) that we can know these true essences directly and objectively. Social constructionists argue the opposite, that we cannot know anything about true essences or reality directly, but rather that humans always engage in socially constructing reality." (DeLamater and Hyde, 1998, p17)

From this perspective, essentialists think there are specific meanings associated with sex, gender, and sexuality, while social constructionists think we are constantly in the process of reworking the meanings associated with these types of categorisations. In Bohan's (1993) account of gender essentialism and social constructionism, they state that:

> "The distinction between essentialist and constructionist views of gender lies not in the origin of gender qualities but in their location." (Bohan, 1993, p6)

The locations in question are within individuals in the case of essentialism or in the relationships between the individual and the external world in the case of social constructionism (Bohan, 1993;DeLamater and Hyde, 1998). So, in the case of what makes someone a man, an essentialist account will not only argue that there are criteria of manhood, but that the criteria are made up of traits that individuals can possess. The social constructionist, on the other hand, thinks that we are constantly engaging with notions of what it means to be a man and that this is culturally and historically situated. This notion of individual engagement in the construction of reality articulated by Berger and Luckmann (1967) was heavily influenced by Mead's(1934) symbolic interactionism, which emphasised the role human interactions have in the production of meaning.

The meaning of this divide and its political applications is often misinterpreted. The divide is sometimes seen as a split between seeing sex, gender, and sexuality categories as real or made up. Weinrich asked whether being homosexual or trans consists of:

> "real entities that exist out there somewhere rather than just in the mind? Or are they made-up concepts that only have meaning within the boundaries of a society" (Weinrich, 1990 p175).

In itself, this distinction is not hugely problematic. However, Weinrich (1990) takes this further and assumes that if sexuality and gender are completely socially constructed, they are not tangible enough for the production of legislation relating to them. The above quote makes the issue clear. Weinrich states that, if socially constructed, these concepts have meaning within the boundaries of society (Weinrich, 1990). Therefore, by existing within the same social context, you are impacted by these meanings. Just as ignoring the meanings associated with traffic lights or currency could lead to harm to yourself or others, rendering the meanings of sex, gender, and sexuality as unimportant can be harmful.

Before moving onto literature surrounding specific ontologies, I want to highlight the differences between essentialism with a social mechanism, which DeLamater and Hyde (1998) refer to as cultural essentialism, and social constructionism. In Section 2.2.2, I discuss how sex is assigned at birth, calling upon the work of Anne Fausto-Sterling (2012). The key thing to note here is that although biological conceptualisations of sex relate to characteristics such as reproductive organs, hormone profiles, and chromones, assigning sex at birth is usually carried out on the basis of genitalia. Given this, I will discuss essentialist accounts in terms of the assumptions that occur based on someone's genitalia at birth. In Section 2.2.2, I discuss ontologies surrounding variations of sex characteristics specifically.

Under biological essentialist perspectives, if someone is born with a penis, they will grow into a man due to having the key essences of being a man (Raymond, 1979;Jeffreys, 2014b). Being a man or woman is a biological state under biological essentialist perspectives (2.2.3). Biological essentialists see this as objective and universal. Essentialist perspectives that feature a social mechanism, such as the cultural feminist perspectives presented by Chodorow (1978), claim that if someone is born with a penis, they will be raised as a boy and will grow into a man (2.2.3). Like biological essentialist perspectives, this account of the relationship between genitalia and identity is seen as universal. It has the same outcome: that how someone is assigned at birth, based on their visible sex characteristics, is assumed to dictate who they are. The differences between this and social constructionist perspectives is that social constructionists first do not assume a universal process of socialisation in which people with penises are made into men and those with vulvas into women (DeLamater and Hyde, 1998). The very conceptualisation of gender is not assumed to be universal under social constructionist perspectives, recognising that what it means to be a man, woman, or something else changes between places and times and may not even be a meaningful framework for understanding people in some contexts (DeLamater and Hyde, 1998).

I have summarised how essentialism and social constructionism are understood within this research. This divide is largely based on the belief of universal essences. Beyond these, ontologies can differ greatly. I do not assume that all essentialist perspectives hold the exact same understanding of sex and gender or their relationship to sexuality, nor am I uncritical of all social constructionist accounts, which can vary greatly. However, I have outlined this divide here to make clear what I mean when I describe this research as anti-essentialist: it is against the notion of universal conceptualisations of identity and highlights issues caused when survey questions are designed with the assumption of universality. The following three subsections touch upon how views on sex, gender, and sexuality shifted around the 19th century. These changes tended to favour essentialism with a focus on how we can categorise people and behaviour. However, by identifying that a shift in perspective even occurred, we start to build a picture of essentialism's key weakness: its unsupported claim of universalism.

2.2.1. Binary biology and people with variations of sex characteristics

This subsection summaries perceptions of the nature of sex characteristics and how they impact people with VSC. Its key argument is that the male/female biological binary does not seamlessly capture the reality of human bodies. It begins by outlining the development of the two-sex model and how it is reinforced today. How ontologies of sex impact the treatment of people with VSC is then summarised.

The two-sex model, in which humans are seen to fall into the distinct categories of male and female, is not the only way humans have been categorised according to sex characteristics. Laqueur (1992) argues that it was not until the late eighteenth and nineteenth centuries that the two-sex model became prevalent within a Western context. Although the specific dates surrounding this shift have been questioned (Stolberg, 2003), the fact that a two-sex model is not the only way human bodies are understood challenges the taken-for-granted nature of the male/female binary. It is also useful to consider Laqueur's (1992) claims surrounding the disconnect between the two-sex model's rise to dominance and scientific developments and its connections to shifts in gender hierarchies. Both of these matters are illustrated when Laqueur (1992) discusses how orgasms for people with vulvas went from being seen as a precursor for ovulation to inessential over a century before there was scientific evidence that orgasm was not required for ovulation or conception. Along with this came:

> "The assertion that women were passionless; or alternatively the proposition that, as biologically defined beings, they possessed to an extraordinary degree, far more than men, the capacity to control the bestial, irrational, and potentially destructive fury of sexual pleasure" (Laqueur, 1992 p150).

This is but one example of the ways in which the categories of male and female were presented as extreme opposites rather than one being a lesser version of the other (Laqueur, 1992). However, Markowitz (2001) did not think that the gradualism of the one-sex model was completely replaced by the dualism of the two-sex model as it manifested in racialised conceptualisations of sex. The drastic opposition within the two-sex model was seen as applying to varying extents. For example, sexologist Krafft-Ebing (1998) explicitly stated that a greater contrast between sexes was a signifier of a more developed race. Calling upon Schiebinger's (2004) account of science being employed in the justification of social hierarchies, Markowitz (2001) argued that extreme sexual dimorphism's use as a tool for reinforcing racial hierarchies meant that:

> "Where previously women and non-Western men were thought to share a similar inferiority to European man, now women of privileged race, thanks to their "difference", have become man's complement. So while particular races continued along the hierarchy defined by the great chain of being, femininity in the abstract became more difficult to place, in part because it was no longer understood simply as inferiority and in part because it was not understood, really, to be a property of *all* females after all" (Markowitz, 2001 p411).

It is via this intersection of racism and the two-sex model that white femininity became *the* feminine standard, which still manifests in the policing of women's bodies (Markowitz, 2001). Batelaan and Abdel-Shehid (2021) argue that sex testing for athletes and the way that Black athletes such as Caster Semenya have been discussed is used to uphold Western/Eurocentric standards of masculinity and femininity. They discuss how Semenya's womanhood was questioned in a voyeuristic and fetishising way, comparing it to the exhibition of an enslaved woman, Sarah Bartmann (Batelaan and Abdel-Shehid, 2021).

Critically reviewing biological research on sex characteristics within the Western context, Sanz (2017) highlights just how taken for granted the male/female binary is. No clear origin of sex could be identified and attempts to define sex tended to become circular, with sex denoting sex (Sanz, 2017). This context adds baggage to the bias surrounding sex, further reinforcing the taken-for-granted nature of the binary. This directly impacts the way that people with VSC are discussed and treated. Alice Dreger (1998) goes as far as presenting the history of people with VSC as:

> "the history of struggles over the "realities" of sex-the nature of "true" sex, the proper roles of the sexes, the question of what sex can, should, or must mean" (Dreger, 1998 p15).

Under this presentation, the history of people with VSC is precisely the history of ontologies surrounding sex and debates over the impact anatomy has over the self. This history centres around hunts for “true sex” that corresponds with the two-sex model and matters of autonomy for people with VSC, particularly from the early 20th century when surgically altering bodies to correspond with their “true sex” became common practice (Holmes, 2016;Reis, 2019).

As has previously been indicated, the nomenclature surrounding VSC is complex. Numerous academics and activists have written about how the way people with VSC are discussed relates to their treatment (A.D. Dreger et al., 2005;Reis, 2007;Davis, 2015a;Spurgas, 2016). Here, I will outline how terminology surrounding people with VSC has developed and debates surrounding the nature of sex, gender, and autonomy for people with VSC within medical settings.

“Hermaphrodite” has been a term used to varying degrees within Western medical settings since the early nineteenth century (Dreger, 1998). It was one of the first ways that people with VSC were categorised and carried a lot of issues, primarily due to its ambiguity and stigmatised nature because of its association with mythological accounts of people with two full sets of genitalia (Reis, 2007;A.D. Dreger et al., 2005). More recently, the term has been incorporated into labels such as male and female pseudohermaphrodites and true hermaphrodites, which creates a non-existent hierarchy and needlessly genders patients in a way that may contradict their identity (A.D. Dreger et al., 2005). One of the authors of the *Changing the Nomenclature/Taxonomy for Intersex* paper experienced:

> “…having to calm an adult patient after an internal medicine resident announced to her that she was 'really' a man, because he had found testes in the patient. What use is there in calling a woman with AIS a 'male', when her external phenotype and her gender identity are female?” (A.D. Dreger et al., 2005 p732)

This is an example of how medical professionals are presented as experts on who people “really” are. As medical understandings and technologies surrounding hormones and surgeries developed, doctors were able to act on this "expertise", which did not always factor in the informed consent of their patients. In *Did Bioethics Matter?,* Reis (2019) discusses how matters of consent factored into the treatment of people with VSC before and after World War 2. Pre-war, Reis (2019) found that:

> "physicians did not typically consider ethical questions in their decisions about their adult patients' gender presentations or bodily conformation, at least not publicly. In their case studies from the 1930s and early 1940s, when they advised a patient to change from female to male, or vice versa, doctors simply sought to right what they perceived to be a serious wrong or an incorrect gender assignment made at birth. They implied that their superior medical acumen and exceptional surgical technique alone produced positive results that allowed their patients to live as the correct gender" (Reis, 2019 p660).

This emphasises the impact that the doctor's role as "expert" had on the treatment of people with VSC. The impression Reis (2019) gave was that patients prior to WW2 were hardly given sufficient information about what was done to them, never mind asked for their consent. Reis (2019) goes on to argue that as bioethics became a discipline after the development of the Nuremberg Code of 1947, doctors started to consider matters of consent for adult patients, but this had limited impact on the treatment of people with VSC. This was due to a shift in focus from the treatment of adults to the treatment of children.

The work of John Money and his colleagues had a major impact on the treatment of children with VSC (Davis, 2015a;Davis, 2015b;Reis, 2019). Money and his colleagues argued that early gender socialisation was the most important factor in dictating someone's gender identity and that this was important for the treatment of children with VSC (Money and Ehrhardt, 1972;Money,Hampson and Hampson, 1957). This reassured doctors performing unnecessary operations on children, making decisions on their behalf that would have lifelong impacts (Davis, 2015a). It was thought that as long as the child was raised as a boy or girl in accordance with how their body was perceived by doctors, they would be happy with the changes, which they might never be told about.

There were two major issues with this that related to the nature of gender and what happens when autonomy is not prioritised when genders are ascribed within a medical context. The first issue concerns the conceptualisation of gendered socialisation: how do you raise someone to be a man or a woman? Fausto-Sterling (2008) criticised Money and his colleagues for basing the emphasis on socialisation on gender stereotypes, which do not apply to everyone and can be sexist and heteronormative. Davis (2015a) also noted that gender scholars moved away from this sort of sex role theory, arguing that gender is a type of stratification rather than specific roles that people can be taught to have, which I will touch upon more in the next subsection of this chapter.

The second issue lay in the power that doctors and parents were granted over the bodies and futures of children with VSC. This is tied not only to the harm of the surgeries themselves or whether doctors made the wrong choice about a patient's gender, but more broadly to the harm that taking ownership of a child's identity and future can have. This was eloquently summed up by Morgan Holmes (1996) during her speech to surgeons who conducted genital surgeries on children. She said:

> "Parents and doctors must give up ownership of the sexual future of minors. Children are no longer the property of their parents; we are not chattel. Our sexualities do not belong to the medical profession. It may be that if surgery had not happened when I was young I would have still chosen it. It is equally possible that I would have chosen to keep my big clitoris; the women I know who escaped surgery are quite grateful to have their big clits. That decision should have been mine to make. Without retaining that decision as my personal right, all other aspects of my sexual health have been severely limited" (Holmes, 1996).

Holmes's account highlights that this is not just an issue of doctors making the wrong choice for their patients, but rather them making choices that are not theirs to make in the first place. This criticism also pairs with examples of harm caused when doctors made the wrong choices for their patients, the most notable example being the treatment of David Reimer (Davis, 2015a). Reimer was endosex and assigned male at birth, but raised as a girl after complications arose during his circumcision and following advice from Money stating that surgically constructing a vagina and raising him as a girl was the best course of action. However, Money was wrong, and David grew to be a man who was extremely unhappy with what was done to him, which led to his suicide at the age of thirty-eight. Research from the University of Huddersfield in 2016 found that, despite these issues and the publication of guidelines in 2006 against conducting nonessential surgeries on children with VSC, these surgeries, including procedures that sterilise, are still being conducted under the NHS (Monro et al., 2017). The continuation of these surgeries ties into the way people with VSC are discussed and conceptualisations of normative bodies.

From the 1990s, the term “intersex” was adopted by activists with VSC as a more positive way to refer to themselves and to organise around. However, some adults with VSC and parents of children with VSC saw intersex as deviant due to its association with LGBT activism and a perception that it denoted an alternative gender to being a man or woman (Reis, 2007;Lundberg,Hegarty and Roen, 2018). The terminology of disorder of sex development (DSD) was meant to be a less politicised way for patients and doctors to communicate about treatment (Reis, 2007). However, some have criticised DSD for problematising bodies that do not fit neatly within the categories of male and female. Reis (Reis, 2007) notes that:

> “The disability rights movement has taught us that atypicality does not necessarily mean disordered. Doesn’t disorder imply that something is seriously wrong and needs to be corrected? If using the word disorder connotes a need for repair, then this new nomenclature contradicts one of intersex activism’s central tenets: that unusual sex anatomy does not inevitably require surgical or hormonal correction” (Reis, 2007, p.538).

This highlights that, along with the issue of who has the power to dictate gender, the treatment of people with VSC is tied to normative practices, which, in turn, problematises difference. These are issues that LGBT people also face and is the basis of solidarity between them and people with VSC. As mentioned previously, the treatment of children with VSC was criticised for featuring sexist gender stereotypes (Fausto-Sterling, 2008;Kessler, 1990). Both Sterling (2012) and Kessler (1990) also noted heteronormative assumptions with the ability to give or receive vaginal penetrative sex being a contributing factor to how children were assigned and what surgeries they received. Not only did these processes assume that children would grow up to be cis/het in a stereotypical fashion, but it has also been noted that, in some contexts, rigidly categorising people as male or female at birth has been required to prevent people being perceived as homosexual (Dreger and Herndon, 2009). Historically within Western contexts, the autonomy of those not meeting sexuality and gender norms has been disregarded and surgeries and HRT used to make them fit, sometimes in an explicitly punitive manner.

Before concluding this section, it is important to note that not all people with VSC are identified as having variations at birth. It is estimated around 1 in every 1500 babies born have visible signs of VSC but that most people's variations do not become apparent until around adolescence (Intersex Society of North America). When VSC becomes apparent, it can indirectly indicate whether someone's variation impacts their genitals, which can have wide-ranging impacts on their lives. People with VSC with visible genital differences may be exposed to non-consensual genital-normalising surgeries, which is considered a human rights violation by international bodies such as the UN (Ghattas, 2015).

In this subsection, I highlighted that the distinct male/female categorisation of bodies has not always existed and, rather than developing completely objectively, has been influenced by power imbalances. I mentioned how gender, race, and sexuality biases are tied to conceptualisations of sex, but these were just some examples. In Sections 2.2.2 and 2.2.3, I will illustrate more ways that ontologies of sex, gender, and sexuality intersect and relate to other demographic factors such as race and disability. Rather than extensive accounts of ways that ontologies are tied to greater structures of power, these are examples used to highlight that sex, gender, and sexuality do not exist in a vacuum. The purpose of this subsection was to illustrate how those dominant understandings of sex, which are often the basis for essentialist accounts, fail to capture the diversity of human biology. Rather than recognising this failure, it is often reinforced in ways that undermine the existence and bodily autonomy of people with VSC. In Section 2.4.1, I engage with literature that highlights how this ontological neglect of people with VSC translates to them being overlooked by survey designers.

2.2.2. Sex/gender distinctions and gender modality

This subsection moves beyond biological characteristics and looking broadly at conceptualisation of sex/gender. The previous subsection discussed the work of John Money (1957), who was one of the first people to discuss gender in terms of it being a human characteristic. This subsection is broken into two interconnected parts. The first focuses on the sex/gender distinction, the benefits it had for second-wave feminists, and how later feminist thinkers questioned it. The second part then considers the way that trans people and gender difference outside the binary have factored into ontological discussions.

In 1968, Robert Stoller started to use the term “gender” to describe “areas of behaviour, feelings, thoughts and fantasies that are related to sexes and yet do not have a primarily biological connotation” (Stoller, 2020, pvii). He argued that although a notion of biological sex is often presented as synonymous with gender, they are not inherently linked (Stoller, 2020). This idea was hugely beneficial for the second-wave feminist endeavour of challenging the way that gender inequality was taken for granted as a “natural” or “inherent” state of things.

Although it was via Stoller that second-wave feminists popularised notions of sex and gender being separate, it was not the first time this idea had been touched upon within feminism. In the 1930s, Margaret Mead (1963) presented social gender as developing from biological sex. Although, at that time, Mead (1963) herself did not talk in terms of a sex/gender distinction, she was one of the first to suggest that the social ordering of societies came after biological sex. In *The Second Sex*, the existentialist De Beauvoir (2014, p.301) famously wrote that “One is not born, but rather becomes, a woman”, separating womanhood – and, by extension, gender – from an inherent biological notion of sex. Her perspective was that what it was to be a woman, or a man, was determined by the society in which the individual resided (De Beauvoir, 2014). This indicates that prior to the establishment of the sex/gender distinction, feminists were engaged with the idea that who people are in relation to sex/gender and their relative position to oppression is not strictly determined by biology.

In the 1970s, sex/gender dualism gained traction. Millett’s (2016) work, *Sexual Politics*, popularised the divide, arguing that:

> “Implicit in all the gender identity development which takes place through childhood is the sum total of the parents', the peers', and the culture's notions of what is appropriate to each gender by way of temperament, character, interests, status, worth, gesture, and expression. Every moment of the child's life is a clue to how he or she must think and behave to attain or satisfy the demands which gender

> places upon one. In adolescence, the merciless task of conformity grows to crisis proportions, generally cooling and settling in maturity.
>
> Since patriarchy's biological foundations appear to be so very insecure, one has some cause to admire the strength of a "socialization" which can continue a universal condition "on faith alone," as it were, or through an acquired value system exclusively." (Millett, 2016, p31)

Similar to Money (1957) and his colleagues, Millett emphasised the role socialisation plays over biological essentialism in determining the gendered position people hold. From this perspective if someone "becomes" their gender, then socialisation is the mechanism through which they do so.

In *Sex, Gender and Society,* Oakley (2015) further developed sex/gender dualism by actively applying it to differences between men and women. At the end of the chapter titled "Sex and Gender", she discusses the relationship between the two concepts in relation to conception, stating that:

> "It seems clear that, as man has evolved from the primates, his behaviour has come to be less and less under the control of biological (hormonal, neural) factors. The cerebrum and cerebral activity are human specialisations. Thus, the human female is not sexually 'receptive' only at a particular hormonal phase of the reproductive cycle: she is 'receptive' all the time – or, rather, when she chooses to be – although the possibility of conception remains closely controlled by hormonal cycles. Perhaps this is an instructive example of how, even in humans, hormones have a necessary (although not sufficient) role to play in the evolution of gender identity within the limits set by biological sex." (Oakley, 2015, p124)

Oakley (2015) therefore argued that gender identity is primarily social, but is still sometimes impacted by biological elements. In Oakley's (2015) account of reproduction, we can see how notions of biological sex are linked to sexual acts and, by extension, sexuality. Our anatomy determines whether and how we reproduce; this links to our sex assigned at birth and gender as well as sexuality. This will be touched upon briefly in this subsection before being further explored in my discussion of ontologies of sexuality.

The next second-wave feminist account featuring the sex/gender divide questioned the extent of this division, while still maintaining a clear ontological distinction. In Rubin's (1975b) sex/gender system, gender comes after sex, but is also a way sex is interpreted. She defined the system as a:

> "set of arrangements by which the biological raw material of human sex and procreation is shaped by human, social intervention and satisfied in a

> conventional manner, no matter how bizarre some of the conventions may be" (Rubin, 1975b p39).

Rubin (1975b) presented this system as an alternative term to patriarchy to account for the oppression of women. To Rubin (1975b), it was the way that gender interpreted a biological conceptualisation of sex that led to divisions and oppression.

The ontology of sex/gender dualism was useful for second-wave feminism. If gender differences and treatment are socially rather than biologically determined, then they are not an inherent part of human life and can be changed. At the time, this was groundbreaking, but since then, other ontological perspectives have developed, and the sex/gender binary has been employed in regressive ways. I will now outline Judith Butler's (2002) and Christine Delphy's (2005) critical accounts of sex/gender dualism before moving on to ontological perspectives on trans people specifically.

There are two key elements of Butler's (2002) perspective on sex/gender that I wish to discuss here: the social elements of sex, and how claims of the "biological" or "natural" reinforce the heterosexual matrix. When considering how sex and gender could differ, they state that:

> "The task of distinguishing sex from gender becomes all the more difficult once we understand that gendered meanings frame the hypothesis and the reasoning of those biomedical inquiries that seek to establish "sex" for us as it is prior to the cultural meanings that it acquires. Indeed, the task is even more complicated when we realize that the language of biology participates in other kinds of languages and reproduces that cultural sedimentation in the objects it purports to discover and neutrally describe." (Butler, 2002,p139)

Here, Butler (2002) is drawing attention to how the conceptualisations we have of sex were informed by dominant gendered discourse. By not identifying the cultural context in which biological traits are categorised and discussed, we do not engage with the role that human bias can and has played in the construction of sex differences. In *Inferior*, Saini (2017) provides a number of examples in which biological sex differences are both under- and overplayed in medical research in accordance with gender stereotypes, and the significance we socially place on sex assigned at birth. Reviewing biology textbooks, Martin (1991) found that sexual reproduction was discussed using misleading metaphors influenced by gender stereotypes. Regardless of whether the subject matter is biological and would occur without social intervention, the way that we think about it and react to it is always socially influenced.

The next part of Butler's perspective focuses on the impact of viewing some sex/gender trait as part of an inherent biological sex. Calling upon the work of Monique Wittig (1981), Butler (2002) emphasised that if sex is separated from gender in a biological vs. social divide, then sex and gender function as:

> "the naturalized terms that keep that [heterosexual] matrix concealed and, hence, protected from a radical critique" (Butler, 2002, p141).

Butler (2002) used the heterosexual matrix to discuss how the gender norms ascribed to people based on their sex assigned at birth is associated with heterosexual assumptions, or heteronormativity (Warner, 1993). Under the matrix, if you are born with a penis, you are assumed be a man who is attracted to women and if you are born with a vagina, you are assumed to be a woman who is attracted to men (Butler, 2002). In the above quote, Butler (2002) is presenting Wittig's (1981) concern as if sex assigned at birth is seen as existing outside of social understandings, then the heteronormative assumptions associated with it can go unquestioned. Arguably, this perception can also apply to the cisnormative assumption that your sex assigned at birth can indicate your future gender identity. Butler's criticism of the sex/gender distinction is therefore that it fails to recognise that all forms of categorisation, including those based on biological traits, can be impacted by our social biases and that not recognising this leaves assumptions unscrutinised.

Delphy's (2005) perspective on the sex/gender binary is not dissimilar from Butler's in one sense, as she worried about what would be left after we questioned gender. She made a comparison in which sex is represented as a container and gender as the contents, and argued that many feminists want to "abolish the content but not the container" (Delphy, 1984, p.52). Delphy (1984) presented sex as being produced via a gendered lens and argued that by not addressing the container (sex), some of the social significance of gendered bodies would be left unchallenged (Delphy, 1984). Figure 2 denotes gender as pink and blue liquid and sex as the jar that the person remains trapped within even when they are no longer drowning in the gender liquid.

Figure 2: Illustration by Kirstie Ken English to represent Delphy's (1984) sex/gender distinction container comparison

The other key element of Delphy's (2005) issue with the sex/gender distinction is the order of sex and gender and how we assume to know what sex is without sound reasoning. In the previous subsection, I discussed how Sanz (2017) found issues with the circular way that the nature of sex is established. Delphy (2005) engaged with a number of different perspectives on why our knowledge of sex is shaky at best, and also questioned the causal link between sex and gender. She wrote that:

> "The presupposition that there is such a causal link [between sex and gender] thus remains just that: a presupposition…We must abandon the notion that we already know the answer. We must not only admit, but also explore, two other hypotheses: first, that the statistical coincidence between sex and gender is just that, a coincidence. The correlation is due to chance. This hypothesis is, however, untenable, because the distribution is such that the co-incidence between so-called biological sex and gender is 'statistically significant'. It is stronger than any correlation could be which is due to chance.
>
> Second, that gender precedes sex: that sex itself simply marks a social division; that it serves to allow social recognition and identification of those who are dominants and those who are dominated. That is, that sex is a sign, but that since it does not distinguish just any old thing from anything else, and does not distinguish equivalent things but rather important and unequal things, it has historically acquired a symbolic value." (Delphy, 2005, p36)

Delphy (2005), much like Butler (2002), argued that sex/gender dualism is an overly simplistic perception that leads to social differences being insufficiently investigated or challenged. There is often a cisnormative assumption in dominant perceptions on sex/gender, in which a biological sex is assumed to predict what gender someone will be. I will now move on to discuss ontologies surrounding those who do not meet that assumption.

2.2.2.1. Trans people and sex/gender ontologies

Here, I summarise the ways that trans people and gender differences have been discussed more broadly. This involves a discussion of trans-exclusionary radical feminist (TERF) and gender-critical perspectives. By looking at current TERF and gender-critical perspectives on data collection, it is apparent how sex/gender dualism manifests today. Later in this thesis, I will illustrate how this dualistic understanding of sex/gender interacts with survey collection practices, limiting who can be represented by them (4.3 and 7).

In the early 20th century, via the work of Hirschfeld (1910) and Ellis (1915), the idea that someone's sex assigned at birth and their identity could differ was recognised within sexology, although using different terms. This was made possible due to the perception of mind and bodies being separate, which developed during the Enlightenment (Rose, 1998;Hines, 2020b). The establishment of this divide led to the trope of trans people being "born in the wrong body" (Prosser, 1998;Hines, 2020b). It was also associated with perceptions of gender deviance changing from "a defect of sexuality to one of sex" (Hines, 2020b, p702).

Contemporary accounts of late 19th/early 20th century sexology tend to see it as presenting sexuality in a heavily gendered manner. This was due to early sexologists' presentation of people assigned male and female at birth as opposites in terms of biology, behaviour, and social roles (Hines, 2020b). This sexual dimorphism primarily hinged on reproduction and the ability to impregnate someone or bear children (Hines, 2020b). This linked gender and sexuality. Prosser (1998) is critical of this account, preferring to see these accounts as conflating gender and sexual diversity. He argues that recognising the way that gender diversity was present in early sexology:

> "radically challenges what I call the 'market theory' of transsexuality: the commonplace that the term 'transexual' and the amiability of the medical technologies of plastic survey and endocrinology conjoined to create transsexuality, that the transexual did not exist until s/he was named. Such absolutist constructionism in malignant form underlies the popular derogation of transexuals as literally constructed: that is not real men and women but ersatz, fake, made up-with no 'real' gendered history" (Prosser, 1998 p128).

Although Prosser's argument makes some useful points, it is based on the false assumption that perspectives such as Foucault's (1978), that emphasise the significance of naming, claim that genders and sexualities that deviated from the norm did not exist prior to their naming. When discussing Foucault's (1978) account of the history of sexuality, I will show that naming sexuality did not bring actions, attractions, and attitudes into being, but provided a new lens for associating these traits with selfhood.

The benefit of Prosser's account is that it highlights the existence of difference outside of the "expert" lens. He argued that the new technology and naming of trans people did not produce them, but instead made them recognisable to cis people and created expectations surrounding how they should be (Prosser, 1998). Works such as *Transgender Warriors* by revolutionary communist Leslie Feinberg (1996) highlight that deviating from what we now perceive as gender norms is not new, and has existed throughout human history and across different cultures. Prosser (1998) also challenges the idea that to be what we now refer to as trans requires someone to medically transition by providing examples of people who experienced discomfort with their gendered body (gender dysphoria) prior to the medical advances that would have allowed them to change it. Overall, I highlighted Prosser's (1998) account here to emphasise that accounts of a social phenomenon can impact said phenomena, but will not wholly bring it into being. In other words, genders that deviate from what we now understand as cisnormativity existed before people attempted to define and categorise them.

The way that gender diversity was classified and treated shifted over time. Hirschfeld's and Ellis's early conceptualisations of gender diversity did not tend to separate the desire to sometimes present as another gender (cross-dressing) with being a gender different to that assumed of a person's sex assigned at birth (Hines and Sanger, 2010). It was not until the middle of the 20th century that the medical field started to specifically focus on trans people. Harry Benjamin (1953) popularised the use of the term "transexual" to describe people who wanted to live as a gender different from that assumed of their sex assigned at birth and was also a proponent of surgery and hormones as the major form of treatment (Hines and Sanger, 2010). The term "transgender" entered the lexicon around the 1970s (Williams, 2014). Its first use has previously been linked to Virginia Prince, who utilised it to describe heterosexual people who cross-dressed full time. Narratives utilising this origin present the meaning of the term transgender broadening over time to one that was utilised to bring a range of gender-diverse people together. However, Williams (2014) presents a somewhat messier lineage of the term, stating it has various uses from the 1970s, with many being as broad and overarching as its later use. So rather than a shift in meaning, it should be perceived as a growth in prominence.

When summarising sociological perspectives on trans people, Schilt and Lagos (2017) break them down into two paradigms: gender deviance (1970s–early 1990s) and gender difference (late 1990s–early 2000s), with their distinguishing trait being whether trans people were an object of study or a subject all in themselves. Discussing the deviance-focused perspectives of the 1970s to early 1990s, Schilt and Lagos (2017) wrote:

> "What unifies this diverse body of research is a shared understanding of people who seek or undergo medicalized gender transitions as theoretically useful exemplars of gender deviance that illuminate the "normal" social construction of gender more broadly and an absence of attention to transgender people's subjective experiences" (Schilt and Lagos, 2017p427).

Therefore the gender-deviant paradigm looks at trans people with the view of learning more about gender norms, whereas the paradigm of difference looks at trans people as important in themselves (Schilt and Lagos, 2017).

The deviance perspectives are broken down into two broad camps: those looking at deviance in a classical sense, and those with a greater tendency to problematise trans people (Schilt and Lagos, 2017). The second type of perspective has more relevance to current survey design debates, but I will highlight one key contribution of the other type of gender deviance perspective. Looking at deviance in a classical sense meant that trans people were viewed as outsiders, and how they dealt with their otherness from the norm became the main location of investigation, which, like the more critical gender deviance perspectives, often featured a focus on "passing" (Schilt and Lagos, 2017). Passing, in the context of gender, is to be seen as one's gender without question. In the more classical perspectives on deviance, passing was utilised to develop ethnographical understandings of gender which emphasised the interactional nature of it and led to West and Zimmerman's (1987) account of gender being something we do rather than something we biologically are. Studying passing, therefore, led to views on the nature of gender itself.

The terms "TERF" and "gender critical" both denote trans-antagonistic perspectives that tend to present cis women's rights in opposition to trans rights, which fall into the other category of gender deviance perspectives (Thurlow, 2022;Connell, 2012). The acronym TERF was created by Viv Smythe (2018) in 2008 to highlight the difference between radical feminists on the basis of them being inclusive or exclusive to trans people. In popular use, it became a term associated with transphobia, in the name of women's rights (Thurlow, 2022). Claire Thurlow (2022) presents the shift from TERF to gender-critical framing as an attempt to have a more positive, legitimised spin on largely similar perspectives, stating that:

> "The initial failure of TERF-related tropes to garner public support quickly influenced the terms of 'debate', with the rhetoric employed noticeably changed. Leaving aside that the term 'gender-critical feminism' is a tautology, its adoption represented the beginnings of a pivot by trans-exclusionary feminists towards language which obscures their trans-exclusionary focus. Alongside a shift from TERF to gender critical, 'anti-trans' became 'pro-women' and 'trans-exclusion' became the protection of 'sex-based rights' ('We defend sex-based rights' (Fair Play for Women, 2021: para.6)). These rather innocuous sounding terms have been transformed into the language of division; exemplifying dog whistle politics whereby the phrases act as a coded message of anti-transness to those initiated, while appearing 'reasonable' (more on which later) to the wider population." (Thurlow, 2022 p6)

Thurlow (2022) went on to recognise that although some holding TERF perspectives were uncomfortable with the shift to gender-critical phrasing, concerned that it represented a weakening in their stance, “TERF” and “gender critical” are largely synonymous with each other. Here, I touch on Janice Raymond’s (1979) ontology and epistemology of sex/gender in *The Transsexual Empire*, due to it being a foundational text for TERF and gender-critical perspectives that influenced current survey design debates (Thurlow, 2022;Connell, 2012).

Raymond’s (1979) ontology of sex and gender is that sex is biologically determined at birth, unchanging and binary, while gender denotes harmful stereotypes which can and should be abolished. TERF and gender-critical thinkers such as Raymond (1979) and Sheila Jeffreys (2014b) present gender as an ideology that oppresses women, and sex as an immutable biological fact that determines someone’s position under that ideology. Therefore, sex is destiny (Carrera-Fernández and DePalma, 2020). The mechanism through which this works follows a similar non-biological essentialist account to cultural feminism: our sex assigned at birth determines how we are raised and how we are raised makes us distinctly men or women. Cultural feminist perspectives vary, but all share a criticism of the undervaluing of female nature or essences (Alcoff, 1988). DeLamater and Hyde (1998) present cultural feminism as a non-biological essentialist perspective. Some cultural feminists rely on some notion of biological difference, but many, such as Chodorow (1978), focus on primary socialisation, particularly in relation to motherhood, and how they perceive it differs for children based on their sex assigned at birth, making them distinctly women and men. There are considerable issues with the way that these perspectives universalise gender differences and upbringings (Alcoff, 1988;Farrell and Lorber, 1991;Bohan, 1993), but I would also argue that they are not that different from biological essentialist accounts in their outcome. Yes, the mechanism through which they think differences develop is not biological, but it still leads to someone’s genitals at birth dictating who they are for the rest of their life regardless of their differences of experiences or how they identify.

Under these essentialist perspectives, trans people are always inherently their sex assigned at birth regardless of how they identify or are perceived. When explaining why trans women should not be considered women, Raymond stated that trans women:

> “have not had to live in a female body with all the history that entails. It is that history that is basic to female reality, and yes, history is based to a certain extent on female biology.” (Raymond, 1979 p20)

When addressing feminist author Chimamanda Ngozi Adichie’s (2017) related (though far less hostile) views on trans women, Camminga (2020) argued that this produces a universal construction of trans people as those who suddenly switched between binary genders but still possess the positionality of their sex assigned at birth. Adichie’s (2017) argument that the experience of male privilege makes trans women distinctly not women assumes that all trans women were raised as boys and have the same relationship to male privilege and that gender should be defined in terms of privilege. Camminga (2020) cites the experiences of Ricki Kgositau, an activist and trans woman from Botswana, who stated that she was never able to occupy the role of a boy growing up so never benefited from any potential male privilege and was very much raised as a girl. In their collection of interviews with trans, non-binary, and gender nonconforming children in the UK, Juno Roche (2020) comments that the usual narrative surrounding trans people does not fit children who have been affirmed from an early age. For children whose parents provide them with the space to express themselves, their relationship to gendered privilege or oppression may have little relation to their sex assigned at birth (Roche, 2020). Even for trans women who spent large periods of their lives perceived as men, Watson (2016) notes that to assume this has an inherent bearing on their status as women:

> “implies either they carry the legacy of having been conferred male privilege and this is sufficient to exclude them from the category “woman” or, having once been socialized to privilege, they can never develop the psyche of a “woman”—as if there were one such thing” (Watson, 2016, p250-251).

Watson (2016) went on to say there was little empirical evidence of a universal experience of male privilege that was so ingrained as to be considered a disqualifying trait for the category of woman. Her scepticism of there being one notion of womanhood is also important to emphasise. One of the essays called upon by Camminga (2020) when they critiqued Adichie’s remarks around trans women considered the irony of Black and African feminists holding trans-exclusionary conceptualisations of womanhood (Chigumadzi, 2017). Panashe Chigumadzi (2017) noted that first, it is ironic to argue for exclusion from the category of womanhood based on assumed privilege when for so long womanhood was conceptualised in terms of affluent white privilege. Second, arguing for conceptualisations of womanhood based on experience is contradictory to the ways that Black and African feminists disrupted definitions of womanhood which only centred middle-class white experiences (Chigumadzi, 2017). The key point I am trying to emphasise here is that there are many ways of being a woman, and to define womanhood in terms of experience is irrationally exclusionary and counterproductive to feminist aims.

Although some TERFs and gender-critical people share Raymond's dualistic perspective of sex and gender, others question it and, by extension, the goals associated with it. Kathleen Stock (2021) argued that feminists cannot/should not abolish gender due to the perception that many gender norms are based on sex. She says that, instead, the goal of feminism should be abolishing the harmful norms linked to sex (Stock, 2021). Thurlow (2022) highlights that Stock's argument raises questions about what norms we should and should not be abolishing, and how her perspective nods towards the way sex and gender are intertwined. It should also be noted that although Delphy's (2005) account of sex/gender will be utilised in this research to support trans-inclusive data collection by highlighting issues with sex/gender dualism, Delphy herself has promoted trans-hostile views when signing a letter entitled *Forbidden Discourse: The Silencing of Feminist Criticism of "Gender"*, which argued that oppression occurs on the basis of sex assigned at birth, failing to recognise the impacts misogyny has on trans women in particular (Hanisch, 2013). Therefore, although the sex/gender binary tends to be utilised in unhelpful and often harmful ways, identifying that the relationship between sex assigned at birth and gender is more complex does not inherently lead to trans inclusion. Considering not only whether a dualistic view of sex/gender is held but also how much emphasis is placed on certain elements of sex/gender can highlight the key distinguishing factor between trans-exclusive and -inclusive views. TERF and gender-critical views may have differing accounts on the sex/gender binary, but consistently single out "biological sex" (sex assigned at birth) as the most important axis of women's oppression and men's privilege.

Raymond (1979) presents “transsexuals” as people dissatisfied by the sex roles determined by sex assigned at birth who take on stereotypes of the “opposite” sex. From her perspective, trans people are both a product of and reinforcement for the patriarchy (Raymond, 1979). Raymond (1979) saw the promotion of passing within medical contexts as a product of and reproduction of harmful stereotypes and often tied it to notions of deception. By taking a gender-deviant perspective, she did not consider trans subjectivities as significant in themselves, but rather focused on how trans women related to the oppression of cis women (Schilt and Lagos, 2017). Trans women were seen as mentally ill at best or actively deceptive and dangerous at worst. Raymond goes as far as saying that:

> “All transsexuals rape women’s bodies by reducing the real female form to an artifact, appropriating this body for themselves. However, the transsexually constructed lesbian-feminist violates women’s sexuality and spirit, as well. Rape, although it is usually done by force, can also be accomplished by deception. It is significant that in the case of the transsexually constructed lesbian-feminist, often he is able to gain entrance and a dominant position in women’s spaces because the women involved do not know he is a transsexual and he just does not happen to mention it.” (Raymond, 1979 p134)

She was making two claims here: first, by merely existing, trans women harm cis women in a way comparable to rape (Raymond, 1979); second, she claims that lesbian trans women are actually just heterosexual cis men who commit rape by deception (Raymond, 1979). This highlights just how hostile Raymond is towards trans women and the way that her perspectives on sex and gender link to sexuality. Raymond (1979) presents trans women’s sexualities in either this deceptive straight man presentation or that of gay men seeking social acceptance. Jeffreys (2014b; 2014a) goes further, promoting Ray Blanchard’s (1989b) theory of autogynephilia. From Blanchard’s (1989b) perspective, all trans women were driven by sexual desire, either to attract cis men or they were autogyenophiles who were aroused by the thought of themselves as women. Although these points tie to sexuality, I note them here as they indicate how TERF and gender-critical perceptions disregard trans people’s self-perception and tend to define sex/gender in a heteronormative manner that reduces trans women and all other people assigned male at birth as a threat (Serano, 2020).

Given that Raymond's (1979 p178) perspectives on sex and gender are prominent within TERF and gender-critical perspectives, and that she argued for "transsexuality to be morally mandated out of existence", it is difficult for me to see these perspectives as anything other than genocidal. However, Raymond argued that this quote has been misinterpreted, stating that:

> "I contend that *the problem of transsexualism would best be served by morally mandating it out of existence*." What this means is that I want to eliminate the medical and social systems that support transsexualism and the reasons why in a gender-defined society, persons find it necessary to change their bodies. Nowhere do I say, as Jahnsen attributes to me, "transsexuals should be eradicated on moral grounds." Jahnsen's quote, and the words of those who echo this falsehood, has overtones of ethnic cleansing and make it sound like I want to eliminate transgendered persons from the face of the earth." (Raymond, 2015)
>
> This argument does nothing to eliminate the genocidal undertones of Raymond's perspective, as all she has done is spell out the mechanism through which she wants conditions worsened for trans people until no trans people feel safe enough being out. When comparing anti-trans perspectives such as Raymond's to genocidal ideologies, Owen (2022) recognised that these perspectives lacked the urgency for large-scale physical state violence against trans people. However, otherwise, she found they were largely similar to genocidal ideologies and argued that: "If attempts to "reduce or remove" trans populations are likely to occur via social invisibilization, stigma, removal of support, and discouraging transition, then it makes sense to focus on these everyday material harms, rather than devote all attention to a theoretical future of "being rounded up in camps." I do not dismiss these possibilities – anti-trans ideology has consolidated rapidly, and might further radicalize – but suggest that paying attention to the form of anti-trans prejudice and ideology encourages more "everyday" material socioeconomic solidarity and action." (Owen, 2022, p489)

Therefore, although perspectives such as Raymond's may not directly call for physical state violence against trans people, they are still calling for trans populations to be reduced and removed (Owen, 2022). Later in this thesis, I consider how the ontologies presented by these types of trans-antagonistic perspectives pertain to survey design (4.3 and 7). Now I move on to views on trans people from the gender difference paradigm.

Gender difference perspectives seek to understand how everyone develops different conceptualisations of gender rather than reducing trans people to a deviation from the norm (Schilt and Lagos, 2017). Schilt and Lagos (2017) draw particular attention to Viviane Namaste and Henry Rubin as developers of the gender difference paradigm within sociology. Here, I will briefly discuss their contributions before moving onto ways that experiences outside the man/woman binary became a topic of discussion.

Namaste (1994) suggested a move beyond the focus on deviance and the insider/outsider divides associated with it. Alongside traditional sociological views on gender deviance, she presented her perspectives as an alternative development to previous queer accounts (Namaste, 1994). Namaste (1994) thought that early queer theorists were doing little to challenge the insider/outsider barriers, as shown by their lack of curiosity surrounding bisexual and trans experiences. She made calls for a more sociological queer theory that would:

> "be markedly different from either mainstream sociological approaches to sexuality or queer theory in its current garb. The move to a model of difference would provoke new insights into the continual reproduction of heterosexual hegemony. This approach offers a specifically historicized understanding of sexual identities, politics, and communities. Looking back on the past, however, does not imply that one must be reduced to it. By theorizing the workings and exclusions of inside and out, a sociological queer theory takes the political risk of expanding current borders of gay and lesbian communities. In this gesture, bisexual and transgender identities can be realized, and the basis for a broad political coalition can be established." (Namaste, 1994 p229)

She therefore presented a sociological queer theory to not simply recognise sexuality and gender normativity, but move away from it. One of the key things Namaste (1994) called for was further empirical investigation into trans experiences, much like Rubin (2003).

Rubin (2003) directly challenged the notion that trans people support gender stereotypes and normativity by arguing that trans people are not inherently normative or deviant in their gendered presentations. He came to this conclusion when interviewing trans men and highlighting the importance of their agency surrounding their presentation. Like the previous work discussed, he considered matters such as passing but centred trans people's perspectives (Rubin, 2003). He argued that the trans men he spoke to were just looking for their real selves to be recognised like everyone else (Rubin, 2003).

Both Namaste and Rubin called for further investigation of the different relationships to gender (Schilt and Lagos, 2017). During the 1990s, the discussion of people who did not neatly fit into the man/woman binary grew. *Gender Outlaws* by Kate Bornstein (2016) and *Transgender Warriors* by Leslie Feinberg (1996) were pivotal texts exploring trans experiences including those outwith the gender binary. Bornstein's (2016) presentation of gender featured the following eight rules:

1. Gender is binary.
2. Gender never changes.
3. Gender is indicated by a person's genitals (penis or vagina).
4. Anything outside the man/woman binary should not be taken seriously.
5. Any transfer from one gender or another is purely ceremonial.
6. Everyone must be classified as man or woman.
7. The gender binary is natural.
8. Being a man or woman is natural.

These rules present gender as a binary, biological essentialist system that undermines anyone who moves within or outside it. Bornstein (2016) presents the opposite view to TERF and gender-critical thinkers such as Raymond (1979), who argue that trans people uphold these types of gender norms/stereotypes/rules. When discussing gender fluidity, Bornstein (2016) wrote that:

> "If ambiguity is a refusal to fall within a prescribed gender code, then fluidity is the refusal to remain one gender or another. Gender fluidity is the ability to freely and knowingly become one or many of a limitless number of genders, for any length of time, at any rate of change. Gender fluidity recognizes no borders or rules of gender" (Bornstein, 2016 p77-78).

Here, and throughout *Gender Outlaw,* Bornstein accounts for ways that people who do not fit neatly within the man/woman binary break the rules of gender. The fifth rule of gender Bornstein (2016) touched on highlighted the cisnormative lens that relationships to gender that fall outside the binary from different historic or cultural contexts has been viewed. Rather than seeing transferrals of gender from other cultures as a different experience of gender altogether, the fifth rule of normative gender reduces it to pure ceremony. This is something that Feinberg (1996) addresses in her writing.[4]

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[4] Feinberg used the pronouns her/hir along with she/zie.

Feinberg (1996) conceptualised an expansive understanding of being transgender in which it functioned as an umbrella term for anyone whose gender deviated from the binary, static norms. In *Transgender Warriors*, zie uses examples from different cultures and points in history to argue that relationships to gender have not always been either binary or static (1996). Examples of this can also be found in more recent texts such as *Genderqueer and Non-binary Genders,* which begins with examples of how gender has not always been binary or static (Richards,Bouman and Barker, 2017).

In Finberg (1996) and Richards et al. (2017), experiences outside the gender binary from different time periods and cultures are mentioned to counteract essentialist claims of a universal binary. Earlier in this literature review, when engaging with Prosser's (1998) work, I noted that gender diversity that in some contexts may now be seen as trans existed before and outwith that framing to indicate that diverse gender expressions existed prior to categorisation. However, I would be apprehensive in applying terms such as "trans" or "non-binary" when discussing people who exist/existed outside of the contexts that use these terms, as it undermines their autonomy and could be ascribing meaning to their expression they did not intend.

In *Decolonizing Transgender 101,* Binaohan (2014) criticised the use of "trans" as an umbrella term. Binaohan (2014) is a "bakla", which is a Filipino term usually used to refer to people assigned male at birth with feminine presentation. Binoahan's (2014) criticism of trans as an umbrella term is based on how it is sometimes used in a way that reduces a wide variety of people with different views, presentations, and needs to those of the most privileged and easily understood by cis people. This touches on the issue of needs. Although mentioning gender experiences in other cultures does illustrate the diversity of relationships to gender, it can feel as if other cultures are being used for the sake of argument while their needs are not addressed. It is also important to recognise the power that those form the Global North have over language. When noting how transnational LGBTI+ activist spaces often require the use of English, Gramling and Dutta (2016) stated that:

> "terms like *transgender* have acquired a degree of compulsory usage and an aspirational universal legibility among gender-variant communities

> transnationally, positioning other terms as more "regional" or culturally constrained, and even as less respectful or ontologically accurate" (Gramling and Dutta, 2016, p341).

Given this, even when terms are used in specific ways within the context of this research, I am careful to emphasise these are not universally used and their meaning will differ depending on the context. Savci (2018) emphasised that when researching global sexual politics, it is critical to be aware of the presence of colonialist frames of thinking surrounding identities and sexual practices. This is also why, despite this research possibly having relevance outside the UK, I do not attempt to make more universal recommendations as it risks placing Eurocentric perspectives onto other cultures in a way that neglects their specific needs.

Genders outside the man/woman binary are referred to in this research as non-binary. However, as mentioned in the Ontology and Language section, this does not denote one homogeneous gender or a specific number of genders but rather people who do not fit neatly within the categories of "man" or "woman" (1.4). The term "non-binary" is also not the only term used to describe these experiences of gender and is not a term every person outside the man/woman binary identifies with. Since 2015, an independent study known as the "Gender Census" has collected data on the language used by people whose genders are not captured by the man/woman categories (Cassian, 2022). In this study, non-binary has consistently been the most used label to describe gender. In 2022, 63.9% of the 39,765 participants indicated they used the term "non-binary" to describe themselves. Other common terms in order of popularity were queer, trans, gender non-conforming, transgender, genderqueer, enby, transmasculine, fluid gender/genderfluid, and agender. This is important. Although non-binary is used here and in other settings as a term to describe people outside the binary, it is not the only term or the one everyone uses (Cassian, 2022).

How non-binary people relate to the wider trans community is important to this research as it can impact on how data is collected on non-binary people. As stated in the Ontology and Language section, non-binary people are referred to as "trans" in this research due to their gender not being that assumed from their sex assigned at birth, but that this is not to assume all non-binary people use the label of trans to define themselves (Darwin, 2020) (4.2). Non-binary people do not represent a homogeneous third gender option. It has also been found that having a non-binary identity is not always mutually exclusive with being a man or woman (Bradford et al., 2019). The way identities overlap is further explored in Strand 3 of this research (6.2).

In the USA, the National Transgender Discrimination Survey (NTDS) (Harrison,Grant and Herman, 2012) was one of the first surveys to feature a sizable sample of non-binary people and found that being non-binary rather than a trans man or woman had relationships with other variables (Vincent, 2020). The study found that non-binary people tended to have a higher rate of suicidality than other trans people, for example (Harrison,Grant and Herman, 2012). The UK Government's National LGBT Survey found non-binary people (76%) to be more likely to avoid expressing their gender identity than trans men (56%) or women (59%), due to fear of negative reactions (Government Equalities Office, 2018b).

Many of the issues faced by non-binary people that the wider trans community may experience in differing ways are due to the binary assumptions that many institutions are built around. Thinking back to Bornstein's (2016) conceptualisation of the rules of gender, trans people break the rules about the links between gender and biology and gender being rigid and unchanging, but non-binary people also specifically challenge the binary, which is assumed to be universal and natural.

Nicholas's (2019) conceptualisation of binary genderism is useful for understanding how binary assumptions lead to a privileging normalisation at the interpersonal and intuitional level. They use binary genderism to describe:

> "the impossibility of non-binary genders to exist in the minds of many due to the compulsivity and naturalizing of the two gender system. Using these concepts, I propose that the problem is a lack of cultural resources or discourses outside of binary gender due to its ostensible neutrality and naturalness that make non-binary and other genderqueer people a social impossibility, or 'unintelligible' in broader heteronormative contexts." (Nicholas, 2019 p173)

Utilising the concept of binary genderism, the mechanisms behind the National LGBT Survey findings become clear. If non-binary people are open about their gender, not only are they breaking cisnormative assumptions, but stating their relationship to gender is outwith the confines of the two categories of possibility. In other words, for many people, gender that is not man or woman is completely incomprehensible. Strand 1 highlights the dominance of binary conceptualisations of sex/gender in current survey practices (4.3).

The entirety of this thesis could be committed to the nature of sex/gender and gender modality. Across Section 2.2.2, I have engaged with the most relevant to current debates over the way these concepts manifest in surveys. This has primarily centred on the sex/gender distinction and assumptions surrounding that. Designing surveys based on these assumptions can highlight nuances in the ways that gender is embodied, and that our understanding of biology is social. Throughout this thesis, I will argue that the outcome of this are questions that cannot represent people accurately based on how they see themselves and live their lives. In Section 2.4, I illustrate this by looking specifically at previous survey design work relating to sex/gender and gender modality. The next subsection discusses conceptualisations of sexuality, categories of sexuality, and assumptions surrounding them.

2.2.3. Sexuality and its links to sex and gender

Heterosexual/straight, gay or lesbian, bisexual or other? When reviewing current survey practices surrounding sexuality, these options consistently appear. This subsection aims to discuss how sexuality became categorised in this way. It is broken down into two interconnected parts, with the first considering how sexuality became a topic of investigation, associated with identity. In the previous subsection, I highlighted how bodies that are seen to deviate from the norm are problematised; the same is true for differences in sexuality. I discuss how searches for the cause of difference are motivated by the view that difference is to be avoided. The second subsection discusses assumptions of sexuality and its different elements. Sexuality is not the key focus of this research but is engaged with due to how it ties into sex/gender survey debates.

Given this, this section aims to provide some context into the ontologies that link to survey debates.

Michel Foucault's account of sexuality is less of an ontological perspective than a wider epistemological perspective on the production of knowledge (Weeks, 2013). By engaging with Foucault's (1978) account of how sexualities such as homosexuality developed, I can highlight the key ontological claims that there is nothing innate about sexual identity, and our way of categorising humans as distinct sexualities is relatively new. To examine these claims, I will first discuss Foucault's perspective on how sexuality became such a prominent subject.

The Victorian era's views on sex, gender, and sexuality are normally seen as considerably more conservative than our own (Felski, 1998). However, rather than being completely devoid of sex, Foucault (1978) saw the post-enlightenment Victorian era as the period where sexuality first became a matter of identity. Foucault (1978) argued this was a product of sovereign control shifting away from *if* people lived or died towards *how* they lived. Through the lens of controlling how people live:

> "Sex was a means of access both to the life of the body and the life of the species. It was employed as a standard for the disciplines and as a basis for regulations. This is why in the nineteenth century sexuality was sought out in the smallest details of individual existences; it was tracked down in behaviour, pursued in dreams; it was suspected of underlying the least follies, it was traced back into the earliest years of childhood; it became the stamp of individuality – at the same time what enabled one to analyse the latter and what made it possible to master it" (Foucault, 1978 p.146).

This explains why sexuality became such a topic of scrutiny in the late 19th century, as control over sex had such wide-reaching impacts. Now I will discuss Foucault's account of the development of sexual identities, which tied into the concept of biopower. Biopower is power over life, which is used to categorise and control populations (Foucault, 1978). This is where sexuality categories came in as a form of control. Foucault (1978) stated that:

> "[the] nineteenth-century homosexual became a personage, a past, a case history, and a childhood, in addition to being a type of life, a life form, and a morphology, with an indiscreet anatomy and possibly a mysterious physiology. … We must not forget that the psychological, psychiatric, medical category of homosexuality was constituted from the

> moment it was characterized-Westphal's famous article of 1870 on "contrary sexual sensations" can stand as its date of birth less by a type of sexual relations than by a certain quality of sexual sensibility, a certain way of inverting the masculine and the feminine in oneself. Homosexuality appeared as one of the forms of sexuality when it was transposed from the practice of sodomy onto a kind of interior androgyny, a hermaphrodism of the soul. The sodomite had been a temporary aberration; the homosexual was now a species" (Foucault, 1978 p43).

Here, we can see that Foucault (1978) saw homosexuality as a product of the second half of the 19th century, which was tied to gender and seen as a specific category of person, though there are some elements of his argument that require clarification. First, although Foucault explicitly discussed the construction of homosexuality, he was also outlining how sexuality categorisation manifested as a whole. In *The Invention of Heterosexuality*, Katz (2007) states the following:

> "Foucault's analysis suggests that the explicit, critical talk in the late nineteenth century about the homosexual and sexual pervert was a way for respectable middle-class doctors to speak covertly in defence of the procreativity ambiguous and thus still controversial "heterosexual." Speaking of the sexual pervert, doctors did not have to risk talking up often, loudly, and explicitly for the heterosexual" (Katz, 2007 p176).

In other words, by determining what people should not be (homosexual), a normative (heterosexual) standard was produced and reinforced through a process of biopower. This ties to Foucault's (1982) conceptualisation of "dividing practices". In *The Subject and Power,* he describes these practices as follows:

> "The subject is either divided inside himself or divided from others. This process objectivizes him. Examples are the mad and the sane, the sick and the healthy, the criminals and the 'good boys'." (Foucault, 1982, pp.777–778)

It was these dividing practices that led to sexuality being a particularly explicit element of identity for those not meeting the norms thrust upon them. Foucault's (1978) argument that sexuality developed in the second half of the 19th century is not claiming that sexual acts or attractions and cultural surroundings did not exist before this period. For example, the criminalisation of men who have sex with men has been present throughout the UK's history, primarily through the criminalisation of anal sex rather than of same gender sexual encounters specifically (Weeks, 2003). Instead of arguing that all sexual acts, attractions, and specific attitudes towards them manifested in the 19th century, Foucault (1978) argued that the notion of sexuality relating to selfhood was a new development. The key takeaway from this is the importance of recognising the contextual nature of sexual identity. Sexual identity is not inherent or static. Improving sexuality representation in data based on self-identification could be a useful tool for understanding sexualities in different contexts rather than interpreting all sexualities through our current lens.

As stated, Foucault's account of sexuality is part of a wider epistemological view on the construction of knowledge. Via this view on the production of knowledge, Foucault (1978) did not just argue that notions of sexual identity were products of power, but rather identity and the subject more broadly. In other words, for Foucault (1978), there is no fixed subject, but rather products of discourse over meaning, which functions as a mechanism of power.

Laqueur (1992) later discussed the relationship between selfhood and sexuality during the Victorian era focusing on masturbation. The Victorian stigmatisation of masturbation is an example of how conservative views on sexuality were at the time. However, Laqueur (1992) argued that regardless of whether it is seen as positive or negative, masturbation as a topic of concern comes down to how we handle sexual forces within us. Must we control these forces to be more "civilised" or should we embrace them to learn more about ourselves? The notion that sexuality is a force can be seen in the work of sexologist Krafft-Ebing, who presented sex as a powerful instinct that demands satisfaction (Weeks, 2003). Weeks (2003) stated that to understand these sexual forces, sexology obsessively categorised sexual differences and created a "sexual tradition" of assumptions and stereotypes surrounding sexuality and gender.

The initial shift towards seeing sexuality as part of identity was largely pathologising in nature, and with that came exploration into its aetiology (McIntosh, 1996). For same-gender sexual desires, a divide developed between perspectives that saw these desires as an outcome of corruption or a medical condition. Krafft-Ebing saw them as a form of acquired "degeneration" (Weeks, 2000). Ellis, on the other hand, thought it could both be acquired or congenital. Those perceived as biologically same-gender-attracted were referred to as "sexual inverts" and those seen as having acquired their attractions were called homosexuals (Weeks, 2000). As noted in the previous subsection, the sexologists of the 19th/early 20th century tended discuss sexuality in terms of gender, due to sexuality being seen as part of the oppositional roles held by men and women (Hines, 2020b) (2.2).

There were positive impacts of biological narratives surrounding sexuality as it was utilised in calls for sex reform, primarily the decriminalisation of sex between men. Anal sex was no longer punishable by death by 1885, but restrictions on male homosexuality were tightening, with a new clause in the Criminal Law Amendment Act branding any sexual interaction between men as a crime of gross indecency (Weeks, 2000). If same-gender attractions were perceived as a form of illness and not the wilful sin of individuals, it became harder to argue for the punishment of those who indulged their desires.

“Born this way” narratives are somewhat reminiscent of these early attempts to legitimise homosexuality. LGBTI+ people have used these narratives to challenge calls to “convert” them or counter the notion that LGBT teachers can corrupt children (Schilt, 2015; Vance, 1989). However, saying someone is born gay or trans does not inherently stop attempts to change them, as it can foster medicalised attempts at finding a “cure” (Schilt, 2015). The adoption of “born this way” arguments have the tendency to excuse marginalised groups from blame rather than tackling the fact that their existence should not be seen as negative at all. The same is true for early sexologists’ pathologising accounts of sexuality. Yes, it may have helped decriminalise sex between men, but for women, who had never been legally prohibited from sex with each other, it led to further stigmatisation (Felski, 1998). Recognising homosexuality as not being an individual’s fault is not the same as not seeing it as a problem.

2.2.3.1. Elements of sexuality and assumptions surrounding it

In *The Homosexual Role*, Mary McIntosh (1996) used comparative sociology to explore the categorisation of sexuality. McIntosh (1996) presented the process of categorisation and seeing some people as deviant and others normal as an important area to investigate, which this research also recognises.

One of the key assumptions she discussed was that categories are synonymous with certain sexual behaviours. McIntosh (1996) was one of the first to argue that the heterosexual/homosexual divide was that of social roles rather than a condition, and drew attention to the divide between behaviour and categorisation. Calling upon findings from the Kinsey reports, she noted that sex between people of the same gender does not always equate to someone playing "the role of the homosexual" (McIntosh, 1996). The Kinsey reports were published in 1948 and 1953, respectively, by Alfred Kinsey and his colleagues and titled *Sexual Behaviour in the Human Male* and *Sexual Behaviour in the Human Female* (Kinsey,Pomeroy and Martin, 1948;Kinsey et al., 1953). McIntosh (1996) called upon the Kinsey reports due to the surprising diversity of sexual behaviour they uncovered, indicating that not everyone who self-identifies or is labelled a certain sexuality only partakes in the behaviours associated with that label. McIntosh (1996) uses this to argue that the role of the homosexual is about more than behaviour and deviations between cultures. This is an important point when we consider what surveys are trying to represent when they ask people to place themselves in categories such as "bisexual", "heterosexual", and "homosexual".

The outbreak of HIV made recognising that sexuality categories are not synonymous with specific sexual acts more important. In health research on the spread of sexually transmitted infections (STIs), the categories "MSM" and "WSW" are often seen to provide more direct behaviour-focused categories. However, Young and Meyer (2005) identified various issues with these terms such as the fact that they are not specific enough to achieve their core endeavour.

In isolation, the categories MSM and WSW do not provide any insight into the type of sex people are having and work on the assumption that everyone is using the same definition of "sex" (Young and Meyer, 2005). They also assume that everyone is working with the same definition of men and women and that everyone fits neatly into these categories.

Young and Meyer (2005) highlighted an intersectional issue surrounding these terms given that they are most often used for research featuring people of colour and working-class populations. They state this is due to the assumption that people identifying as gay or lesbian are more likely to be white and relatively affluent (Young and Meyer, 2005). Barker and Iantaffi (2019) also identified that Black men in particular are perceived as being less likely to disclose a non-heterosexual identity. The pervasive whiteness assumed of sexual minority communities factors into the erasure of queer people of colour (DasGupta and Dasgupta, 2018;Bérubé, 2001). In *Being out of Place*, Dasgupta and Dasgupta (2018) discuss the assumed homophobia within Muslim communities and South Asian communities more generally, stating that this “operates as a technology of racism, via which queer Muslim bodies are displaced and perpetually caught between ethnic enclaves and gayborhoods” (Dasgupta and Dasgupta, 2018, p.35).

These notions of who is and is not as likely to deviate from cis/het norms ties to the issue of autonomy in terms of who gets to self-identify and whose sexualities are assumed. This also impacts who can and cannot identify as trans, which is touched upon when I discuss the findings of the 2021 census in England and Wales (9).

One of the ways that privilege and visibility can interact is that even if your sexuality is marginalised, or if you are otherwise privileged, this can provide social, cultural, and political capital that protects you and allows you to be visible (Bérubé, 2001). In *Let the Record Show*, Sarah Schulman(2021) discussed how the dominant memory of the AIDS Coalition to Unleash Power (ACT UP) predominantly features white men, despite the group featuring many women and people of colour. Privilege can make it safe to be visible, which, in turn, means that the privileged dominate the narrative of who can be part of otherwise marginalised populations.

Alongside the white affluent assumptions of the LGBTI+ community, there is a sexualised perception which makes being anything other than cis/het seem inappropriate for those deemed unsexual. Age and disability tend to be the deciding factors on whether someone’s ability to know their own sexuality is respected. Via the lens of the Convention on the Rights of the Child (CRC) (Unicef, 1989), Kurian (2020) discusses how the perception that matters of sexuality are inappropriate for children and young people, particularly those not defined by heterosexual norms, leads to their rights not being met. For example, under Article 13 of the CRC (Unicef, 1989), young people have a right to information, but due to stigma surrounding LGBTI+ identities, information surrounding them – particularly relating to sexuality and sexual health – is withheld (Kurian, 2020). Between 1988 and 2000 for Scotland and 2003 for England and Wales, Section 28 of the Local Governments Act (1988) ordered that local authority bodies such as schools must not:

> “intentionally promote homosexuality or publish material with the intention of promoting homosexuality…promote the teaching in any maintained school of the acceptability of homosexuality as a pretended family relationship.”

Section 28 was rooted in the notion that childhood was an innocent time and that homosexuality was an undesirable lifestyle that children could fall into if exposed to information about it (Moran, 2001). Later in this thesis, it will be apparent that similar social contagion narratives are present in how population estimates for the trans community are problematised by some today (9).

Here, I noted ways that the perceived innocence of children leads to sexuality and queerness being seen as inappropriate topics for them. However, being of an older age can also impact assumptions surrounding sexuality, as the sexualities of older people are often ignored, devalued, or assumed to not exist (Chepngeno-Langat and Hosegood, 2012). Moreover, many older LGBTI+ people fear having to go back in the closet when receiving care from people who may not be accepting (Wallace, 2019). Many of the issues relating to sexualities for older people are tied into experiences of being disabled and navigating the vulnerability that can come from needing care.

The sexualities of disabled people of all ages have been overlooked to varying degrees (Shakespeare, 2006). Shakespeare (2006) notes that the public/private divide in social issues found within feminism also applies to matters in disability studies, as public issues such as access to education, employment, or housing are more commonly discussed than private matters like sexuality. This can go as far as to construct a stereotypical view of disabled people as completely desexualised, which has been linked to the infantilisation that many disabled people experience, particularly when receiving care (Shakespeare,Gillespie-Sells and Davies, 1996).

Thus far, I have highlighted some assumptions surrounding who gets to be sexual and have their sexuality respected. On the other hand, there is also the assumption that sexual and romantic attraction is innate or universal. This leads to asexual and aromantic people who feel little or no sexual or romantic attraction, respectively, to be perceived as deviating from the norm. Scherrer (2008) presents asexuality as a challenge to the universal nature of sexual attraction. The normative assumption of sexual attraction is so dominant that it has led to the pathologisation of asexuality, presenting it as an issue that needs to be fixed (Gupta, 2017). In a scoping review of research surrounding asexual identities, Kelleher, Murphy, and Su (2023) found that this was a common theme in research and linked it to feelings of invisibility.

Before discussing how assumptions of sexuality link to matters of sex and gender, I wish to briefly highlight normative assumptions surrounding relationship formation, particularly regarding monogamy and polyamory. Feminists developed the term “compulsory monogamy” to highlight the normative pressure to be part of an exclusive couple and how this particularly impacts women (Willey, 2015). Willey (2015) summarised the way that people are stigmatised via compulsory monogamy, stating that:

> “Monogamy is assumed normal and natural for ‘females’ and so the non-monogamous woman – whether in reality or imagination – is pathologised. The reach of this pathologisation is wide…Ultimately, she is the foil to the good woman (or good queer, ‘minority’, etc.), the hero/ine in the story, because the story is always a love story. Through her exclusion, an ideal of healthy adult sexuality only realisable in heterosexual (or heteronormative) coupledom is naturalised.” (Willey, 2015, p629)

Given this, I understand compulsory monogamy as a form of dividing practice in which those who meet society’s expectations are presented positively and those who do not, negatively (Foucault, 1982). Terms such as ethical non-monogamy and polyamory are utilised to denote those who have or seek multiple-partner relationships. For some, being polyamorous is seen as a form of identity; for others, it simply denotes their relationship formation (Willey, 2015;Klesse, 2014). There is a range of arguments against conceptualising polyamory as a sexual identity. Klesse (2014) heavily criticised sexual orientation models for their rigidity, cultural specificity, and normative tropes which struggle to understand people outside of the norms associated with sex characteristics and gender. Beyond this, he argues that seeing polyamory as a set identity minoritises it, further normalising monogamy and setting unnecessary boundaries between polyamorous people and other non-monogamous people who do not see themselves as having a minority status (Klesse, 2014). Willey (2015) also challenges notions of a sexual orientation of polyamory, arguing that rather than categorising on the basis of relationship formation, we should be challenging the compulsory nature of monogamy itself.

So far, this discussion of sexuality, at least in relation to who people are attracted to, has been largely binary. This reflects the gay/straight, deviant/normative binary that dominates discussions of sexuality. Often, bisexuality is discussed in terms of homosexual and heterosexual identities and presented as a solution for difficult-to-categorise people, as McIntosh (1996) noted when discussing a psychiatrist's definition of homosexuality:

> "Along with many other writers, he introduces the notion of a third type of person, the "bisexual," to handle the fact that behaviour patterns cannot be conveniently dichotomized into heterosexual and homosexual. But this does not solve the conceptual problem, since bisexuality too is seen as a condition (unless as a passing response to unusual situations such as confinement in a one-sex prison). In any case there is no extended discussion of bisexuality; the topic is usually given a brief mention in order to clear the ground for the consideration of 'true homosexuality'" (McIntosh, 1996 p182-183).

A neglect of bisexuality is also present in queer theory despite its aim to challenge the hetero/homo binary (Callis, 2012) In *Playing with Butler and Foucault*, April S. Callis (2012) argues that although bisexuality has been neglected within prominent lesbian and gay politics and queer theory, including it within queer analysis improves upon it. Callis (2012) uses Foucault's account of sexuality to explain why bisexuality was discussed less often, stating that:

> "just as Foucault's theory of discourse can explain the Western construction of gays and lesbians, it can also explain the lack of salience around bisexual identity. With no medical discourse, no scientifically granted truth and no reverse discourse, it is little wonder that bisexual identity has formed more slowly than others. The fact that Foucault's work can be used to explain this difference between homosexual and bisexual identities confirms that bisexuality would have been a fruitful topic for Foucault to explore. The usefulness of bisexual identity to buttress Foucault's work also points to the utility of the subject for modern queer theorists drawing on Foucault." (Callis, 2012 p34)

In other words, due to the narratives surrounding sexuality being so focused on a normative/deviant binary, bisexuality as a concept took longer to develop.

Recent work by Cipriano, Nguyen, and Holland (2022) in the *Journal of Bisexuality* discussed researchers' poor understanding of bisexuality and issues surrounding how it is defined. As mentioned previously, there is tension between identity labels and behaviour, but that has not prevented researchers from trying to define bisexuality in terms of whether someone engages in sexual acts with people of more than one gender, which puts pressure on people to "prove" their bisexuality (Cipriano,Nguyen and Holland, 2022). Cipriano, Nguyen, and Holland's (2022) work focused on recent debates surrounding the relationship between bisexuality and conceptualisations of gender. The crux of the debate is whether bisexuality is trans-exclusive, meaning, are bisexual people only attracted to cisgender men and women? They conducted semi-structured interviews with 25 women attracted to more than one gender and found that women who did not identify as bisexual (instead using terms like pansexual or queer) tended to see bisexuality as not trans-inclusive, but that bisexual women did, defining it as being attracted to two or more genders (Cipriano,Nguyen and Holland, 2022). These findings can be seen to support the perspective held by post-structuralists/queer theorists that there is no definitive notion of identity (Cipriano,Nguyen and Holland, 2022).

The links between conceptualisations of bisexuality and gender is part of a broader range of ontological debates and assumptions surrounding how notions of sexual orientation and gender correspond. Previously, it was noted that early sexologists' perspectives closely linked views of gender and sexuality, pathologising those that deviate from the norms of either (Hines, 2020b) (2.2.2.1). Pathologised conflations of sexual orientation and gender have been seen in more recent accounts, such as Blanchard's (1989) view that trans women's dysphoria is either based on their attraction to men or their attraction to the thought of themselves as women (2.2.2.1). Blanchard's (1989a) ontology of sexual orientation centres around a biological notion of sex and attraction to others on the basis of said sex. Blanchard's perspectives have been heavily criticised for a vast array of reasons, such as his lack of empirical basis for grouping trans women in terms of their attractions and the lack of a cis control group to indicate that what he was supposedly finding was distinct to trans women (Serano, 2020). Rather than highlight all of the issues with Blanchard's account, here I focus on how findings from Galupo, Henise, and Mercer's (2016) research illustrated that ontologies of sexual orientation rooted in notions of biological sex do not reflect trans people's own accounts of their identities.

In an online survey of 172 trans and other gender-variant adults based in the US, Galupo, Henise, and Mercer (2016) identified a range of themes surrounding the use of identity labels and perspectives on sexuality. Two themes particularly relevant to this research are the complexity of identities and their relationship to gender rather than a biological notion of sex (Galupo,Henise and Mercer, 2016). Broadly, respondents were found to discuss their sexual orientation in terms of gender rather than any notion of sex, with some not mentioning sex at all (Galupo,Henise and Mercer, 2016). Some also noted that their "orientation flipped", meaning that, prior to transitioning, they were attracted to a different gender to the one they are now (Galupo,Henise and Mercer, 2016). The perspectives shared by Galupo, Henise, and Mercer's (2016) participants contrast greatly with Blanchard's (1989a) account of the relationship between sex and sexual orientation. In Chapter 4, I highlight how this type of ontological debate has manifested alongside gender essentialism in discussions of how sexual orientation is represented in the latest UK censuses (4.2.2).

In an online survey of 448 sexual minority people conducted by Galupo, Mitchell, and Davis (2015), 129 reported having more than one sexual identity, with trans people and those attracted to more than one gender being most likely to do so. Galupo, Henise, and Mercer's (2016) study of trans people's sexual identities featured similar findings, as many respondents used multiple sexual identity labels or leant towards the use of more flexible umbrella terms when describing themselves. Both Strands 2 and 3 of this research found evidence of participants utilising multiple identity labels and considered how to best represent this utilising surveys (5.3.1 and 6.2).

To conclude this discussion of sexuality, I wish to return to Butler's (2002) conceptualisation of the heterosexual matrix (2.2.2). The heterosexual matrix is the normative lens through which sex and gender link to assumptions of sexuality. Through it, those perceived as men are assumed to be attracted to women and those perceived as women are assumed to be attracted to men (Butler, 2002). When considering the heterosexual matrix as a lens through which lesbian athletes are judged, Tredway (2014) argued that when someone's sexuality is known to deviate from that of compulsory heterosexuality, it can lead to judgements on their gender:

> "masculinity for women is a code word for homosexuality with its inverse, homosexuality as a code word for masculinity, being true as well." (Tredway, 2014, p174)

In other words, if a woman (or someone assumed to be a woman) is seen as masculine, she will be assumed to be homosexual and if she is homosexual, she will be assumed to be masculine; the same is true for men (and those assumed to be men) in regard to femininity. These assumptions are made regardless of the actual gender expressions, identity, or sexuality of the individuals being perceived.

Throughout this discussion on sexuality, I have highlighted how it became an element of identity and noted key assumptions surrounding it. Although the overall focus of this thesis is on sex and gender rather than sexuality, these were important points to cover due to the significance of Foucault's (1978) conceptualisation of identity to this work and the way that assumptions relating to sexuality are tied to sex and gender.

2.3. The costs and benefits of quantification for overlooked populations

Since the development of qualitative methods in the early 20th century, there has been debate over the use of qualitative or quantitative methods to answer social questions/address social issues (Onwuegbuzie and Leech, 2005b). This debate was further developed in the 1960s/1970s as feminists criticised "malestream" social research with criticisms against quantitative methods (Oakley, 1998). In the first part of this section, I summarise some criticisms of quantitative methods, primarily focusing on feminist arguments and queer conflicts with quantification. Then, I progress onto how quantification could be utilised to create change if we recognise its weaknesses and address those that can be changed.

2.3.1. Criticisms and limitations of categorisation and quantification for representing sex, gender, and sexuality

Essentialists, with their belief in true essences, have often been tied to the epistemological stance of positivism, which assumes that we can have objective knowledge of these essences (Oakley, 1998). The criticisms of quantitative methods I highlight here focus primarily on the unexamined biases linked to positivism and the issues that creates for our understanding of sex, gender, and sexuality.

Feminists are often critical not only of our ability to produce objective knowledge, but also its mere existence due to the perspective that knowledge is socially constructed (Sprague and Zimmerman, 1989;Oakley, 1998). Bowles' (1984) account of the hermeneutical circle goes as far as to denounce objectivity altogether, stating that:

> "there is no such thing as a 'detached', 'neutral' or 'objective' place to stand when we know something. We are always speaking from a 'prejudiced' (in the sense of pre-judgment) and 'interested' and 'evaluative' posture." (Bowles, 1984, p187)

Although other feminist thinkers, such as Keller (1982), do not go as far as to think objectivity is impossible, many feminists have been critical of the unexamined way that quantitative researchers claim objectivity. Searching for objectivity has been presented as harmful due to how it leaves biases unexamined and places those seen as holding it on a pedestal (Oakley, 1998;Jamieson,Pownall and Govaart, 2022;Gregg, 1987). Due to the unexamined bias in so-called "objectivity", some feminists reframed it as "male subjectivity" to denote that it is simply subjective perspectives awarded higher scientific standing due to who produced it and how (Caplan, 1988).

Poststructuralism, which formed the basis of queer theory, also challenges notions of objectivity due to its perspective that meaning is contextually produced/reproduced and there is no such thing as universal truth (Callis, 2012). In the previous subsection, I discussed Foucault's (1978) perspective on the production of knowledge being a form of power, and biopower being the way that people's lives are understood and therefore controlled (2.2.3). Browne (2010) applies this perspective of knowledge and power to governmental statistics. She argues that governmental quantification is often perceived as objective truth, never recognising that it plays a role in (re)producing the categories it sets out to measure (Browne, 2010). Browne (2016) states that this operates through a process of biopower executed via the categorisation and control of populations. Saying that governmental data collection exercises such as censuses are a form of biopower means that the way that we are defined by them becomes how we see ourselves and is a means through which society is ordered (Browne, 2010). By setting out these categories, the forms of measurement set the parameters in which people are expected to exist (Browne, 2010). Hacking (2015) makes a similar point when viewing quantification through the lens of biopower, stating that:

> "Enumeration demands kinds of things or people to count. Counting is hungry for categories. Many of the categories we now use to describe people are by-products of the needs of enumeration." (Hacking, 2015 p280)

This means that counting exercises such as censuses produce populations by creating the very categories they are ordered in. Therefore, data collection is not simply a process of describing populations "waiting to be counted", but instead plays a role in the production of populations (Browne, 2010 p234). This type of biopower is a key focus of this work. The contextual subjectivity of this relationship between categorisation and power was summed up in *Dark Matters: On the Surveillance of Blackness,* in which Simone Browne wrote that:

> "Census enumeration is a means through which a state manages its residents by way of formalized categories that fix individuals within a certain time and a particular space, making the census a technology that renders a population legible in racializing as well as gendering ways" (Browne, 2015 p56).

This highlights not only that the census and other data collection exercises play a role in the creation of categories, but also that these categories exist within specific cultural contexts.

The focus on the categorisation of people and the power behind it links statistics, sexology, and eugenics (Somerville, 1994;Hacking, 2015;Louçã, 2009). Somerville (1998) argued that sexology and eugenics became ways of distinguishing between the normal and abnormal and that led to the overlapping stigmatisation of interracial relationships alongside homosexuality. Saini (2019) provided various examples of how the supposedly scientific methodologies of eugenics were merely attempts to legitimise racist subjectivities. These methodologies have strong ties to statistics and 19th and early 20th century sexology (Louçã, 2009;Hacking, 2015;Somerville, 1994). The impact of this was that European notions of sex, gender, and sexuality played major roles in the colonial project, as they were forced upon and used to police indigenous people (Oyěwùmí, 1997;Hines, 2020b;Binaohan, 2014). This is a clear example of what can happen when “scientific expertise” and assumed objectivity are utilised to create inequalities.

The language we use and the way we understand concepts of selfhood and identity fluctuate between geographies and over time. A clear example of this in relation to sex, gender, and sexuality within the UK is the perception of the term “queer”, which was once primarily seen as a slur used against people from LGBTI+ populations but has now, in many cases, been reclaimed (Browne, 2008;Worthen, 2023). However, it is not as simple as some terms going in and out of fashion and being understood the same way by everyone. Currently, in the UK, some people see “queer” as a slur and some use it as an identity label. There is fluidity of conceptualisation within the same geographic and historic period. Cocks (2006) reviewed histories of sexualities to understand notions of identity and selfhood linked to sexuality related to modernity. They concluded, much like Weeks (2003), that our notions of identities are historically and culturally situated and that how we have sex and with whom has not always been tied to notions of who we are. The same is true for notions of the self in relation to gender (Hines, 2020b). This is important for historians as it means they should be careful applying modern identity categories to people from the past. It also ties to epistemological concerns surrounding data and categorisation. To take a hard positivist stance requires a firm ontology surrounding categories that state what they are and are not, in an exclusionary manner.

Changing meanings and terminology is not the only way that sex, gender, and sexuality can be difficult subjects to quantify, as participants may have varying levels of comfort disclosing information of this nature. This is tied to the invisibility of the LGBTI+ populations, which is perceived as the biggest barrier to accurately measuring LGBTI+ populations (Weeks, 2003;Compton, 2018). This is often linked to the concept of LGBTI+ people being “in the closet”, where they are not open about who they are. Gates (2011) provided a demographer’s perspective on “measuring the closet” in relation to sexuality, in which he identified that just because someone is in the closet does not mean they will not state their true sexuality in a survey. However, Gates (2011) also attempted to measure the closet in terms of sexual behaviour, which can be useful as an exercise to indicate a difference between behaviour and identity, but behaviour should not be mistaken for a direct indicator of who someone “really” is. For example, Salva (2021) indicates multiple examples of straight men having sex with other men but not seeing themselves as gay, bisexual, pansexual, queer, or any other LGBTI+ identities. It would be inaccurate to assume that these men are in the closet and purely choosing not to disclose their real identities in surveys. Connell (2018) presents three major issues with the concept of being “in the closet”. First, it puts pressure on people to come out when not everyone has the privilege to do so safely (Connell, 2018). Second, it privileges the gender(s) people are attracted to over other elements of identity (Connell, 2018). Finally, it can reinforce inflexible notions of sexuality, as it suggests that once someone is “out”, their true identity has been revealed and it will not change (Connell, 2018).

Depicting how someone identifies in a survey as their unshifting identity through life requires several assumptions. First, it assumes that the participant is comfortable enough to disclose their identity in the survey, which could depend on their personal situation and the situation in which the data is being collected. It also assumes that the survey provides all of the options required for the participant to accurately describe their identity. Finally, it assumes that the participants have one unshifting identity, which is challenged by the existence of gender-fluid people who shift between identities and the mere concept of having to "come out" indicating a culture of shifting identity. Depictions of unshifting identity may also assume each person can be captured by one gender and sexuality label. As discussed in the previous section, this does not appear to be the case, with empirical evidence indicating that, at least within sexual minority populations, many people utilise more than one sexual orientation label (Galupo,Mitchell and Davis, 2015;Galupo,Henise and Mercer, 2016).

Quantitative issues with fluidity all relate back to debates over the value of subjective knowledge. When arguing against changes in the 2021 census for England and Wales, Sullivan (2020a) presented subjective gender data in opposition to "accurate" sex (assigned at birth) data. However, Fugard (2020, p6) pointed out that this disregards the fact that "ontological subjectivity is common in social life and even economists are satisfied relying on subjective report". They provide examples of how subjective concepts such as happiness and wellbeing have been used to inform policy in the past. Arguably, other identity-focused census questions such as those on religion or ethnicity are also subjective. The fact that these questions are subjective does not make them any less valuable. If two people both indicate they are Christian on the census but have radically different views surrounding God or religious practices, it does not mean that one of them was wrong, it just means that there is diversity within the group of people who self-identify as Christian.

Notions of quantitative methods producing "objective facts" about the social world is tied to the issue of expertise and power. When discussing feminist criticism of quantitative methods, Oakley stated that:

> "The idea of a social world to be known about implies a knower; the knower is the expert, and the known are the objects of someone else's knowledge, not, most importantly, of their own. But feminist knowers must reject any mode of explanation which requires or sanctions the imposition upon the female subject of the theorist's own views as to who she is, what she wants, and what she should have" (Oakley, 1998, p710).

There are multiple elements to this issue. First, as highlighted previously, the expertise ascribed to those claiming to hold objective knowledge leaves biases unexamined. Second, with this supposed expertise can come the false assumption that the researcher knows the participants better than they do. A good example of these issues can be found in the USA census, which feminists in 1976 challenged due to the way household relationships were recorded in terms of relations to the "head" of the household or family (Presser, 1998). Not only did this assume that all households had a "head", but also that the head was always a man, going as far as to recode responses which stated a woman was the head of the household (Presser, 1998). This is an example of an unexamined bias and researchers assuming they know better than their participants.

Presenting the social world to be known may also lead to privacy concerns, as the "knowers" feel entitled to information. In *Data Feminism,* D'Ignazio and Klein (2020b) highlight many ways that privacy has been infringed upon in the interest of "progress" but often only for those collecting the data, not the people the data is about. In *Going Stealth: Transgender Politics and U.S. Surveillance Practices,* Beauchamp (2019) discusses data representation in terms of "the relationship between visibility, protection and surveillance". He called upon Foucault's (2019) assertion that "visibility is a trap", as it assists in the mechanisms of surveillance which exploit the very people it makes visible.

If the risks of being visible in data were always being taken by informed and consenting participants, then there would not be as much of an issue. However, calling upon feminist conceptualisations of consent, I will show how this is not always the case (7). Anja Kovacs and Tripti Jain (2020) provide a feminist account of how consent relates to data collection. Their account recognises the power at play when information is provided, and data produced and consent is more than a matter of asking questions and obtaining answers without coercion:

> "rather than an expression of the will of autonomous and equal individuals, consent is fundamentally embedded in power relations that, legally and/or socially, construct some as free and equal, and others as less so" (Kovacs and Jain, 2020 p16).

In the Methodology chapter, I will outline how the feminist conceptualisation of consent will be used in the analysis of this research (3.2). Feminist perspectives are adopted with the aim of recognising the broader power relations surrounding surveys, fully situating this research in the social world.

Thus far, I have discussed criticism of quantitative methods and barriers for quantifying sex, gender, and sexuality. In the next subsection, I will discuss ways of moving beyond these issues, highlighting the potential benefits of quantitative methods, particularly surveys producing population estimates.

2.3.2. Realising the benefits of categorisation and quantification

When trying to move past the limitations associated with quantitative methods, there are two important points: neither quantitative nor qualitative methods are inherently good or bad, and there are beneficial applications to both types of method (Oakley, 1998;Scott and Siltanen, 2017;Onwuegbuzie and Leech, 2005a;Hughes and Cohen, 2013). This section begins by highlighting ways to realise the benefits of quantitative methods. There are then examples of beneficial applications of population estimates.

The previous subsection featured perspectives on quantitative methods' association with positivism and the hunt for objective knowledge and how that can lead to unexamined biases reinforcing inequalities. However, a pragmatic approach to research methodologies does not see quantification as inherently positivist; it challenges the quantitative/qualitative divide and argues that both types of methods have their advantages and disadvantages and can complement each other (Onwuegbuzie and Leech, 2005a). It is with a pragmatic approach in mind that I consider the ways that quantitative methods could be adopted for critical research.

Oakley (1998) was one of the biggest feminist advocates for the potential of quantitative methods, arguing that:

> "The construction of 'quantitative' and 'qualitative' methods as opposed impedes critical thinking about developing and using ways of knowing capable of respecting the autonomy and subjectivity of the researched, at

> the same time as minimising bias, in creating an appropriate knowledge for women” (Oakley, 1998 p19).

Oakley (1998) argued that just because quantitative methods have been poorly used does not mean they cannot be applied well. A similar perspective was shared by A. Wade Boykin (1978), as he argued in favour of not dropping empirical research on Black Americans altogether despite issues with previous work (Cokley and Awad, 2013). So how do researchers seeking to conduct ethical research for positive change handle quantitative methodology issues? An increasing number of researchers posit that reflexivity is the solution (Jamieson,Pownall and Govaart, 2022;Ryan and Golden, 2006). When considering what reflexive sociology is, Sweet (2020) stated that:

> “Questions of reflexivity ask us to consider who we should listen to and why, how to place actors’ ideas in a larger field of power, questions about our own relationship to actors’ theories of the world. Reflexivity asks us to approach our work with epistemological unease because we are always at risk of reproducing categories that reify power.” (Sweet, 2020, p924)

She went on to note that for feminist work focusing on gender and/or sexuality, such as the current research, reflexivity is particularly crucial for challenging normative perspectives, which are rooted in and reenforced by unequal power (Sweet, 2020). In the Methodology chapter, I present this type of critical stance as integral not only to the queer feminist approach of this research, but the sociological approach as well (Compton,Meadow and Schilt, 2018b) (3.2).

Jamieson et al. (2022) present reflexivity as the process of reflecting on our perspectives and the impact they may have throughout our research, highlighting the assumption of objectivity in quantitative methods as a difficult but key step to addressing researcher bias. They foresee this working in one of two ways:

> “1) researcher bias is acknowledged, centred, and celebrated in quantitative work, 2) researcher bias is deemed to be problematic and is instead confronted and challenged.” (Jamieson,Pownall and Govaart, 2022 p19)

These two approaches would help destabilise the unwarranted pedestal of quantitative objectivity and hopefully promote addressing biases in the research process. In Ryan and Golden’s (2006) discussion of the application of reflexivity in qualitative methods, they highlight that reflexivity is particularly neglected at the data production stage and found it was beneficial for providing a better grasp of who the research engaged with and how. Beyond being more reflexive, others have identified key steps to making the most out of quantitative methods.

Data Feminism features seven principles for feminist approaches to data science which can be used when trying to utilise quantitative methods for change: examine power, challenge power, elevate emotion and embodiment, rethink binaries and hierarchies, embrace pluralism, consider context, and make labour visible (D'ignazio and Klein, 2020b). These capture different elements of reflexivity, transparency, and actively utilising research to promote change. They also tie into ways of adopting an intersectional approach to research, which I will discuss shortly.

In the previous subsection, I touched on how categories of sex, gender, and sexuality can relate to power and be exclusionary. Being reflexive and recognising this does not mean that categories cannot be used, it just means that:

1. They should not be used without consent. If terms are required to represent participants from multiple categories, it should make it clear that they are grouped based on shared experience, not shared identities.
2. There should be no assumptions regarding the meanings participants ascribe to identity categories.

Browne (2010) recognised that being visible within data can be a risk, but she also highlighted that such data representation can work against heteronormativity by recognising that people who are not heterosexual exist. This reasoning could also be applied to collecting trans- and non-binary-inclusive gender data as working against cisnormativity. Hines (2020a) found the UK census representing trans people for the first time to be a positive epistemological step, showing that gender diversity is being identified not only at the grassroots level, but also at the structural/national level. By asking these questions, we actively acknowledge that not everyone is the same.

This type of data visibility cannot be easily classified as positive or negative. D'Ignazio and Klein (2020b) discussed how visibility can make it easier to harm or to help people from marginalised groups. As previously mentioned, Browne (2010) positioned the census and other government data collection exercises as tools for governments to know their population and decide how to distribute resources. When discussing the Trump Administration's removal of sexual orientation and gender identity from the national ageing survey, Cahill and Makadon (2017) argue that if marginalised groups are not counted, they are not accounted for by the government and their needs and any inequalities they face will not be considered when providing social services. Therefore, if people are not counted, it could be seen as an indication of indifference or hostility towards them and could make endeavours to meet their needs more difficult. Even Beauchamp (2019) who, as shown previously, takes a negative perspective on data visibility, does not argue that we should:

> "actively take up deception as a political tool to render targeted populations ungovernable. Those new lines of solidarity should remind us of the uneven possibilities offered by any embrace of deception, a tactic that may open new space for some but reignite the truth-seeking mission against others. In many cases, surveillance practices thrive on the illegibility that they themselves assign to certain populations. That assignation then rationalizes the proliferation of surveillance through state agencies, formal policies, and interpersonal engagements, modifying internal logics and frames of reference to track us more effectively" (Beauchamp, 2019 p140).

By the term "deception", Beauchamp (2019) is referring to actively misrepresenting oneself in data; this is an approach to being ungovernable in data alongside withholding data when possible. Beauchamp's (2019) argument in the above quote is that avoiding all forms of data visibility will not stop harmful surveillance practices that are utilised to exploit trans and other marginalised people, and even if invisibility may help some people, it may hinder others. He goes on to say that although he is sceptical of any lasting positive outcomes from being represented in the data, there may be brief opportunities for good that should be taken (Beauchamp, 2019). The production of data is constant in the UK today. I am trying to find ways to make the data work for those providing the information, particularly those normally rendered invisible or misrepresented by surveys.

This research focuses on surveys producing population estimates, which have some specific benefits. Population estimates allow researchers to understand whether the data they have on different populations is representative and how generalisable their findings are (Compton, 2018). Compton (2018) states that a lack of reliable data on the size of marginalised populations is part of a self-fulfilling prophecy (Figure 3) and that this prophecy contributes to an undervaluing of research on people LGBTI+ populations within academia. The 2021/22 UK censuses featuring questions on sexual orientation and gender modality could help address the self-fulfilling prophecy depicted in Figure 3, but only if the questions are appropriate, representing differences in sex, gender, and sexuality in a way that reflects the lived realities of the participants.

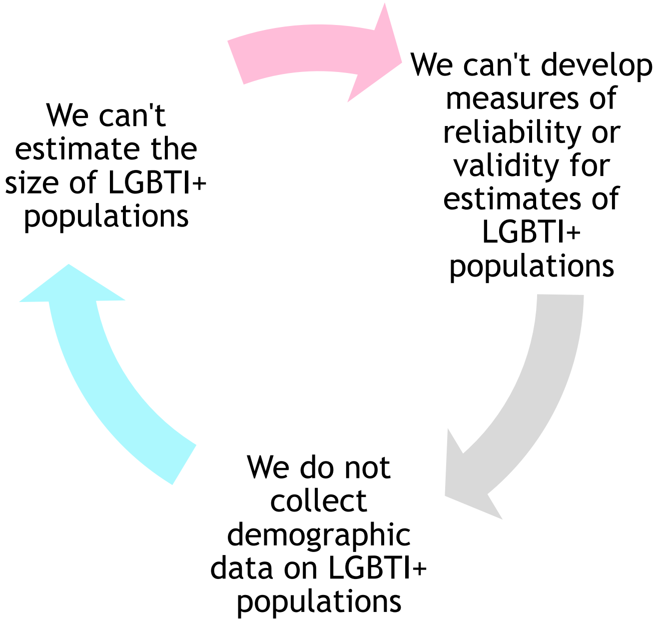

Figure 3: The self-fulfilling prophecy of demographic data collection (Compton, 2018)

Census data has particular importance in this research, not only because of the changes happening to the three UK censuses, but because of its ability to overcome key issues facing research on marginalised populations. People from LGBTI+ populations tend to be unevenly spaced geographically, meaning that depending on your sample field, you may collect a disproportionately large or small sample of the LGBTI+ population (Compton, 2018). In the UK, for example, the Office of National Statistics (ONS) (2020a) Annual Population Survey indicates that, in 2020, the percentage of people selecting an option other than heterosexual (lesbian, gay, bisexual, or other) in each of the UK countries differed, with Wales having the highest percentage (4.2%) and Northern Ireland the lowest (1.8%). It also found that London had the highest concentration of people selecting an option other than heterosexual, at 5.4% (ONS, 2020a).

Censuses that ask about sex, gender, and sexuality could help highlight the geographic spacing of LGBTI+ populations, making achieving representative samples easier as researchers can consider skews in the demographics based on their sample field. This is also beneficial for intersectional analysis as censuses and other large-scale surveys tend to collect demographic data on several characteristics such as ethnicity, disability, and religion. Law academic Kimberly Crenshaw (1989) coined the term “intersectional” when describing how the experiences of womanhood differ between Black and white women. She stated that:

> “Because the intersectional experience is greater than the sum of racism and sexism, any analysis that does not take intersectionality into account cannot sufficiently address the particular manner in which Black women are subordinated” (Crenshaw, 1989 p140).

Broadly speaking, this means that when considering differences in experiences, we should not be reducing our analysis to examine the impact of one axis of inequality, but instead be considering how different structures of power intersect. In terms of what taking an intersectional approach looks like, Scott and Siltanen (2017 p375) state that it involves recognising context to avoid taking a “one size fits all approach”, minimising prior assumptions about the nature of inequality, and taking a multifaceted approach to understanding the social world. Introducing new variables for population estimates is beneficial for all three of these elements of intersectionality. Having a more detailed demographic depiction of a population builds a better contextual understanding.

Counting people who are different can work against normative biases (Browne, 2010). Adding new covariates may uncover ways that experiences differ for different groups. Baumle (2018) emphasised the potential for intersectional understandings based on demographic data when they stated that if we include sexuality in demography, it could “shift the way that we think about population studies, including the way that gender and sexuality intersect to shape demographic outcomes” (p.279).

Looking at US data, Baumle (2018) mentioned that by identifying non-heterosexuals in demographic data, various aspects were revealed about sexuality’s relationship to factors such as geography, employment, earnings, and family structures, which opened up new avenues of investigation.

In this section, I presented ways to move beyond and/or recognise the limitations of quantification. From previous literature, it is clear that if sex, gender, and sexuality survey representation is to be a force for good, it requires reflexivity not only surrounding how the data is created, but why and exactly how it will be applied. The following section touches on current ways that survey designers attempt to maximise the value of survey questions.

2.4. Previous approaches to survey design

2.4.1. People with variations of sex characteristics and current survey designs

None of the surveys reviewed in Strand 1 of this research counted the number of people with VSC or produced any other data relating to sex characteristic variations. Given this, here, I will mostly highlight the few ways that people with VSC were mentioned in the design process for surveys and deliberation process on governmental policy on data representation. I found that people with VSC are often brought up alongside non-binary people as those that are overlooked by binary sex questions/those to be represented by “other” categories. Given this, I will touch on a recent example from the Australian census tied to conflating people with VSC and non-binary people.

I searched for the terms “intersex”, “DSD”, “variations”, and “characteristics” in documents relating to the censuses and governmental policy on sex and gender data. The terms “variations” and “characteristics” of course came up with results not related to people with VSC, but were searched for separately due to there potentially being alternative ways of denoting variations of sex characteristics or matters relating to sex characteristics specifically. No mention of people with VSC in the Northern Ireland Statistic and Research Agency’s (NISRA) census documents was made apparent with these searches. Both ONS (2020c) and National Records Scotland (NRS) (2018) mentioned them in relation to the design of sex and gender census questions. These mentions related to what being intersex or having a VSC means in terms of being a sex characteristic rather than as a gender identity. The rest of the comments were tied to how third options in sex questions could provide an opportunity for people with VSC to be represented in survey data. There are two issues with this. First, people with VSC will also have an assigned sex at birth and a relationship to gender like endosex people, so by making people with VSC choose between selecting male, female, or another option means you’re potentially excluding them from analysis as part of the male or female categories they also belong to. This issue will be touched on further when discussing focus group responses from people with VSC in this research (5.3.1). The second key issue is the way that third options can create confusion by conflating people with VSC and non-binary people.

It is useful to consider the latest Australian census when discussing the conflation of people with VSC and non-binary people in data. The 2021 Australian census conducted by the Australian Bureau of Statistics (ABS, 2022) introduced a third option to its question on sex. Participants could now choose to indicate that they have a “non-binary sex” rather than stating they are “male” or “female” (ABS, 2022). Prior to this, from 2016, participants had to make a special request to select an option other than male or female (ABS, 2022). Despite seeming like a step in the right direction for producing inclusive data, there was significant confusion over whether this third option was meant to represent people with VSC or non-binary people, which could lead to misrepresenting both groups and potential political backlash (Knott, 2022).

Having a variation of sex characteristics is about possessing biological traits from birth which cannot be categorised neatly as either male or female.[5] Being non-binary, on the other hand, is about possessing a relationship to gender that cannot be neatly categorised as either man or woman. ABS (2022) have since indicated that the question was intended to represent people with VSC despite using the term "non-binary", which is usually associated with gender rather than sex characteristics. On the Intersex Human Rights Australia webpage, bioethicist and intersex activist Morgan Carpenter (2012) is critical of the way having a VSC/being intersex is sometimes framed as a matter of gender identity, conflating it with non-binary identities within LGBTI+ research. Due to the census confusion, the data produced from the sex question will be binary with people who selected the non-binary sex question being assigned "male" or "female" (Gillespie, 2021). ABS (2022) indicated that they will produce a report on the non-binary sex data and optional text box responses for those who select this option at a later date.

In the UK census context, people with VSC do not appear to be heavily considered. In design documentation produced by NRS (2018) for the development of the Scottish 2022 census, some mention of people with VSC can be found. In this documentation, it was clear that NRS (2018) envisioned a sex/gender question with an option other than male or female as potentially beneficial for both people with VSC and non-binary people.[6] Although confusing concepts such as a "non-binary sex" option were never considered, there was a lack of recognition that, by assuming that third options serve the needs of people with VSC and non-binary people, you are conflating matters of sex characteristics and those of gender. During the question testing process, NRS (2018) did not actively seek to engage with people with VSC, but the trans and "general population" samples they engaged with did mention them, suggesting that current survey practices may erase people with VSC. One participant

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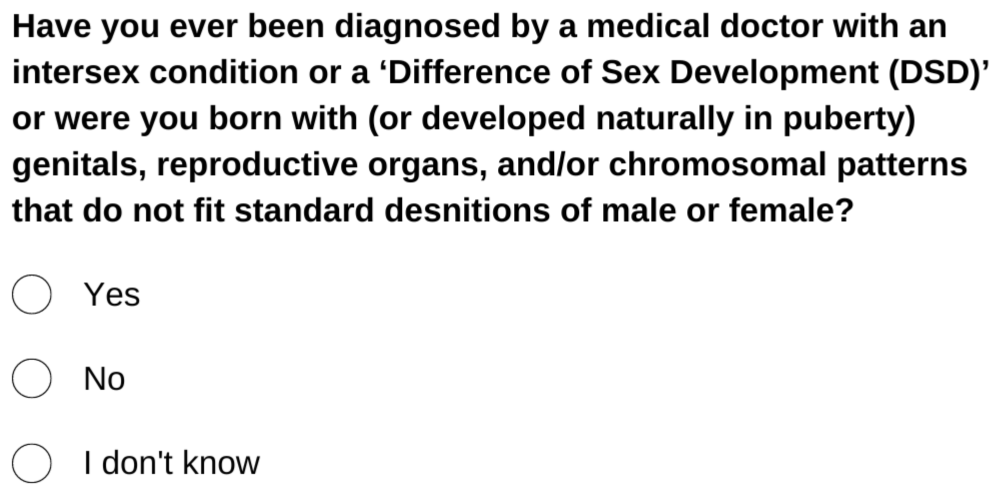
[5] Although someone with a VSC will possess these traits from birth, it is not always apparent until later in life, as noted in Section 2.2.1.

[6] I refer to this as a sex/gender question because at that stage in the Scottish census design process, it was not clear what the focus would be. In the final Scottish census, a "lived sex" sex question was utilised, as well as a gender modality question, which enabled trans respondents to share a specific gender identity.

suggested the inclusion of a specific question to count people with VSC, which is notable, as people with VSC in this research also suggested this (NRS, 2018) (5.4). Including a specific question on sex characteristics has been supported by Intersex Human Rights Australia (Carpenter, 2012) and was utilised in the UK's National LGBT Survey (GEO LGBT Team, 2017).

Although people with VSC were not actively sought out in the question testing process, the peer support group, DSD Families, was one of many stakeholders engaged with by NRS (NRS, 2019). DSD Families is a group that supports families with children with VSC. Although groups of these kinds may have some insights into the issues facing people with VSC, engaging with them, but not specifically engaging with adults with VSC, may leave the voices of people with VSC unheard. Groups such as OIIUK and Intersex UK could have been useful stakeholders to engage with to understand the perspectives of adults with VSC. Earlier, I shared a quote from academic and intersex activist Morgan Holmes (2016) in which she argued that parents and doctors must "give up ownership" of the futures of intersex children. This concern over the influence parents have over the bodies of children with VSC and issues relating to VSC broadly has also been voiced by Horowicz (2017), Timmermans et al. (2019), and Connoot (2020), who argued that although families of children with VSC may have good intentions, they may not always make the best decisions on their behalf. In regard to DSD Families specifically, it is notable that they publicised their work on the website Mumsnet, which has a culture of transphobia (Garland and Travis, 2021). Overall, the engagement practices of NRS appear to speak about rather than to people with VSC. Although this research features a limited sample of people with VSC, it did attempt to engage with people with VSC and centres around the perspectives they gave, which none of the UK census bodies seems to have done.

Looking beyond the work of the UK census bodies, some direct engagement with people with VSC on the matter of data representation can be found. Tamar-Mattis et al. (2018) conducted a study specifically focused on how people with VSC felt about survey questions aiming to produce data on the number of people with VSC. The study featured engagement with interACT, a VSC advocacy group, as well as an online survey of 111 adults along with demographic questions that asked them the single item VSC measure created by the Gender Identity in US Surveillance (GenIUSS) group (Tamar-Mattis et al., 2018). The version of the GenIUSS-recommended question on VSC utilised by Tamar-Mattis et al. (2018) was:



Have you ever been diagnosed by a medical doctor with an intersex condition or a 'Difference of Sex Development (DSD)' or were you born with (or developed naturally in puberty) genitals, reproductive organs, and/or chromosomal patterns that do not fit standard definitions of male or female?

○ Yes

○ No

○ I don't know

Figure 4. GenIUSS VSC question (Badgett et al., 2014)

Tamar-Mattis et al. (2018) then utilised an open survey question to produce data on the participants' perspectives on this question format. They found that the participants were in favour of being represented in surveys and 72% responded positively to the GenIUSS question (Tamar-Mattis et al., 2018). There were comments about how refreshing and important it is to be represented in surveys that so often exclude people with VSC (Tamar-Mattis et al., 2018). When issues with the question were raised, they tended to focus on its medicalised nature, the use of the acronym DSD, and whether a separate question was the best approach (Tamar-Mattis et al., 2018). Much like this research, Tamar-Mattis et al.'s (2018) work was somewhat limited by its use of convenience sampling and presents itself as a first step towards addressing a gap in data representation for people with VSC that requires more research.

The GenIUSS (2014) report highlighted three key issues for representing people with VSC in data, which may indicate why there has been limited work on this area and that pose issues for this research to investigate. Firstly, as discussed previously, there is no consensus on terminology for people with VSC, with some people using terms like “intersex” while others use “DSD” or only discuss their variation in terms of a specific diagnosis. Secondly, some people who have no VSC may use terms like “intersex” to describe their gender identity. Thirdly, due to there being no formal recognition of VSC on documentation, researchers cannot call upon them to indicate how participants should answer, if trying to know how many people with VSC there are. Chapter 4’s discussion of sex question guidance highlights broader issues with relying on documentation to indicate the nature of sex/gender.

In this subsection, I highlighted that current discussions surrounding the representation of people with VSC in surveys are limited. I indicated how approaches to representing people with VSC and how said representation is discussed tends to conflate people with VSC and non-binary people. As will be highlighted later in this research, this conflation ties to an unhelpful confusion surrounding the purpose of these questions. Are they representing sex characteristics, sex assigned at birth, gender, or something else entirety? When the focus of a question is not clear, it creates issues both for participants interpreting how to respond and researchers trying to understand the data.

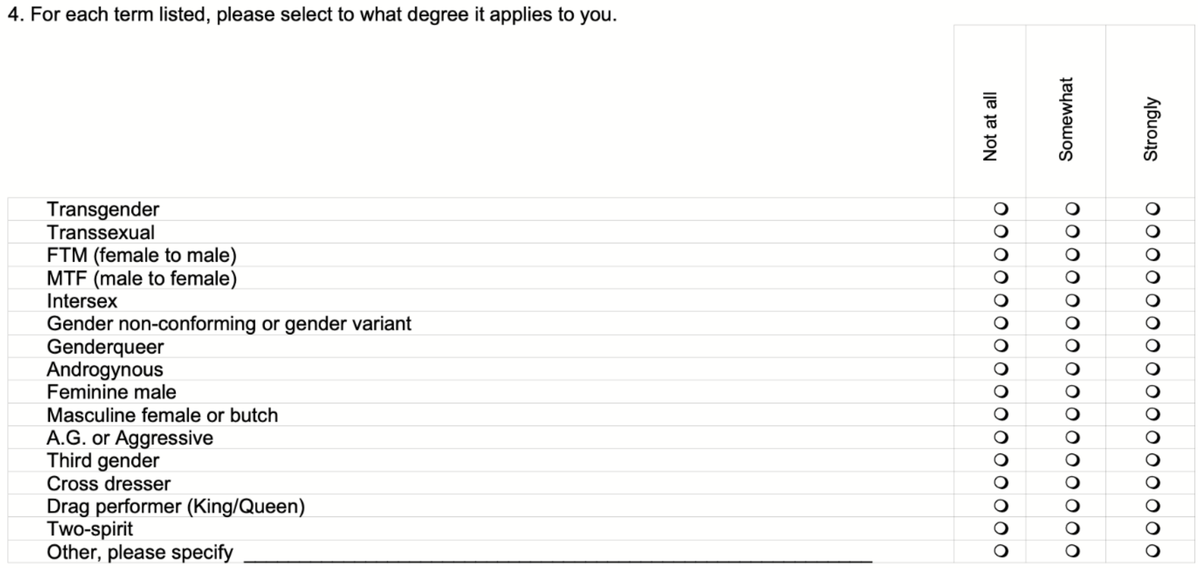
2.4.2. Binary genderism in survey design debates

The National LGBT Survey conducted in 2017 found that of the 108,000 participants, 6.9% were non-binary (Government Equalities Office, 2018b). That means that in the UK’s largest sample of LGBTQ+ people (prior to the 2021/2022 census), there were more non-binary participants than there were trans women (3.5%) and men (2.9%). Yet, outside of the text box which accompanies the gender modality questions in Scotland, England, and Wales, there was no way to report a non-binary identity on the latest UK censuses (Government Equalities Office, 2018b). Moreover, the mandatory nature of the sex questions means that non-binary people were required to actively misgender themselves. I will now briefly outline the issues with binary assumptions in data collection and how they exist in a wider context of gender binarism in the UK. I will conclude this subsection with some other ways of representing non-binary people in surveys featured in other research.

When conducting large-scale surveys such as the UK censuses, one of the key aims is to have as many people as possible respond to every question. NRS (2018) found that non-binary-inclusive questions not only had stakeholder support, but also led to lower item non-response (0.5%) compared to the binary sex question (0.8%). The Culture, Tourism, Europe, and External Affairs Committee was responsible for approving the Scottish census. It was resistance from this committee rather than empirical evidence that prevented the Scottish census from being non-binary-inclusive (NRS, 2019). This exclusion of non-binary people, despite empirical evidence and demand, has been found within other political contexts, namely, the GRA (2004) reform.

Since 2016, reforming the GRA (2004) has been a major topic of debate and the main battlefield where fights over trans rights have occurred (Pearce,Erikainen and Vincent, 2020). This is not due to it being the most pressing issue trans people face, but rather the issue that cis politicians have centred on when addressing trans rights. The focus on the GRA (2004) was promoted by the House of Commons Women and Equalities Committee's (2015) *Transgender Equalities* report, which highlighted a number of issues with the GRA (2004) as well as other issues facing trans people. The core reasons for GRA (2004) reform are its overly bureaucratic, costly, binary, and medicalised nature that excludes people under 18 (Scottish Parliment, 2019;Sharpe, 2007). Despite expressed demand, the UK Government has abandoned reform outside of reducing the price of pursuing a GRC (Catherine Fairbairn,Doug Pyper and Balogun, 2022). In Scotland, the Gender Recognition Reform Bill was passed but later blocked by the UK Government. When first writing this subsection, I noted that the work of the Scottish Government's Non-Binary Working Group could lead to some progress for non-binary people. However, the Scottish Government only fully accepted nine of the 35 NBWG recommendations (Scottish Government, 2022). Therefore, although the existence of the working group shows some recognition that people outside the binary exist, it arguably does little to detract from the negative impact of binary genderism on peoples' lives.

When it comes to challenging binary genderism with survey designs, a variety of different approaches have been suggested with various levels of success. Broussard, Warner, and Pope (2018) refer to any gender questions with more than the binary option as expansive. In *Helping Quantitative Sociology Come out of the Closet,* Sumerau et al. (2017) emphasise that expanding gender question options is a crucial step to representing people outwith the gender binary, making reference to how the NTDS (Harrison,Grant and Herman, 2012) found a sizable non-binary population normally overlooked in sociological research. Another key element to representing non-binary people is recognition that gender categories are not always mutually exclusive. Figure 5 shows that this was another area that the NTDS took steps forward in by including this question alongside other sex, gender, and gender modality questions.



4. For each term listed, please select to what degree it applies to you.

	Not at all	Somewhat	Strongly
Transgender	○	○	○
Transsexual	○	○	○
FTM (female to male)	○	○	○
MTF (male to female)	○	○	○
Intersex	○	○	○
Gender non-conforming or gender variant	○	○	○
Genderqueer	○	○	○
Androgynous	○	○	○
Feminine male	○	○	○
Masculine female or butch	○	○	○
A.G. or Aggressive	○	○	○
Third gender	○	○	○
Cross dresser	○	○	○
Drag performer (King/Queen)	○	○	○
Two-spirit	○	○	○
Other, please specify ______________________________	○	○	○

Figure 5: "Choose all that apply" sex, gender, and gender modality question used in NTDS (Grant, Motter, and Tanis, 2011)

The question in Figure 5 enabled participants to indicate an expansive array of different terms they felt applied to them and included a text box for any missing options. A similar sort of question format was also suggested for further testing by The Williams Institute. They suggested that the second step of the two-step question set shown in Figure 5 could be made more inclusive by adding options such as "Gender queer/gender non-conforming" and allowing participants to select more than one option (Badgett et al., 2014 p16). Both option expansion and allowing multiple responses will be heavily discussed throughout this research.

The final question design that is suggested for reflecting a broader range of genders and experiences with surveys is scale-based questions. The purpose of these questions is to represent gender without relying on identity labels. As this literature review has emphasised, identity labels are extremely contextual and will hold different meanings from person to person, which are the main reasons why Ho and Mussap (2019) promoted the use of scale-based questions. Wylie et al. (2010), on the other hand, argued that scale-based questions focused on gender expression rather than identity could better capture the impact being gender non-conforming has in healthcare contexts. I think the scale questions proposed by Ho and Mussap (2019) and Wylie et al. (2010) could be useful, but not in the ways they suggest.

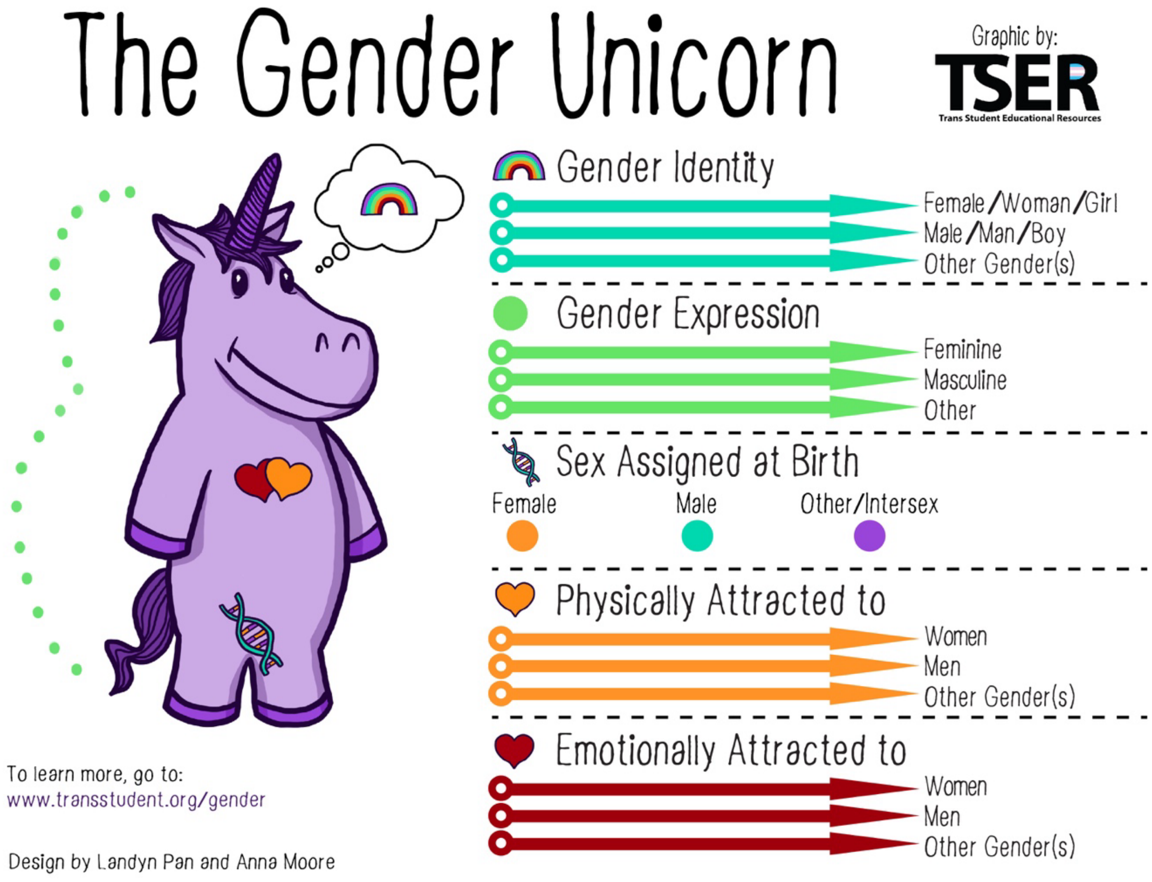


Figure 6: The Gender Unicorn basis of the gender identity scale (Trans Student Educational Resources, 2015; Ho and Mussap, 2019)

The gender identity scale question developed by Ho and Mussap (2019) was based in the first row of scales from this educational resource, The Gender Unicorn (Figure 6). As indicated by Figure 6, this counteracts dualistic ideas of gender, as instead of female/woman/girl and male/man/boy being two sides of a spectrum, they are each their own spectrum and there is a third scale for gender experiences outside of the realms of woman and man (Ho and Mussap, 2019). This could be beneficial for understanding participants' self-perception. However, it does suffer from the same issues that gender identity labels do. Just as identity labels are contextual and defined on an individual basis, so are notions of being a man or a woman. Being on a scale does not make it any more objective and removes the ability to represent people as they self-identify. The contextual nature of gender is also apparent in Wylie et al.'s (2010) work, as they noted that participants found it difficult to assess how others perceive their gender expression as it differs from time to time. They tried to address this by specifying that they wanted to know how people saw them "on average" (Wylie et al., 2010). Further research would be needed to determine whether that makes a difference in participants' comprehension of the question, as it may not be the case that there is an "average" way that all participants are perceived. It is also questionable how well anyone can assess others' perception of them.

Here, I have tied the poor representation for non-binary people in the UK census to a larger context of gender binarism which contradicts empirical evidence. I mentioned that non-binary people could be represented by the text boxes featured in the English, Welsh, and Scottish Censuses' gender modality questions. However, when concluding this thesis, I will highlight limitations with this approach to representing non-binary people, when discussing the data produced by the 2021 census of England and Wales (9). The next section of this chapter goes on to discuss current debates surrounding sexuality survey representation.

2.4.3. Cognitive, acceptability, and quantitative testing

When introducing this thesis, I mentioned that one of its key outputs is the approach I took to involve overlooked populations in the knowledge production process. Cognitive, acceptability, and quantitative testing of survey questions holds some similarities to the approach I took, in the sense that they also feature engagement with target populations to improve survey designs. The difference between these forms of testing and my approach is that their engagement with target populations was determined by premade questions, while mine was driven by questions designed by the target populations. In the Discussion chapter of this thesis, I will compare the approach I took in this research to conventionally used question testing techniques and suggest ways that these approaches could be incorporated to inform each other (7.3). Providing context to that discussion, I use this subsection to outline what cognitive, acceptability, and quantitative testing are and give some examples of the role they play in the design of sex, gender, and gender modality questions. I focused on the design of these questions due to them being the most contentious, therefore facing a greater level of scrutiny.

The primary function of cognitive testing, in this context, is assessing the measurement validity of survey questions, meaning, do they produce data on what the researchers intended them to? For example, Wylie et al. (2010) used cognitive interviews to investigate how participants understood questions on perceived gender expression and their thought process when answering them. It was via these interviews that they found that participants did not have a stable state of perceived gender, so added the term “on average” to the questions (Wylie et al., 2010). Knowing the thought process of participants via these types of interviews can help identify areas of confusion, and help researchers understand what information is being provided when they ask different questions (NRS, 2018). Such intelligence can be used separately or alongside acceptability testing, which focuses on whether participants would be willing to answer the questions provided (NRS, 2018). Quantitative testing assesses whether/how data quality can differ between different questions designs and can also feature some elements of acceptability testing (NRS, 2018). In short, these types of tests are concerned with the following:

Cognitive: What participants are providing data on;

Acceptability: Who will be willing to answer the question;

Quantitative: Which question design leads to the highest response rate.

I will now briefly summarise how these forms of testing were used when designing questions surrounding sex, gender, and gender modality for the latest UK censuses. Of the three census bodies, the NISRA published the least on sex, gender, and gender modality question testing. As mentioned previously, they opted not to include a gender modality question in the 2021 Northern Irish census, but otherwise followed a similar approach to that taken by the ONS in the English and Welsh census. Due to this, I will primarily be discussing reports from the ONS and NRS.

In 2017, Ipsos MORI carried out acceptability and quantitative testing on gender identity questions on behalf of the three UK census bodies. The acceptability testing contained a single gender identity question with the options “male”, “female”, and “in another way, write in” and was found to be acceptable to the general public (NRS, 2018). However, when it was taken forward for quantitative testing, it changed. Three question sets were tested by Ipsos MORI: A binary sex question, a sex question with a third text box option, and a two-step sex and gender question with the gender identity question tested previously as step two. It is unclear why the gender identity question was not tested on its own. The quantitative testing found little difference in response rate to the two sex questions, but that the responses dipped for the gender identity step in the two-step question set (NRS, 2018). In NRS’s (2018) reporting of these findings, it was concluded that the language of “sex” led to more responses than that of “gender identity”, despite the fact that the gender identity question was not quantitatively tested on its own. In the ONS’s (2020c) testing of two-step questions, they found that:

> “trans participants recognised the distinction between the concepts of sex and gender identity but considered deriving their trans status by cross-tabulating responses to the two questions to be “underhand”. Participants questioned the need to ask both questions. For some participants, this was because they thought the questions asked the same thing, and for others this was because they did not see a separate data need” (ONS, 2020c).

This highlights that participants may have been less inclined to answer the gender identity part in the Ipsos MORI tests due to it seeming repetitive and unnecessary. The above quote also indicates acceptability issues within the trans population when it comes to gender modality being inferred rather than asked directly.

Between 2017 and 2020, the ONS conducted an extensive array of tests on sex, gender, and gender modality questions. The testing conducted prior to 2018 that created the parameters for the final 2021 census questions featured four approaches (ONS, 2020c). The first two explored the potential for a non-binary sex question and how sex and gender questions could be used (ONS, 2020c). The second two further developed these questions and considered matters such as sex question guidance (ONS, 2020c).

The ONS's (2020c) exploration of how participants understand sex provided further evidence that there are differing interpretations of what is meant by "sex" in questions. Further, they found that trans participants who interpreted sex questions to be about sex assigned/registered at birth found it unacceptable, irrelevant, and intrusive (ONS, 2020c). This is frustrating given that after the legal pressure from Fair Play for Women, this is exactly the information that was asked for (Topping, 2021). They also found that when provided with both a gender identity and sex question, some trans participants would respond in a way the ONS associated with cis respondents, with trans women selecting women and female and trans men selecting man and male for the gender and sex questions, respectively (ONS, 2020c). This was due to interpretations of the questions and sometimes concerns surrounding being visibly trans in the data (ONS, 2020c).

In their exploration of non-binary sex and two-step question designs, the ONS (2020c) stated that "For the non-binary sex question, the "Other" response increased confusion for trans participants around the question's meaning".

Much like with NRS's (2018) interpretation of Ipsos MORI's findings, the ONS may have jumped to the wrong conclusion. Yes, they found that non-binary sex questions with the "Other" option included were more confusing to participants (ONS, 2020c). However, that could have more to do with the use of the term “sex” in a question that is trying to be inclusive of non-binary people. As stated, when discussing the representation of people with VSC, there is often conflation between them and non-binary people, which could be the issue here. Participants were unsure whether the “Other” option was aiming to collect data on people with VSC or those outside the gender binary due to the use of the term “sex”. Of course, based on these findings alone it is uncertain, but it is also not guaranteed that the confusion was causally linked to the “Other” option.

Alongside these first four approaches, there was also community engagement during LGBT History Month and quantitative testing on gender modality questions (ONS, 2020c). There were two things that came to mind when reading the research behind the ONS’s question designs: the desire to represent trans people as trans first and foremost rather than their genders, and a disconnect between the ONS’s findings and the final census design. In Approach 3, they found that non-binary-inclusive gender questions accompanied by gender modality questions were found to be acceptable (2020c). This would enable participants to accurately report both their gender and whether they were trans or not directly, rather than being inferred by other responses, which participants found undesirable. Despite this, the ONS (2020c) recommended that the 2011 sex question should not change, despite recognising that this would cause issues for trans participants. They provided no reason for this.

Alongside Ipsos MORI’s gender identity question testing, NRS (2018), working with ScotCen, counted cognitive testing. They tested a three-question set (binary sex, expansive gender identity, and trans status) and a two-question set (non-binary inclusive sex and trans status) (NRS, 2018). Like Ipsos MORI, they failed to test a gender identity question on its own, which was found to be an issue in the data as participants were unsure about combining a binary sex question with an expansive gender question (NRS, 2018). Based on support for the two-question set, they quantitatively tested it and found it had a high response rate (NRS, 2018). However, as stated previously, due to a Scottish Government committee decision, the non-binary-inclusive sex question was not featured in the final census design.

This subsection provided a quick overview of what cognitive, acceptability, and quantitative testing are and discussed how they were used in the 2021/2022 UK census design process. The UK census bodies conducted extensive research to inform the design of the census. I think they could have gone further in some areas by exploring the possibility of gender identity questions without sex questions or what difference using man/woman options rather than male/female could make. However, their research is the most expansive example of pre-survey design research and many of their key findings could not even be fitted into this section. What I am more concerned about is the disconnect between their research findings and the final census designs. The design of census data collection does not appear to be as data-driven as it could be.

2.5. Literature review conclusion

I began this chapter by setting my anti-essentialist stance and guiding readers through the ontological divides relevant to this work (2.2). This highlighted the fact that conceptualisations of sex, gender, and sexuality often intersect and that fixed understandings of these concepts leave populations such as people with VSC overlooked or misunderstood. Tying these ontologies to survey design, I went on to consider the limitations of quantification and categorisation, which helped illustrate the potential risks and benefits of survey representation, emphasising why this is an important area of investigation (2.3). Finally, I engaged with work surrounding survey designs and the ways in which questions are created and tested for the UK censuses. This sets the scene of current knowledge surrounding survey representation to which this research contributes (2.4).

This literature review emphasised the multifaceted nature of this topic, with its relevance to ontological, epistemological, methodological, social, and political debates. The next chapter shows that by utilising an exploratory, sequential mixed-methods design, I investigated survey representation in a way that recognised this complexity. It highlights how I expanded on previous work by centring the perspectives and needs of those overlooked by current practices.

3. Methodology

3.1. Methodology introduction

Taking a queer feminist approach drew me towards an exploratory sequential mixed-methods research design which utilises the benefits of both qualitative and quantitative methods to investigate the topic of survey representation. The first section of this chapter outlines my queer, feminist approach (3.2). The second explains what taking an exploratory sequential mixed-methods approach meant and my reasoning for adopting it (3.3). This is followed by a reflexive section on my positionality via the lens of insider–outsider (IO) research (Rosenberg and Tilley, 2021) (3.4). From there, the three interconnected strands of the research are outlined in more detail (3.5, 3.6, and 3.7). This chapter shows the value of each individual strand of this research while emphasising that integrating the data from each strand is required to maximise the practical applications of this research. The chapter concludes by outlining how the findings of each strand are integrated to create a comparison of current survey practices with the perspectives of populations overlooked by said practices (3.8).

The first section discusses what taking a queer feminist approach means to this research (3.2). This theoretical discussion resides within this Methodology chapter to emphasise the link between the queer feminist perspective I hold, and the exploratory sequential mixed-methods approach I employed. In the first section, I explain that taking a queer feminist approach to this research was conducted partly due to their criticisms of the types of categorisations and quantification present in surveys. By basing this research around critical views of survey representation, it holds surveys to a higher standard and highlights ways to improve them. The section goes on to link my theoretical perspective with the focus on population surveys and overlooked populations' perspectives. It is from this focus that the exploratory sequential mixed-method design was developed.

The second part of this chapter provides a summary of what taking an exploratory sequential mixed-methods approach means (3.3). It explains each of these terms separately before summarising what each of the three strands aimed to accomplish.

Before addressing each of the strands separately, Section 3.4 reflects on my positionality as an insider-outsider (IO) researcher (Rosenberg and Tilley, 2021). The purpose of this section is to be transparent about the costs, benefits, and general influence that sharing experiences and identities with my participants had on this work.

The final four sections summarise the approaches taken in the three strands and how they were integrated (4.4–4.7). The sections highlight matters such as the impact that the COVID-19 pandemic had on this research, the aims and methods of each strand, ethical considerations, recruitment processes, and how the data was analysed. The sections on strands 2 and 3 discuss the samples they engaged with, highlighting the strengths and limitations of them. The final section explains how all of the data was combined and analysed (3.8). Overall, this chapter summarises how I designed this mixed-methods research around the perspectives and needs of overlooked populations with the aim of producing critical insight into how survey designs can be improved.

3.2. Taking a queer feminist sociological approach

This research takes a queer feminist sociological approach to the issue of representation relating to sex and gender from UK surveys. In short, this means addressing the issue of survey representation via the lens of challenging cis/het normativity and gendered power imbalances. This section will delve deeper into what this specifically means for this research, and how I came to this perspective. This theoretical perspective directly informed my methodology, which is why it is situated at the start of this Methodology chapter. When introducing this thesis, I stated that the lines between the queer and feminist theory are not clearly defined, but I use these terms to recognise the context in which my perspective developed. Given this, I will not outline all of the similarities and differences between queer and feminist perspectives, but instead highlight the tools derived from them that I utilised in this research. The previous chapter's engagement with the literature also makes it clear that neither queer theory nor feminism represent a homogeneous set of perspectives on sex and gender or their relationship to sexuality. This section begins by arguing that critical approaches such as queer theory and feminism can be invaluable for sociological endeavours, but that this potential is not always realised. From there, I highlight the three key reasons I was drawn to queer feminist perspectives: their critical nature, the specific ways queer theory challenges cis/het normatively, and how feminism addresses power imbalances.

There has been resistance to adopting queer theory (Compton,Meadow and Schilt, 2018b;Schilt, 2018) and, to a lesser extent, feminism (Skeggs, 2008;Alway, 1995) within sociology and broader social research fields. In many ways, it was this resistance that drew me to these perspectives in the first place, as it is partly based on queer and feminist criticism of categorisation and the production of knowledge. This is beneficial to this research in two broad senses. First, if, at its core, sociology is understood as a way of thinking about human life that encompasses different points of view via empirical data collection rather than just parroting "common sense" views, then perspectives that challenge norms within sociology itself can lead to more reflexive practices and better sociology overall (Bauman and May, 2019). Second, this research was prompted by the need to improve survey representation. By bringing together the often contradictory perspectives of queer scholars and demographers, Baumle (2018) stated that the demography of sexuality has the potential to "generate a stronger, more reflective scholarship on population sexuality" (Baumle, 2018, p279). Inspired by this, I saw that the best way to investigate survey representation was with theories that took a critical stance toward it: in this case, queer theory and feminism. Both perspectives have influence together throughout this research, but queer theory touches slightly more on issues of categorisation, and feminism more on matters of the power at play when we count.

Chapter 2 noted queer theory's foundation in post-structuralism and its challenges to the notion of a fixed subject (2.2.3). In other words, queer theory has been used to challenge the notion of fixed identities, particularly in relation to sexuality (Browne, 2010). This leads to conflicts with quantification, which so heavily relies on the use of categories such as “bisexual” and “heterosexual/straight”. Browne broke the extent of this conflict in two when she stated that:

> “A queer deconstruction of quantitative research tools could (and some would argue should) conclude in using queer tools to deconstruct normative categorisation impulses. However, this would be to exclude the excess to these critical insights, particularly the possibilities which a government sexualities question appears to offer. the anti-normativity and deconstructive approaches may for instance fail to address the potentials of (re)creating forms of normativities from that which was once deviant” (Browne, 2010 p236).

In other words, queer theory could either be completely against the quantification of gender and sexuality, or it could see the recognition of experiences outside the cis/het norms or normative categorisation of gender and sexuality as a queering methodology in itself (Browne, 2010). This research takes a middle ground approach, recognising that flexible, expansive survey tools could possibly utilise the use of identity labels to resist and expand upon current understandings of gender and sexuality in a way that makes space for the experiences of more people. At the same time, throughout this research, I emphasise that even if identity labels are used, they do not hold one fixed meaning and will change over time, both in terms of the individuals’ identity and how these terms may be understood in different contexts.

Much of Chapter 2’s discussion of the limitations of quantitative methods and ways to use them was based on feminist criticisms of objectivity (2.3). Unchecked objectivity can lead to power over what is deemed legitimate knowledge; challenging this is a key element of this work (Oakley, 1998;Caplan, 1988). The overarching theme in how feminist perspectives manifest in this research are in improving methods to balance and challenge power. For example, the data science principles depicted in *Data Feminism* are called upon, since they emphasise the importance of feminist research examining and challenging power (D'ignazio and Klein, 2020b). A key way of balancing power is through an active process of informed consent. I utilised Kovacs and Jain’s (2020) feminist account of consent in data collection to consider ways that elements of consent – particularly negotiation – can be utilised to balance the power between researchers and participants and produce data more likely to reflect the participants' lives.

Emphasising negotiation paired with the queer resistance to cis/het norms heavily influenced this research and my choice to adopt an element of co-production in its design. When introducing this thesis, I noted the feminist methodological tradition of recognising the value of situated knowledge via specific standpoints (Collins, 2002;Haraway, 2020;de Vries, 2015). Early in the design of this research, this prompted my desire to work with overlooked populations to understand their perspectives on survey representation. The queer nature of this work is further ingrained this approach, as the core target population of this work is recognised in terms of how these individuals do not fit within the restrictive normative bounds currently set by survey designers. The element of co-production, which I discuss more in Section 3.6.3's overview of Strand 2's methods, was designed to have the participants actively engaged in the production of knowledge about themselves.

This active participation of the participants from overlooked populations in knowledge production was also motivated by feminist notions of consent. Kovacs and Jain (2020) emphasise that understandings of consent that assume everyone is equal and has the same freedom over their own autonomy as others fails to recognise power imbalances. Throughout this research, I emphasise the ways that current survey practices overlook some populations due to their focus on large sample sizes and their basis in normative assumptions. Given this, these populations do not have the same level of power over what they are consenting to. Including them in the knowledge production process here is a small-scale example of how that can be addressed.

There are many ways that the issue of survey representation in terms of sex and gender could be examined. My choice to focus on the perspectives of overlooked populations was motivated by queer theories' resistance to cis/het norms and the feminist emphasis on negotiation as a key element of consent. The exploratory strand in which participants were asked to design survey questions made them active negotiators in the knowledge production process. The fact that these participants were selected on the basis of being overlooked by current survey practices means that the experiences most at odds with current forms of knowledge production were being centred on. By testing their questions on a slightly larger scale and by comparing the findings with the current practices, recommendations can be direct and, hopefully, more applicable than if they were made in the abstract.

3.3. Exploratory sequential mixed methods for critical engagement

This research adopted an exploratory sequential mixed-methods approach to critically engage with survey methods in the UK. The previous chapter outlined why this critical approach of focusing on overlooked populations' perspectives was taken. This section explains why, with that in mind, an exploratory sequential mixed-methods approach was adopted. It begins by explaining what makes an approach exploratory, sequential, and mixed-method in nature. From there, my reasoning for adopting three strands rather than just one or two is explained. This section briefly highlights some of the strengths and weaknesses of this research, which will be further explored throughout the following chapters.

When first designing this research, I was conscious of three hurdles. Firstly, this research is only as useful as its recommendations are applicable to UK survey practices. This meant that I must consider how things are currently done and steps to improve them, rather than produce recommendations in the abstract. Secondly, work on survey representation can easily reinforce exclusionary survey practices or misunderstandings about people who fall outside of sex, gender, and sexuality norms, as was highlighted in the Literature Review's engagement with survey representation literature (2.4). Finally, for survey questions to be used to create population estimates, they must work on a large scale. Realising these hurdles, it became apparent that one method alone was unlikely to adequately address the issue of how to represent differences in terms of sex and gender with surveys. Using Table 2 as a starting point, I will now summarise what it meant to take an exploratory sequential mixed-methods approach to this research. Although each of the three hurdles were addressed with varying levels of success, I will highlight how, by integrating data from three research strands, I was more successful than I would have been had I used any one method.

Table 2: What is an exploratory sequential mixed-methods research design?

Design element	**What it means**
Exploratory	Qualitative methods are used to explore the topic, informing a later quantitative strand
Sequential	There are multiple strands of the research, each coming one after another with each informing the next
Mixed methods	The research utilises both qualitative and quantitative methods, combining the data

Note: Table based on the work of Tashakkori and Teddlie (2009) and Creswell and Plano Clark (2007)

This research features three sequential strands. Being sequential means that one strand follows on from and is informed by the previous strand (Tashakkori and Teddlie, 2009). A key benefit of this type of mixed-methods approach is that each method can compensate for the other’s shortcomings, as each will have their own strengths and weaknesses, as emphasised by a pragmatic approach to social research methods (Tashakkori and Teddlie, 2009;Onwuegbuzie and Leech, 2005a). To address limitations in quantitative methods, this research was designed in an exploratory manner.

Creswell and Plano Clark (2007) present exploratory mixed-method designs as featuring a qualitative approach followed by a quantitative approach, with the qualitative approach exploring the topic in question to inform the data collection of the larger quantitative strand. I selected an exploratory approach to avoid recreating the very quantitative survey issues I was trying to address. In Section 2.4 of the Literature Review, I highlighted numerous ways that current approaches to representing sex, gender, and sexuality using surveys overlook or misrepresent certain populations. There is previous work that proposes new question designs, but purely based on the researchers’ own perspectives surrounding the nature of sex, gender, and sexuality (Meyer and Elias, 2022). Even with rigorous engagement with the literature and/or an insider positionality, relying too heavily on researcher perspectives risks overlooking some issues or creating others. This is not to say that this research addresses all possible survey design issues, but rather that by engaging with overlooked populations, the recommendations are not as heavily influenced by my individual perspectives and have a chance of addressing more of the current survey design issues. This empirical approach is one of the distinguishing benefits of this research. Now I will summarise the exploratory sequential mixed-methods design I utilised.

As stated previously, this research featured three strands. The first was the contextual strand, which systematically analysed current population survey practices surrounding sex, gender, and sexuality. This research was first designed to consider sex, gender, and sexuality, though in this thesis, sexuality is primarily considered in terms of how it relates to sex/gender. The output of Strand 1 was used to provide a summary of current survey practices and identify who may be overlooked by these practices. The overlooked populations identified became the target population of Strand 2. The second strand was exploratory, utilising focus groups to explore overlooked populations' perspectives on survey representation of sex, gender, and sexuality alongside a participant demographics questionnaire. It featured a participatory element as focus group participants had the chance to produce survey questions they felt would best represent people like them. Utilising two rounds of feedback sheets, the focus group participants were also engaged with throughout the research process to see how the people from these particularly overlooked populations viewed the research findings. The purpose of this was to ensure that the views of the overlooked populations identified were centred throughout the research. The final strand was primarily quantitative, utilising an online survey to gain broader insights on the questions designed by the focus group participants from Strand 2. The purpose of this strand was to test the suitability of the questions with a wider audience and determine whether the perspectives on survey designs shared in Strand 2 were applicable to a larger sample of LGBTI+ people.

Before discussing each strand in more depth, I use the next section to describe reflexivity and consider my positionality. This is an important step in all research, but is of particular relevance to this topic, where researcher positionalities and any normative assumptions based on them can dictate who is and is not counted. Being reflexive and transparent about the basis of this research and the choices made within it helps to avoid the types of opaque research processes with hidden and taken-for-granted assumptions that this research aims to address.

3.4. Reflexivity and positionality

Being queer, agender, and trans, my sexuality and relationship to gender are rarely – if ever – represented by survey methods, meaning I come to this research from an insider perspective (Gair, 2012).[7] Being an insider means that I share relevant traits or experiences with the target populations of my research, in this case, being overlooked by surveys. This both motivated my research and influenced its design. During the early design stages of the 2021/2022 UK censuses, the existence of people like me, and whether we count, once again became a topic of debate. Experts produced questions that disregarded or misunderstood a vast array of sex, gender, and sexuality experiences. For example, one of the question sets considered by NRS (2018) during the design of the 2022 Scottish Census, based on recommendations from the Equality and Human Rights Commission (EHRC), presented "intersex" as a distinct category someone can be assigned at birth. Although some people have variations of sex characteristics that are apparent at birth, all children born in the UK are assigned either male or female (ONS, 2017). Designing survey questions that are not based on, or that perpetuate, misunderstandings motivated this research. It felt to me that the perspectives of people currently overlooked by population surveys, such as myself, were not being adequately considered. My insider perspective alerted me to this and made me first consider engagement with overlooked populations as an approach to improving survey questions.

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[7] Queer, like all identity labels, holds different meanings for different people, depending on the context. When writing about my own identity, I use it primarily to denote my sexuality, but it also captures my relationship to gender as well, although I also use the terms agender, non-binary, and trans when describing that.

Recognising my insider status is important given its influence over this research. However, it should not be overstated. Binary notions of insider/outsider research oversimplify researcher positionalities and risk minimising the power insider researchers can still have over their participants (Hayfield and Huxley, 2015). Throughout this research, I have considered the risks and benefits associated with data representation; given this, it is important that I recognise the power I have as a researcher over how my participants are represented (English, 2024). Rosenberg and Tilley's (2021) conceptualisation of "insider-outsider" or "IO" research is a useful lens for viewing this research. They argued that researchers are always outsiders to their participants due to the researcher/participant relationship while also recognising the value and need for more research with trans people to be trans-led (Rosenberg and Tilley, 2021). Rosenberg and Tilley's (2021) account of IO research recognises the potential issues that insiders must navigate, without presenting insider experiences as an inherently corrupting force. Although it is true that researchers with insider experiences and close ties to the community that they are working with must be continually reflective regarding the ways their own experiences may influence their work, this is also true for outsider researchers. An outsider researcher working in this area will still have their own relationship to sex and gender, which will influence their perspectives alongside the wider cisnormative and heteronormative cultures, which can lead to unhelpful assumptions (Rosenberg and Tilley, 2021;Hayfield and Huxley, 2015).

As stated previously, I am overlooked in surveys in terms of my (lack of) gender, gender modality, and sexuality. However, this does not mean I am overlooked in the same way as all of my participants, nor does it mean that having the same relationship to sex, gender, or sexuality means that my participants are part of a homogeneous group. I do not have a variation of sex characteristics and did not start this research with any specific insights into how people with VSC may feel about their representation in survey data. It is also true that although I am overlooked in terms of gender, gender modality, and sexuality, I am not overlooked in the exact same way as all of my participants. Trans men and women will have differing experiences to me when responding to surveys. Asexual people who also identify with another identity label such as "gay", "bisexual", "lesbian", or "heterosexual" will have differing experiences to mine. These are just some of the examples of the ways that, even in terms of the characteristics focused on in this research, I will differ significantly from my participants and will have limited insight from my own experiences.

IO framing is also useful for recognising the intersectionality of experiences. Alongside having relationships to cis and heteronormative power structures, all participants in this research and in research broadly will have relationships with other systems of power/oppression such as racism and ableism. This is important, as to simply reduce myself to an insider without further consideration would be to reduce participants in terms of their experiences of being overlooked by surveys and not seeing them as multifaceted individuals. This also emphasises the importance of considering who is and is not featured in this research, which is further discussed in Sections 3.6.2 and 3.7.2 of this chapter.

Moreover, although there are potential benefits to insider experiences, these benefits can create issues of their own. Being an insider can enable easier communication with participants due to familiarity with their experiences and shared narratives (Hayfield and Huxley, 2015). Within the LGBTI+ community, a variety of terms are used to discuss relationships with sex, gender, and sexuality (Vincent, 2018). Being an IO researcher means that I have some experience of how this language is used, though it is important to recognise that there is not one objective way to talk about experiences of sex, gender, and sexuality (Vincent, 2018). Issues could have arisen if I overestimated my understanding and did not ask my participants for adequate clarification. There are three ways I handle this in my research. Firstly, in the focus groups, when designing questions based on the participants' responses, I did not simply collect their perspectives to then design the questions later by myself. Rather, I communicated to the participants how I was interpreting their responses there in the focus groups, describing the questions they were designing as they discussed them. Secondly, to reinforce this, and to ensure that I did not misrepresent any other perspectives on survey representation shared by the focus group participants, I adopted feedback sheets in which summaries of their accounts and the overall findings of the research were supplied to participants who consented to further engagement. Via the feedback sheets, participants were able to tell me whether they thought I was representing their perspectives accurately, and how the final recommendations of the research related to their perspectives. The final way I handled my own subjectivities was to be transparent in the writing up of this research, utilising direct quotes from participants whenever possible to make it clear on what basis the analysis was built.

Another clear example of the costs and benefits that come with being an IO researcher is how it impacts recruitment. Being a member of the LGBTI+ community with strong links to a number of LGBTI+ organisations such as the Equality Network/Scottish Trans and LGBT Youth Scotland obviously makes recruitment easier in some ways, as I did not have to establish new connections from scratch. However, most of my networks are in Scotland, meaning relying too heavily on them could lead to participants in Scotland being overrepresented. The way I attempted to handle this was by contacting organisations across the UK for help in sharing my calls for participants (Appendix 2). This was only mildly successful, in part due to the disruption of the pandemic, meaning that many organisations were overcapacity. I think engaging with organisations sooner in the research process, before I even designed my methodology, to open lines of communication would have been beneficial (3.7).

The biggest benefit that being an IO researcher brought to this research was how it enabled easy communication between me and my participants. This was particularly beneficial for Strand 2, as the focus groups took on a light conversational tone, in which participants seemed comfortable sharing their perspectives surrounding data representation. Conducting the focus groups during the summer of 2020 meant that, although there were some recruitment issues, the participants were excited for the opportunity for discussion with people in their community. I was happy that the focus groups could be such a relaxed space, given the increased isolation some participants may have felt due to the COVID-19 lockdown measures.

This has been a brief reflexive discussion of my positionality as an IO researcher. Here, I recognised the hinderances and benefits of being an "insider" while also using IO framing to draw attention to the power I have as a researcher and the fact that neither being an insider nor an outsider represents being part of a homogeneous group and should not be overstated. This is not the only section of reflexivity within this thesis, as I consider my role as researcher and the impacts of my positionality when I discuss the specific strands of this research.

3.5. Strand 1: Understanding the survey context in the UK

3.5.1. Strand 1 methods

The purpose of Strand 1 was to gain an understanding of the current survey approaches to sex, gender, and sexuality utilised in the UK. The Literature Review delved into this slightly by engaging with current survey design debates (2.4). However, while the Literature Review considered the design and ontological basis of a few questions in depth, Strand 1 systematically analysed how 27 UK surveys represent sex, gender, and sexuality. Having a grasp of current UK survey practices allowed the research to meet two key aims, previously mentioned in Table 1 1. First, it produced an image of current UK survey practices based on the systematic analysis. Second, it identified populations overlooked by said practices by highlighting the restrictive assumptions they were based on. Given that this research aimed to centre the views of overlooked populations, the groups identified in Strand 1 later became the target populations of Strand 2's focus groups. Understanding populations' terms of how they are or are not represented by current survey practices is a useful element of this research which distinguishes it from previous literature surrounding sex, gender, and sexuality survey design.

Strand 1 also tied into my broader aim of being able to provide practical recommendations on how to improve UK survey practices (Table 1, aim 8). The insights into current survey practices produced by Strand 1 highlights the current parameters of UK survey designs and gives something to compare overlooked populations perspectives against. Knowing how things are currently carried out means that the parameters of feasibility surrounding UK population surveys can be considered when producing recommendations. It also enables an identification of useful survey questions already in circulation which could be highlighted in the recommendations. This is beneficial due to questions already in circulation having already been tested with larger populations.

The data set produced for Strand 1 featured 31 variables on the 27 surveys (Appendix 1). The information for the data set was collected via publicly available methodology documentation on the surveys. There are six general survey information variables. These include the survey label in the data set, the geographic locations the survey captures, the latest year of the survey focused on in the data set, and whether it utilised a paper questionnaire, interview questionnaire, or online questionnaire.

The three survey methods' variables were included due to the collection method potentially impacting how participants engage. The variables were based on the primary methods of engagement. There may have been alternative ways to access the survey for people with visual impairments or literacy limitations. Survey accessibility is important: if not given its due regard, it could lead to some of the target population being unable to respond, creating sample bias. However, the question of whether people can even respond to surveys warrants its own research. This research looks specifically at research questions and how they produce data. Given this, I took note of surveys that utilised interview methods due to some of the methodology documents reviewed indicating that sex/gender questions were not always asked directly. A survey was considered to utilise interview methods if, as a primary method of data collection, participants relied on an interviewer to record the answers they provided. This could take place face-to-face or over the telephone or videocall. The distinction between paper and online survey methods was also noted due to the impact that can have on the mandatory nature of questions. In an online survey, participants will be unable to skip questions the survey designer deems mandatory, whereas on a paper survey, this could still be possible.

The other variables in the data set focused on what kinds of information the surveys aimed to represent and the question designs they utilised. The key types of information were sex/gender, gender modality, variations of sex characteristics (VSC), and sexuality. Originally, “sex assigned at birth” and “gender” were going to be addressed separately in this strand, but it quickly became apparent that very few surveys make a distinction between these concepts or specify which they are concerned with. The sex/gender distinction discussed in Chapter 2's engagement with feminist literature did not seem central to the design of these surveys (2.2). For this reason, there are additional variables relating to the sex/gender questions to highlight how these concepts were approached in each survey.

There are five types of variables repeated for each type of information. The first type of variable is a binary variable stating whether the relevant type of information was asked about. The second variable is a categorical variable recording the formats of the questions used for each type of information. Given that different question formats are required to record different types of information, the options for these variables differ depending on the type of information concerned (Table 3).

The question format variables refer to some formats as expansive. This is based upon Broussard, Warner, and Pope's (2018) work in which they refer to gender questions with more than the binary options as expansive (2.4). I use this term for sex/gender questions with more than binary options and sexuality questions that enable participants to indicate an identity outside lesbian, gay, bisexual, or heterosexual.

Since 2001, there has been an expressed user need for clarification on what information the sex questions in the census are asking for (Diversity Solutions, 2008). The census bodies realised that they could not assume everyone interpreted the sex question the same way due to trans participants contacting them to ask what the question concerned (Diversity Solutions, 2008). Given this, one of the key elements I considered in my review was clarity surrounding these questions, which is why the sex/gender question format variable mentions lived and documented sex guidance. Lived sex guidance refers to guidance that recommends that respondents answer based on how they live, so trans men select "male" and trans women select "female". Documented sex guidance recommends that participants answer based on their documentation, meaning only some trans people can respond based on how they live. These types of guidance are expanded upon in Chapter 4's discussion of the guidance debates surrounding the UK censuses (Sex/gender and gender modality in current survey practices).

There are two other binary variables repeated for each type of information: one concerned with age limitations on questions and another on whether they were mandatory or not. A question is considered mandatory if there is no mention of it being skippable in the methodology or questionnaire documents and no “prefer not to say” options. A question is considered age-restricted if it is only to be answered by people of a certain age. The Workplace Employment Relations survey is the only survey reviewed that does not record any information on children. For this reason, all of its questions were considered age-restricted. The final variable repeated for each type of information is the question text variable, in which the direct text from the question according to the methodology or questionnaire documents is recorded.

Table 3: Question format variable options

Type of information	Value	Meaning
Sex/gender	NA	Not relevant due to this information not being asked about.
	1	Documented sex binary question: A binary question that specifically states that responses should be based on gender markers on documentation such as birth certificates.
	2	Binary question with no specific guidance: A binary question which provides no insight into the basis on which participants should provide information. This includes questions with ambiguous guidance.

	3	Lived sex binary question: A binary question that states that responses should be based on how the participant lives their life.
	4	Expansive question: A question with more than just binary male/female or man/woman options.
	5	Expansive question with space to specify: A question with more than just the binary options and a text box in which to write a more specific response.
Gender modality	NA	Not relevant due to this information not being asked about.
	1	Binary question: Usually just with “yes” or “no” options, but could also utilise the labels “transgender” and “cisgender”.
	2	Question with space to specify another option: Questions that include a text box to state a specific gender identity.
Sexuality	NA	Not relevant due to this information not being asked about.
	1	Binary question.
	2	Limited question: Question with “bisexual”, “gay”, “heterosexual/straight” and “lesbian” as the only options.
	3	Expansive question: Question with more than the LGB and

		heterosexual/straight options.
	4	Expansive question with space to specify another option: Question with a text box in which people can specify a specific identify.
Variation of sex characteristics/Differences of sex development/intersex	NA	Not relevant due to this information not being asked about.
	1	Binary question.
	2	Categorical question.
	3	Question with space to specify a specific variation of sex characteristics.

The additional sex/gender question variables focused on how the information was represented and the wording of the questions. The first variable was whether interviewer observations may have been used to answer any sex/gender questions. This was a binary variable between some of the observations being based on interviewer observation or none of them. There is no way of guaranteeing that surveys with interviewer-observed responses rely on this for every observation. The other four additional sex/gender variables related to specific wording use. The first was about whether the terms “sex” or “gender” were mentioned in the questions themselves. This was a categorical question, with the options being “sex”, “gender”, “nothing”, “sex and gender”, or “other”. The “nothing” option was for questions phrased openly, for example, if it asked, “Are you…?” and then provided the sex/gender options. The next variable examined the language used for recording what are sometimes understood as the binary sex/gender options. This variable was primarily concerned with whether the options were “male and female” or “man and woman”. The next categorical variable aimed to record how question options outside the binary were worded. This variable was mostly focused on whether the term “non-binary” or another gender option was used or whether these options were simply labelled “other”, “in another way”, or “something else”.

The final variable was another text variable in which the specific wording of any additional sex/gender question guidance was recorded.

Thus far, I have discussed the approach I took to create a data set on the 27 surveys that make up my understanding of current survey practices. In Chapter 4, I summarise what this data set told me via a range or tables that depict what different topics the surveys asked about and how. The next subsection of this chapter provides more details on the 27 surveys I analysed.

3.5.2. Strand 1 surveys

There were 27 surveys reviewed in total, with 6 of them being the UK censuses from 2011 and 2021/2022 (Appendix 1). The criteria for a survey to be reviewed was for it to have occurred since 2011 and aim to understand the population of either the UK as a whole or specific UK nations. They were primarily identified via a list of UK services from the UK Data Service (2023)[8]. Most of the surveys are general population surveys that put no limitation on who can respond other than geography. However, the Crime Survey for England and Wales (ONS, 2020b), Scottish Crime and Justice Survey (Grant et al., 2019), and Workplace Employment Relation Survey (Wanrooy et al., 2013) did focus on those in the population with specific experiences. However, these surveys were still included due to placing no specific limitations on the demographics of their sample other than age in the case of the workplace survey. Crime, justice, and workplace experience also represent areas of life in which an understanding of the sex, gender, and sexuality demographics could be useful. The reason for focusing on surveys since 2011 is due to this research's focus on current practice. If a survey was conducted prior to 2011, when the most recent census data was collected, it is unlikely that the data it produced is the most up-to-date data available. When a survey was conducted multiple times since 2011, the latest available version of the survey was reviewed, which, other than for the 2021/2022 censuses, meant surveys from 2019/2020.

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[8] The UK Data Service website has been updated since Strand 1 of this research was conducted. I referenced the latest version of the list, which I do not think has changed significantly.

The surveys included in this review are not a comprehensive list of surveys that record information on the UK's population; however, by reviewing them, a snapshot is obtained on how sex, gender, and sexuality are currently represented in large data sets.

3.6. Strand 2: Exploring overlooked populations' perspectives

This strand focused on exploring the perspectives of the four overlooked populations identified in Strand 1. It had three core aims, referred to as the representation, knowledge production, and research compatibility aims (Table 1, aims 3, 4, and 5).

The representation aim was to provide an account of perspectives held by people from overlooked populations on survey representation relating to sex, gender, and sexuality. Meeting this objective could help identify reasons why representation in population surveys matter or why its significance should not be overestimated. Understanding why these groups may want to be represented can also help us identify requirements for survey questions employed to represent them. The goal is not to describe every possible perspective on representing differences of sex, gender, and sexuality in population surveys, but rather to explore some perspectives held by overlooked populations and understand the reasoning behind them.

The knowledge production aim sought to include people from overlooked populations in the production of knowledge about themselves. When working with marginalised groups, adopting an element of co-production helps address power imbalances and inaccurate narratives placed upon them (Willis et al., 2018). Strand 1 developed my grasp of current UK population survey practices and their failings; in Strand 2, I began identifying solutions for these failings. By using questions designed by Strand 2's participants as templates for the rest of the research, I hoped to remove exclusionary narratives from the foundations of the question designs.

The research compatibility objective was about considering how population surveys currently represent differences of sex, gender, and sexuality and thinking of practical ways to improve them. The purpose of this objective was to identify any questions already in use which meet the overlooked populations' standards and to highlight specific areas for change. I previously touched on Baumle's (2018) account of the contrasting perspectives of queer scholars and demographers leading to more reflexive work (3.2). The research compatibility objective hopes to tap into that same potential by trying to identify ways that the current methodological parameters of population surveys can be adapted to represent those who struggle to fit within it. By centring those most overlooked while still maintaining a strong focus on the practical parameters of population surveys, recommendations can be produced for methodologically rigorous survey designs that do not neglect anyone or force them into inaccurate boxes.

The primary method employed by Strand 2 to meet these objectives was online focus groups, carried out over Zoom. Each focus group discussed either the representation of people with VSC, people who do not identify with their sex assigned at birth (trans people), people who are not men or women (non-binary people), and people who have overlooked sexualities (not just LGB or heterosexual). To identify which focus group each potential participant should be assigned to, and to understand their positionality, everyone volunteering to participate was provided with an online questionnaire, which accompanied the research information sheet and consent form. The final element of Strand 2 was employed to manage elements of my positionality and to continually centre overlooked populations. This was achieved using two online feedback sheets: one about the focus group response and one about the final recommendations of the research.

Here, I will provide more detail on the steps taken and methodological considerations in Strand 2, starting with the impact COVID-19 had on this strand and the recruitment process. I begin by discussing the COVID-19 pandemic, due to being in the early design stages of this research when the pandemic broke out and how it had a knock-on impact on all elements of this work.

3.6.1. Impact of COVID-19 on Strand 2

I began this research in September 2019, less than 6 months prior to the UK being put into lockdown to manage the COVID-19 pandemic. This had a range of impacts on my research, particularly during Strand 2.

I had originally designed this strand to feature in-person focus groups across the UK with the possibility of supplementing them with online interviews if I struggled to engage with any of the overlooked populations. In early 2020, due to lockdown restrictions, online methods had to be adopted. Although online methods can feature some drawbacks (Lobe,Morgan and Hoffman, 2020), moving online did have two major benefits for my research. Firstly, it made it easier to engage with participants from across the UK, as participation was no longer limited by who could congregate in one physical location for each focus group. Secondly, not having to travel for the focus groups or book spaces to conduct them meant that my funding could be reallocated directly to the participants to compensate them for their labour. Compensating participants has been identified as particularly important when engaging with marginalised groups such as the trans community (Vincent, 2018, p279). Compensation can enable participation from people without the financial resources to participate for free (Vincent, 2018).

Later in this chapter, I touch on how research fatigue and the strain of the pandemic on the groups I reached out to during the recruitment stages may have negatively impacted the response rate to this research, particularly in Strand 3 (3.7). Given that only 8 of the 24 organisations contacted to share the call for participants for Strand 2 confirmed that they did, the strain of the pandemic may have limited how much these organisations were able to share calls for participants. However, reflecting on how engaged the focus group participants were, I think rather than being fatigued by research at that stage of lockdown, their participation was a rare opportunity to connect with others. Due to the isolation of the pandemic, the focus groups became a space for the participants to engage with unfamiliar people with similar relationships to sex, gender, and/or sexuality as them. This may have contributed to the participants' willingness to participate and the conversational tone that the focus groups took. Of course, this is purely speculation; these participants may have been willing to participate and done so with the same level of enthusiasm regardless of the pandemic. However, I was aware of the scarcity of social interaction and the stresses of life during the pandemic, which made making the focus groups a relaxed space particularly important. In the next subsection, I will discuss this further in relation to how I conducted the focus groups.

In this subsection, the pivot to online forms of data collection was noted as a key way that the COVID-19 pandemic impacted upon this strand. Next, I will provide more details on the methods employed in this strand, including the way that lockdown restrictions factored into my choice not to utilise interviews as a supplementary research method.

3.6.2. Strand 2 recruitment and sample

In Strand 1, four populations were identified as being particularly overlooked by UK population surveys. People in the UK over the age of 16 from these groups made up the target population of Strand 2's qualitative exploration. The purpose of this was to centre the perspectives of overlooked populations in how this research made its investigations and how it produced recommendations on survey representation. This section outlines how participants from these populations were recruited and describes the sample engaged with during Strand 2. This strand aimed to produce an in-depth snapshot of some of the ways that overlooked populations perceived survey research. Given this, a representative sample was not required. The purpose of this subsection is to describe the recruitment process I followed and to contextualise the data produced via Strand 2's focus groups.

The original goal for Strand 2's sample was to recruit four to six people from the identified overlooked populations to participate in a focus group aimed at discussing how people from their population were/were not represented by surveys and how to improve this. This was achieved for all of the focus groups, apart from the one engaging with people with VSC. I was able to recruit participants based in each of the four UK nations, which is important given the differing approaches the UK census bodies took across the UK. Engaging with people across the UK nations allowed for potential differences in perspectives on or experiences of survey representation to be investigated.

When starting this research, I was aware that research on people with marginalised relationships with sex, gender, and sexuality is often dominated by white middle-class people (van Eeden-Moorefield et al., 2018). Here, I will note the ways in which I attempted to minimise these limitations. Although not all of these approaches were successful, the sequential nature of this research meant that they could be learnt from and used to improve the recruitment strategy for Strand 3. The ability for each strand to not only be informed by but improve upon the previous one is a benefit of sequential research designs.

Strand 2 employed a mix of both passive and active recruitment strategies (McInroy, 2016). The recruitment was passive in the sense that no individuals were contacted directly and asked to participate due to the chance of biasing the sample and making participants feel pressured (McInroy, 2016). However, various groups and organisations that engage with LGBTI+ people in the UK were asked to share the call for participants. Appendix 4 lists 24 organisations, groups, and businesses that engage with LGBTI+ people in the UK that I contacted. I took this more active approach for two reasons. Firstly, given that the four overlooked populations likely make up a very small percentage of the general population, there was no guarantee that they would see the call for participants by me sharing it alone. Secondly, due to being based in Scotland and having strong ties to LGBTI+ people here, those that would see the call would likely all be in Scotland. It is for this reason that I decided not to engage with too many Scottish gatekeepers. This proved to be a wise decision, as without direct prompting, at least four major Scottish LGBTI+ Twitter accounts shared my call for participants, including two LGBTI+ bookshops and two major LGBTI+ media organisations. The only two LGBTI+ gatekeepers in Scotland I contacted directly were LGBT Youth Scotland and the Equality Network. Engagement with the Equality Network was particularly important as they directly engage with people with VSC via their VSC and intersex project and, in November 2019, hosted an intersex and VSC gathering (Equality Network, 2019a;Equality Network, 2019b). One of my two participants in the VSC focus group found out about the research via the Equality Network.

There were three core limitations in the recruitment methods utilised for Strand 2. Firstly, people who follow LGBTI+ community groups, organisations, and businesses on social media or via their email newsletters tend to have things in common other than the key elements of sex, gender, and sexuality focused on in Strand 2. For example, LGBTI+ equality organisations tend to be heavily concentrated in urban areas (McGlynn, 2018). This means that although sharing the call for participants via these gatekeepers provides access to LGBTI+ people, it does not provide equal access to all. This is further aggravated by the second limitation of the strand as a whole, which is that it is limited to people who have access to the internet, which will also be impacted by external variables. Of the 24 organisations contacted to share my call for participants, only 8 confirmed that they did (Appendix 2). This may be due to the increased pressures of the COVID-19 pandemic, leading to a lack of capacity to share calls for participants.

Appendix 3 shows the calls for participants shared online along with the text and hashtags that accompanied them. The original call for participants went live on 15th June 2020 (Appendix 3.2). It was hoped that by sharing the call during Pride Month and using related hashtags, a broader range of people would see it. Image descriptions also accompanied the calls for participants, so they were accessible to people who use screen readers. The Pride flag included in the call was an inclusive flag that features a black and brown stripe in an attempt to identify that racism is a persistent issue within the LGBTI+ community (Dhaliwal, 2019).

Introducing this subsection, I highlighted that this strand aimed to engage with people from four overlooked populations from each of the UK nations and from a range of backgrounds. Fifty-two people volunteered to take part in Strand 2. When they volunteered, they were asked to complete an online demographic questionnaire, which was accompanied by a participant information sheet and consent form (Appendix 4). I will provide details on the design of the questionnaire in Section 3.6.

During the recruitment stage of Strand 2, I regularly checked the participant questionnaire responses to determine the make-up of the volunteer sample. It became apparent that people of colour (POC), people with VSC, and people based in Northern Ireland were not present in the volunteer sample. To address these limitations, a second call for participants was created, focusing specifically on people with VSC and using the intersex Pride flag (Appendix 3.3). The general call for participants was also shared again, accompanied with text stating that volunteers who were POC would be prioritised when selecting who would take part in the focus groups. After that, the call for participants was shared again, stating that more volunteer participants from Northern Ireland were also needed. After these calls were shared, there were more volunteer participants from these populations. This suggests that alongside contextualising the focus group data, the participant questionnaire assisted in obtaining a more varied sample by proactively calling for participants from populations from which no one had volunteered. However, there was still only one volunteer who was a person of colour. In Section 3.7.2, I discuss how I learnt from this and tried to engage with more POC in Strand 3.

From the 52 participant volunteers, I aimed to contact between 5 and 8 participants for each of the four overlooked populations to ask whether they were interested in participating in a focus group. The participants contacted were randomly selected from within the relevant overlooked populations they were a part of. I contacted more participants than were required for each focus group in case some could not attend. If fewer than four people stated that they could be involved, I would have randomly sampled from the remaining volunteers to engage with a larger group. Given that research with LGBTI+ people tends to overlook POC, often only sampling white people, if everyone in the random samples had been white, I was going to randomly select from a sample of people of colour. However, there was only one volunteer who was a person of colour, and she was selected as part of the original random sample for the trans focus group but did not respond to the focus group invitation. There were only five volunteer participants who had VSC, all of which were contacted and said they would participate in the focus group; however, on the day, only two attended. In the next subsection, I will discuss the possible ways that I could have engaged with more people with VSC and why, in the end, I opted to progress to the next stage of the research without further data collection due to the richness of the data already produced.

Table 4 outlines most of the data provided, but simplifies the gender and sexuality data in terms of whether participants were part of overlooked populations in relation to those categories. I will discuss the specific gender and sexuality identities of my participants shortly. Due to the entire sample being white and from the UK, race and ethnicity is not represented in Table 4.

Table 4: Demographic information for Strand 2 sample

Variable		VSC	Trans	Non-binary	Overlooked sexualities	Total
Age	16-17	0	1	0	0	1
	18-24	0	2	4	1	7
	25-34	0	1	2	5	8
	35-44	0	2	0	0	2
	45-54	1	0	0	0	1
	55-64	1	0	0	0	1
Country	England	2	3	2	2	9
	Northern Ireland	0	0	2	0	2
	Scotland	0	2	2	3	7
	Wales	0	1	0	1	2
Type of area	Rural	1	0	0	2	3
	Urban	1	6	6	4	17
Identifies with sex assigned at birth?	Yes	1	0	0	3	4
	No	1	6	6	3	16
VSC	Yes	2	0	0	0	2
	No	0	6	6	6	18
Identifies as a man or a woman	Yes	2	3	0	4	9
	No	0	3	6	2	11
Sexuality	Overlooked	1	5	4	6	16
	Represented	1	1	2	0	4

Disabled	Yes	1	3	3	2	9
	No	1	3	3	4	11
Religion or faith	Yes	2	1	2	2	7
	No	0	5	4	4	13
Class	Working class	0	1	2	3	6
	Middle class	1	3	3	3	10
	Unsure or not provided	1	2	1	0	4
Number of participants		2	6	6	6	20

Note: Race/ethnicity is not included due to entire sample being white and from the UK. Participants' sexualities were considered "Represented" if the only terms they used to describe their sexuality were "lesbian", "gay", "bisexual", or "heterosexual/straight". If participants stated that they were one of these identities and another identity, then they were considered "Overlooked".

It was previously mentioned that all participants in this strand of the research were white. This reproduces a flaw within LGBTI+ research broadly (Fish, 2008). It was also the case that the majority of the participants self-identified as middle class (Table 4, Class variable), which is also a common occurrence within LGBTI+ research (van Eeden-Moorefield et al., 2018). These limitations in sample diversity are important to note when understanding the context of the data produced by the focus group participants. If different forms of racialisation impact experiences of or perspectives on data representation, Strand 2 could not investigate that. Recognising this is important so as not to reduce the perspectives and experiences of the LGBTI+ population to those of its more privileged members. I also avoid this by further emphasising the goal of Strand 2, which was to explore some experiences of and perspectives on data representation in depth rather than to produce a broad account of all of them.

The sample was varied in terms of age, faith/religion, and disability and/or long-term health condition. The participants' age backets ranged from 16–17 to 55–64, with most being between the ages of 18 and 44, which is to be expected given that younger people tend to be more likely to indicate an LGBTI+ identity than older people, as indicated by the latest census data itself (ONS, 2023e;ONS, 2023c;NISRA, 2023)[9] and the National LGBT Survey (Government Equalities Office, 2018a). Seven participants stated that they had a religion or faith, with Buddhist, Jewish, and Pagan being listed, while three participants stated that they were agnostic but spiritual in other ways and one indicated they were unsure. Nine participants stated that they had a disability or long-term health condition, and when asked to specify, a range of physical health conditions such as visual impairments and arthritis were shared, alongside mental health conditions and types of neurodivergence.

The geographic spread of the sample is one of its core strengths, with participants from all four UK nations (Table 10, Country variable). This is important to this research, because different parts of the UK have had different approaches to census debates surrounding sex, gender and sexuality. Along with asking about the country in which the participants were located, the questionnaire also asked whether they lived in an urban or rural area. This was asked because there is a tendency to focus on LGBTI+ experiences in urban areas and I wanted to gauge whether this was reproduced in Strand 2's sample (McGlynn, 2018). Table 4 shows that most of the participants were based in urban areas, though not all of them (Table 4, Type of area variable).

The four variables highlighted in grey in Table 10 indicate whether or not the participants were part of one of the overlooked populations identified in Strand 1. Sixteen participants stated that they did not identify with their sex assigned at birth. This included all participants in the trans and non-binary focus groups. Although the representation of people who are not men or women had its own specific focus group, all of the participants of that group could have just as easily been in the trans focus group, and the same is true for half of the participants of the trans focus group who were not men or women. The words the participants used to describe their relationship to gender were queer, trans, transgender, cis, man, woman, femme, FTM (female to male), non-binary, genderqueer, ambivalent, and genderfluid. Some of the cis participants included comments on their expression, stating that they were curious or simply use the

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[9] At the time of writing, no data on gender modality or sexual orientation from the Scottish 2022 census has been shared; thus, only data from censuses from England, Wales, and Northern Ireland is cited.

term “ish” after the word man or woman. Of the nine participants who were exclusively men or women, three were men and six were women. There were no cis men in Strand 2’s sample.

The binary sexuality variable in Table 4 was separated in terms of whether participants were exclusively heterosexual/straight, gay, lesbian, or bisexual. If they used any other terms to describe their sexuality, they were considered overlooked, as some of their sexuality was not fully represented by the majority of the sexuality questions reviewed in Strand 1. Most participants had relationships to sexuality that were overlooked in some capacity. The terms participants used to describe their sexuality were as follows: bisexual, lesbian, dyke, anthrozoosexual, queer, quoiromantic, panromantic, demisexual, asexual, pansexual, demiromantic, grey-asexual. None of Strand 2’s participants specifically identified as heterosexual/straight or gay.

Although there are some weaknesses in Strand 2’s sample, it does meet the requirements of the strand’s explorative nature. It features people from across the UK who are overlooked by current population surveys due to their relationship with sex, gender, or sexuality. In the next subsection, I outline how the sample summarised here was engaged with to produce rich, in-depth data on perspectives on and experiences of survey representation.

3.6.3. Strand 2 methods

This subsection outlines how the participant questionnaire, focus groups, and feedback sheets were utilised to meet the three core objectives of Strand 2. It depicts the reasoning behind the methods I adopted and intricacies of how they were applied. I begin by discussing how focus groups became the primary method for this strand.

In Section 3.3, I explained that I opted for a sequential mixed-methods approach due to the multifaceted nature of survey representation and saw an exploratory approach as beneficial for minimising the chance of reproducing the biases in survey design that this research aimed to address. Exploratory strands require the depth enabled by qualitative methods to uncover potential new avenues of investigation and, in this context, participants’ reasoning behind their perspectives (Creswell and Clark, 2007). When it comes to understanding overlooked populations, perspectives on survey representation and the back and forth enabled by one-to-one interviews and focus groups stood out as the two best options for this strand.

From the beginning, focus groups were envisioned as the primary method of this strand, although interviews were briefly considered as a secondary method. Here, I explain why I opted for focus groups alone as the primary method of qualitative data collection in this research. There are two core reasons for this change in methods: one is a practical consideration, i.e., the shift to online methods due to the COVID-19 pandemic, and the other is a more significant matter tied to the purpose of this strand. From a practical standpoint, when in-person focus groups were thought to be the main method used for this strand, one-to-one interviews had the benefit of being more flexible to the time and geographic constraints of the participants. If a participant could not attend a focus group due to scheduling issues, they could still participate via a one-to-one interview following a similar structure. Time constraints could have still hindered participation when I shifted to online focus groups, but the online format did allow for far more flexibility than in-person meetings would have, given it was not reliant on everyone making it to a physical space and the availability of said space (Howlett, 2022). However, even when I shifted to online methods, I still considered interviews as a backup method in cases where I found it difficult to obtain a large enough group for the focus groups. This could have been utilised in the case of the engagement with people with VSC, but was not, due to the richness of the data provided by the two-participant focus group and my recognition of the broader value of focus groups in the context of this work.

This research has a basis in queer and feminist perspectives. One-to-one interviews that are seen as less likely to bias individual perspectives compared to focus groups are often called upon within feminist research (Wilkinson, 1998). However, in this research, the perspectives of individuals have limited value compared to the perspectives of groups. This research is looking at ways to improve survey representation; this requires questions that are flexible to a range of experiences and perspectives. If I were conducting cognitive testing, such as that carried out by census bodies in the UK, one-to-one interviewing could have been beneficial in identifying how individuals conceptualise their relationships with sex, gender, and sexuality and how that influences the way they answer survey questions. However, this research was more concerned with individuals' identities in the context of the populations they are a part of and how those populations are reflected by surveys. A key output of the focus groups was how, as a group, the participants were able to identify which questions pose issues for representing them and why. This helped the participants to think beyond what a question that fits them would look like and towards what a question that would fit everyone who shares their relationships with sex, gender, and/or sexuality could be. When discussing the preliminary findings from Strand 2, I make note of an example where the group dynamic helped the participants in the trans focus group consider the perspectives of other trans people that were not even held by anyone within the focus group (5.3). Of course, one-to-one interview participants could have been prompted to think of the needs of the wider populations they were a part of, but I thought the group dynamic would be a more organic way to promote this type of consideration. I found this particularly beneficial when asking the participants to work together to produce survey questions as they took the time to make the questions as open and inclusive as they could.

As stated previously, only two of the five participants contacted for the VSC focus group attended. This could have warranted conducting one-to-one interviews to expand on the range of views from people with VSC. However, I was doubtful that I would be able to reach more people with VSC in a short time frame without employing active recruitment measures – by contacting people with VSC I know directly – which could have risked creating unnecessary bias in the sample. The second issue was recognising the benefit of the group dynamic mentioned in the previous paragraphs. I was not sure that data from one-to-one interviews would be easily compared and analysed alongside the data from the focus groups. I felt it risked giving the individuals in the interviews an uneven contribution compared to other participants. Finally, the data from the small VSC focus group was already very rich, sharing similar themes to the other focus groups and speaking to a range of issues that impacted people with VSC specifically. In the conclusion of this thesis, I discuss the types of further research I think could develop from this research (8.2). There, I note that a specific study on the representation of people with VSC is required to develop a more detailed understanding of the specific data representation needs of people with VSC.

Open questions were utilised in the participant questionnaire to help prevent the reproduction of the type of issues this research aims to address. Open questions do not work at a larger scale, so utilising them in the participant questionnaire also posed little risk of influencing their perspectives on the type of large-scale questions they would later be asked to co-produce. The three core questions for identifying which focus group the participants should be allocated to were questions 10–13 (Appendix 4). Via these questions, I was able to identify which of the research volunteers identified with their sex assigned at birth, had genders not (fully) captured by the categories “man” and “woman”, had VSC, or were not bisexual, gay/lesbian or straight. The other questions either helped me understand participants’ backgrounds or provided useful information for working with them. Question 6 provided information on participants’ pronouns, enabling me to refer to them correctly (Appendix 4). Question 16 helped identify any accessibility needs my participants had that could impact their ability to engage with this research. Given the online nature of this research, physical accessibility needs did not have to be considered, but things such as closed captioning could have been implemented if any participants stated that they required them due hearing impairments or issues with auditory processing. The rest of the information provided by the questionnaire will be summarised in the Strand 2 findings chapter. When discussing what individual participants said in the focus groups, I will state their pseudonym, which focus group they were in, the relevant identity labels provided in the questionnaire that led them to being placed in that focus group, and their pronouns.

As stated previously, there are three objectives to Strand 3. Each focus group was built around these objectives. To meet the representation objective, each focus group began with the simple question of:

“Do you think [relevant element of sex, gender, or sexuality] should be represented by surveys?”

From there, the participants were asked to elaborate on why they thought the element of sex, gender, or sexuality being discussed should or should not be represented. The group setting allowed for discussion between participants. The primary reason for selecting focus groups over individual interviews, other than the fact that it allowed me to engage with more people at once, was that I hoped the group setting would produce fewer individualised responses as the participants would consider what requirements are needed to represent people like them rather than just them specifically. In the findings subsection, I will demonstrate that this was effective.

The knowledge production objective was addressed next, as the focus group participants were asked:

"As a group, design a question representing [relevant element of sex, gender, or sexuality] that everyone could answer accurately."

If the focus groups had been conducted in person, I would have provided flipchart paper and pens to help facilitate this discussion. However, given the need for an online format, I chose a free-flowing conversational approach, allowing participants to talk to each other about what they deemed most significant in a good survey question. I would intervene occasionally to confirm what the group wanted the question to look like regarding each specific element of the question design discussion. The feedback sheets included as part of this strand also helped ensure that the questions produced were exactly to the participant's requirements. There were also times when the group discussion would move away from feasible population survey questions. When this occurred, I would let the discussion carry on, taking note of any key reasons why a particular question design was seen as better than another, and then interject with some parameters for the survey question they designed. I will discuss this further in the Strand 2 findings chapter.

The final objective was met by providing participants with example questions selected from the surveys reviewed in Strand 1 (Appendix 5). Each focus group was provided with an example of a commonly used question and a more expansive question. Expansive questions are those which produce more detailed data on sex, gender, or sexuality. The participants were asked to consider the ideal question they had designed and compare it to the questions I showed them. Proceeding in this order was carried out to avoid the questions I was going to show them having an influence on their question designs. Given that people with VSC were not represented in any of the population surveys reviewed in Strand 1, to provide an example of an expansive question, I looked elsewhere to the Equality Network's survey of people with VSC (Appendix 5.1). The trans and non-binary focus groups were both provided with the same example questions. Along with one common and one expansive sex/gender question, they were also provided with a gender modality question. I specifically selected the question that will be used in Scotland's 2022 census to assess the participants' perspectives on the use of the term "trans" within it (Appendix 5.2). The members of the overlooked sexualities focus group were provided the sexual orientation question from the 2021/2022 UK censuses as an example of an expansive question, and the same question without the utilisation of a text box as an example of a commonly used but less expansive question as it creates a generic "other" category, conflating many different identities (Appendix 5.3).

The feedback sheets were used to serve two core purposes (Appendix 6). Firstly, they ensured that I did not overestimate my in-group understanding of my participants and misrepresent them. The first feedback sheet that all participants were provided with featured a summary of the focus group they participated in and the questions designed by their group. Providing participants with the space to comment on these ensured that I would not misrepresent their perspectives or the questions they designed. The second purpose of the feedback sheets was to continually centre the most overlooked populations in this research. The second feedback sheet that the participants were provided with for further engagement allowed them to comment on the research recommendations. Their feedback did not necessarily change the recommendations, but provided feedback on them that was beneficial when discussing them. One of the key outputs of this research was an accessible guide on representing sex, gender, and sexuality using survey questions – if the further engagement participants found the recommendations unclear, then that feedback could be used to improve the survey question guide.

In this research, financial compensation was also used as further incentive to provide feedback after the focus group. All focus group participants were provided with a £15 Love2shop voucher, with the opportunity to receive a further £5 voucher if they completed two feedback questionnaires. The feedback questionnaires took no more than half an hour to complete. Given that the focus groups lasted for 1.5 h at most, all participants were compensated at a rate exceeding the UK living wage (Gov.uk, 2021).

3.6.4. Strand 2 ethics

Ethical approval was obtained from the College of Social Sciences' Ethics Committee. The core ethical considerations for this strand were ensuring that all participants were adequately informed about the nature of the research before providing consent, and the wellbeing and privacy of the participants. The information sheet (at the start of Appendix 4) informed the participants about the purpose of the research, why they have been asked to be involved, what taking part would mean, and how their data would be handled. Based on whether or not the participants wanted to be further involved with this research after the focus groups, they were then provided with an outline of what they would be consenting to if they took part (see questions 3 and 4 in Appendix 4). Consent was given via ticking all of the boxes within that question that indicated not only that they wanted to be involved, but that they fully grasped what their involvement would entail.

The information sheets highlight how participant privacy was ensured during this research and how their data would be used. The only identifiable information provided by participants was their names and email addresses. This information was retained until the completion of the focus groups unless the participant had consented to further engagement with this research. All further engagement participants had their contact details retained until the completion of the research.

The audio recordings of the focus groups were only accessible by me and a University of Glasgow-provided transcriber, via the external organisation Clear Links Support, which was made clear on the participant information sheet. The use of a transcriber was deemed necessary as my dyslexia limits how quickly I can listen to and record information at once. Although the transcriber did speed up this element of the research, at points they mixed up which participants were talking, particularly in the case of trans participants. To correct this, I reviewed the transcript alongside the audio files before deleting them to make sure all of the responses were associated with the correct participants. This problem highlighted the fact that gender assumptions surrounding voices and names can lead to confusion when transcribing focus groups with participants who do not fit these assumptions.

After checking and editing the transcripts where needed, the audio files were deleted to avoid the retention of possible identifiable data. After the transcripts were produced, all participant names were replaced with pseudonyms. To enable withdrawal from the research, all Strand 2 participants were assigned an identification code based on their name and date of birth. The key to the code was kept in an encrypted file on a password-protected University of Glasgow-provided OneDrive account. Any Strand 2 participants who wished to withdraw would have been asked for their name and date of birth and, using the key, their responses could be removed from the research. The identification codes and key will be destroyed after the submission of my doctoral thesis. The information sheet (Appendix 4) states that if participants withdrew after 1st December 2020, they would not be quoted directly, but that their responses could have informed the research as a whole.

Although the topic of population surveys is not particularly distressing, in itself the political context surrounding them or discussing reasons why representation matters could become distressing. To minimise this, all participants were assured that they only had to share what they felt comfortable with. Signposting to the LGBT Switchboard and Samaritans was also included at the end of the participant questionnaire to provide support to anyone who needed it (Appendix 4).

3.6.5. Strand 2 analysis

Thematic analysis was employed to analyse the data gathered by the focus groups and comments made on the first set of feedback sheets. This section will discuss why I opted for a thematic approach and summarise how the analysis was conducted.

Given the influence of Foucault's post-structuralist perspectives on this research, it could be expected that I employed Foucauldian discourse analysis, which examines social action, practices, and primarily language though the lens of power (2.2) (Khan and MacEachen, 2021). Using Browne's (2010) application of Foucault's (1978) concept of biopower to data collection exercises, this research views the entirety of survey representation through the lens of power. However, I opted for a thematic analysis due to this research's focus on survey question design. Although the power at play when population estimates are made is the context of this research, it functions more as a motivational factor for this work rather than the key area I sought to understand. The title of this thesis and my overall research question starts with the words "how should", indicating the intent of this research to move beyond how things are currently done and on to how they should be done. The thematic analysis of Strand 2's data was the most direct way to identify key ways in which the participants thought survey representation should be improved. Although discourse analysis was not employed in this research, I would argue that it could be a fantastic tool for understanding different matters of data representation. For example, if this research sought to understand how power is asserted over populations either in the data collection or dissemination stages of research, a Foucauldian discourse analysis of census body reports or media reactions to census data would be invaluable.

To address the three core objectives of Strand 2, a deductive codebook was employed to organise the data (J. Fereday and E. Muir-Cochrane, 2006). Levels 1 and 2 of Table 5 outline the different levels of depth in the code designed prior to the analysis. Most data was broken down based on whether it related to representation or question design. Relevant comments that fell outwith these topics, such as comments on the nature of sex, gender, and sexuality, were also coded to identify themes. Once the relevant data was filtered into the categories outlined in the level 2 column, it was re-examined and themes identified (J. Fereday and E. Muir-Cochrane, 2006). Although the final element of this analysis could be seen as fairly inductive, given the small size of the sample and the fact that participants who volunteered likely had strong opinions on the matter, it is still primarily deductive in nature.

Table 5: Levels of Strand 2 thematic analysis

Analysis level 1	**Analysis level 2**	**Analysis level 3**
What should/should not be represented	Should be represented	Identify themes
	Should not be represented/ should only be represented in limited circumstances	
Perspectives on the significance of representation or reasons for representation	Benefits of representation	Identify themes
	Risks of representation	
Question design methods	Survey/question format	Identify themes
	Question phrasing	
	Question options	
Perspectives on question design methods	Strengths of question designs	Identify themes
	Weaknesses of question designs	
Other relevant comments	Identify themes	

When identifying themes, I took note of the following key information: who said what, and which focus group they were in; whether their perspective was on a specific type of representation or question design; and how often the theme occurred, and whether it relates to a widely held perspective or something more contentious.

In this subsection, I outlined the approach taken to address the three objectives of Strand 2. The next subsection will outline the preliminary findings of this strand before highlighting how Strand 2 will influence Strand 3.

3.7. Strand 3: Reviewing participant-designed questions and views on survey representation

The purpose of Strand 3 was to determine whether the perspectives of Strand 2’s focus group participants were shared with a larger group of LGBTI+ people. The online survey also provided an opportunity to test the questions designed by the focus group participants. Testing via an online survey was deemed necessary due to the recommendation that this research work with larger samples, which online surveys are more adept at engaging with.

The survey was live from 4th June 2021 to 2nd July 2021. Unlike Strand 2, the survey was conducted after the most recent UK censuses in England, Wales, and Northern Ireland. There were 347 participants in total. All of the most overlooked populations engaged with in Strand 2 were represented, along with lesbian, gay, and bisexual people whose genders were that assumed by their sex assigned at birth. The Strand 3 sample section will discuss the sample in more depth, but key limitations that should be noted are the lack of representation for people from younger (16–17) and older (>55) age groups, people who live in Northern Ireland and Wales, and anyone who does not identify as white. These limitations, along with the exploratory nature of this research, mean that a key contribution of this research will be identifying issues and potential solutions that should be explored further. However, given the sheer size of the surveys, this research, aimed at making recommendations for further question testing, was always going to be required. Strand 3’s adoption of quantitative methods can be seen as the first step in testing the suitability of the questions co-produced by the focus group participants and gaining larger-scale data on LGBTI+ people’s perspectives on survey representation.

The literature engaged with in Section 2.4 of the Literature Review found relatively little engagement with overlooked populations in the design of survey questions, and when they were asked for their perspectives, it was usually in relation to pre-made questions. The sequential nature of this research means that questions designed by and for people overlooked by current survey practices are then reviewed by LGBTI+ people. So, although Strand 3's online survey sample itself is relatively limited as part of the sequential design, it provides a new approach to designing questions to represent sex, gender, and sexuality.

3.7.1. Impact of COVID-19 on Strand 3

Unlike Strand 2, Strand 3 was always intended to be online, meaning that the research design was not impacted by the COVID-19 pandemic. Any impact of the pandemic relating to recruitment or the quality of responses is harder to determine.

Restrictions changed relatively often and to different extents across local authorities in the UK. This makes it difficult to pinpoint the exact impact the pandemic could have had during the month the survey was open. There have been general observations made relating to survey responses. The ONS (2022b) noted that, around the world, the pandemic was linked to a decrease in survey responses. However, this was primarily tied to the move from face-to-face interviews to telephone interviews as a tool for data collection (ONS, 2022b). The reliance on online engagement during the pandemic across many areas of society could reasonably have had both positive and negative impacts on this strand. Being online more may have made participants more likely to see the call for participants. On the other hand, potential participants may have had online fatigue and been less willing to respond to the survey. The LGBTI+ organisations who were contacted to share the survey may have had less capacity to do so due to the strain of the pandemic (Appendix 8). Overall, it is difficult to determine the true extent of any impact the pandemic had on Strand 3.

3.7.2. Strand 3 recruitment and sample

In June 2021, the online survey for Strand 3 went live. It was open for a month and gained 347 participants. This section summarises the recruitment process for the survey and the demographics of the sample it produced (Appendix 11). This provides insight into who Strand 3’s survey engaged with and the context of their responses. The demographic data produced in Strand 3’s online survey can also be used to highlight limitations in how other surveys restrict participants to singular identity categories. This is touched on briefly here, but further elaborated on in Chapter 6 as it is a key finding of this research.

Just as was the case with Strand 2’s sample, the sample discussed here is compared to population estimates and makeup produced by The National LGBT Survey (Government Equalities Office, 2018b) and the Annual Population Survey (ONS, 2022d). Late in the write-up process of this thesis, data from the latest UK censuses was published. I do not compare my samples to that data in this section for three main reasons. First, only the English and Welsh sexual orientation and gender modality census data can currently be disaggregated in terms of other demographic variables, meaning that for participants in Scotland, I could only compare my sample in terms of sexual orientation and gender modality and for those in Northern Ireland, just sexual orientation. Second, my research is more comparable to sample-based surveys rather than censuses that aimed and had the means to attempt to represent the entire population. I utilise this here to emphasise the potential of the census. Finally, there is much to consider about the census data in and of itself, which is better critically engaged with in the Epilogue chapter of this thesis (9). Containing my engagement with census data in the Epilogue also makes clear it was published after the completion of my analysis, so did not directly influence this research.

Strand 2 highlighted just how difficult recruitment can be, particularly given the potential impacts of the COVID-19 pandemic. The online survey had a broader target population and required more responses than the focus groups. Learning from Strand 2, I contacted considerably more organisations to help share the survey link. Whereas for Strand 2, only 24 organisations were contacted, for Strand 3, 101 were, though only 20 were confirmed as sharing, either having responded directly to my call or having visibly shared it via social media. More organisations may have shared it via internal networks, but there was no way for me to know that. Just as I did when listing organisations engaged with to recruit for Strand 2, I noted who the organisations worked with. This helped me identify demographics that could be missing, particularly relating to

POC who were missing from Strand 2. Although Strand 3 did feature responses from some POC, it was still a relatively small amount.

Appendix 11 features a table depicting the demographic makeup of the online survey participants, broken down in terms of whether they were part of the four most overlooked populations or were cis lesbian, gay, or bisexual people. Before diving into the participants' relationships to sex, gender, and sexuality fully, I am going to discuss their other demographic characteristics in more detail. I will reflect on the strengths and weakness of the survey sample and compare it to other research samples of LGBTI+ people.

Most of Strand 3's survey participants were based in England (57%) and Scotland (38%). The vast majority (82%) stated that they lived in urban areas, which is a common feature of LGBTI+ research samples and could be partly caused by sharing the calls for participants via LGBTI+ organisations that have a tendency to be based in urban areas (McGlynn, 2018).

The sample featured a limited range in the ages of the survey participants, with 92% being between the ages of 18 and 44. The National LGBT Survey from 2018 was also dominated by these age groups, though not to the same extent (Government Equalities Office, 2018a). The ONS (2022d) found that people between the ages of 16 and 24 comprised a higher portion of the LGB+ population, with considerably fewer people over the age of 50 identifying as such.

The online survey participants were predominantly white, with 94% identifying as such. The National LGBT Survey also had a large portion of white participants, at 92.4% (Government Equalities Office, 2018a). Just as in the National LGBT Survey, mixed/multiple ethnic (3.2%) groups was the second most common ethnicity option selected, followed by Asian (2.2%) (Government Equalities Office, 2018a). No participants selected the options Black or Arab in Strand 3's online survey. Six participants did not select a specific ethnicity, but did utilise the text box to state that they were:

- Asian/White
- Roma/Gypsy/Traveller

- White Jewish
- White European
- Armenian American
- Ashkenazi

The participants who selected one of the listed ethnicity options were promoted for further information, which I will summarise to give a more detailed depiction of how they identified in terms of ethnicity. Table 6 provides details on the makeup of the White sample within the online survey. Most of the White participants identified as British, English, Scottish, or Northern Irish (78%), with Irish (2.5%) being the second most common ethnicity. Twenty-four participants utilised the text box to state a specific White ethnicity not listed, seven of whom stated that they were European. Three of the four participants who identified with the terms Gypsy, Irish Traveller, Traveller, or Roma were noted in Table 6, with one additional participant using the general text box and not ticking any other specific ethnicity.

Table 6: Specific ethnicities of the 319 White participants of the online survey

Specific White ethnicity options	**Sample size**
Irish	9 (2.5%)
Gypsy, Irish Traveller, Traveller or Roma	3 (0.8%)
Polish	1 (0.2%)
White British, English, Scottish, Northern Irish or Welsh	274 (78%)
Not listed with no text response	8 (2.4%)
European*	7 (2.2%)
Other Slavic, Hungarian, Trans-black, Cornish, Norwegian, Scottish and German, Spanish, Danish, British/New Zealander, British and American (dual), American, Dutch Australian, White European and Anglo-Indian, British and Irish, Ukrainian/Italian and Armenian American*	17 (4.8%) (1 for each)

Note: * denotes that the option was stated using the provided text box.

As stated previously, 3.2% of the participants stated that they had mixed/multiple ethnicities. There was a range of different ethnicities within this sample. Ten utilised the text box to state that they were:

- Burmese, British
- Latin (White-Indigenous-Black)
- Chinese/White
- Black/White
- Latinx, British, Irish
- English and Nigerian parents
- White and Asian (Chinese)
- Black African and White
- White Scottish + South Asian
- Arab, Persian, African, central Asian, and Cypriot

Table 7 provides insight into the specific ethnicities of the seven Asian participants. It shows that four of them were Indian (1.2%), with the other three being Bangladeshi, Pakistani, and Kashmiri, respectively.

Table 7: Specific ethnicities of the 7 Asian participants of the online survey

Specific Asian ethnicity options	Sample size
Bangladeshi	1 (0.2%)
Indian	4 (1.2%)
Pakistani	1 (0.2%)
Kashmiri*	1 (0.2%)

Note: * denotes that the option was stated using the provided text box.

Similar to the National LGBT Survey, this survey was dominated by people without a religion or faith, with 69% selecting that option in the National LGBT Survey and 74% selecting it in Strand 3’s survey (Government Equalities Office, 2018a). Table 8 summarises the faiths and religions of the survey participants. After having no religion or faith, being Christian (11%) was the second most common response to this question, which was also true in the National LGBT Survey (Government Equalities Office, 2018a). This survey deviates from there, with Paganism (3.4%) and Judaism (2.2%) being the next two most common faiths. Two participants utilised the text box to state that they were questioning, one of whom also suggested that this should have been an option in the religion or faith question, like in the gender and sexuality questions.

Table 8: Faith and religions of the 347 online survey participants

Religion or Faith	Sample size
Buddhist	5 (1.5%)
Christians	36 (11%)
Hindu	2 (0.6%)
Jewish	7 (2.2%)
Muslim	2 (0.6%)
No religion or faith	246 (74%)
Unknown	14 (4%)
Pagan*	12 (3.4%)
Agnostic*	5 (1.4%)
Spiritual*	4 (1.2%)
Humanist*	2 (0.6%)
Questioning*	2 (0.6%)
Cross-community Protestant Catholic, Ancient alien theorists, Satanism, God/higher power of my own understanding, Wiccan, Quaker, atheist, I have a faith but it is not defined by a single religion, Buddhist Christian Animist Spiritualist, and Nondenominational Christianity*	10 (1 for each) (2.8%)

Note: * denotes that the option was stated using the provided text box.

There were two questions related to disability and health. One specifically asked whether the participants identified as disabled, which 38% did. This differs from the number of people who had a specific health diagnosis and/or learning difference, which was 73% of the participants. The most common long-term health conditions were mental health issues, with 55.3% of participants selecting that option. This was followed by various types of neurodiversity such as learning differences (20.7%) or social and communication issues (19%). The overall rate of participants who stated that they were disabled was high compared to both the National LGBT Survey (Government Equalities Office, 2018a) and recent estimates of the size of the disabled population across the entire UK (Department of Work and Pensions, 2023). The 2018 National LGBT Survey found that 16.8% of the LGBTI+-specific sample stated that they were disabled, with a greater portion of trans (32.5%) people being disabled than cis (14.1%) people (Government Equalities Office, 2018a). The latest estimates from the 2021/2023 Family Resource Survey indicates that the portion of disabled people in the UK is growing, with 24% now being disabled compared to 19% 10 years prior (Department of Work and Pensions, 2023).

Over 75% of participants had at least an undergraduate degree. In terms of self-identified socioeconomic class, there was a fairly even split between middle- and working-class participants, with 58% indicating they were middle class and 41% working class.

Thus far, I have summarised the demographic makeup of the survey sample outside of the participants' relationships to sex, gender, and sexuality. The purpose of this is to make readers aware of the context in which the insights gained by Strand 3 are based. Due to the survey's small sample size, none of the perspectives shared by its participants can be claimed as being representative of those held by the LGBTI+ population, ages 16 and over, in the UK. Given that this research has highlighted the limitations in the production of LGBTI+ population estimates in the UK, from which representativeness would be established, any claims of such would be of debatable value. Beyond being representative, information on the demographics of the sample can highlight potential biases that may impact the perspectives shared by participants. Throughout this demographic summary, I have compared the portion of different populations to other samples, particularly LGBTI+-specific ones. This was to highlight that some of the skews within the sample, particularly relating to age and ethnicity, are shared by other research as well. This is not to excuse the limitations in this sample, but rather to further emphasise the limitation of

LGBTI+-specific research for depicting the characteristics of the UK's LGBTI+ population. Throughout this research, I have discussed stereotypes and assumptions surrounding differences in sex, gender, and sexuality. Some of these differences may be reinforced in research through the channels in which people engage with LGBTI+-specific research. This means that national censuses' representations of LGBTI+ people have untapped potential to represent more of the population.

As highlighted in Table 9, 292 (84%) of the participants were part of what is conceptualised here as overlooked populations. The other 55 (16%) participants were cis lesbian, gay, or bisexual (LGB) people.

I will now move on to discussions of the survey participants' relationships to sex, gender, and sexuality. However, this will be more thoroughly discussed in Chapter 6, as this data highlights important findings regarding the nature of these concepts and how they should be represented by surveys. As stated previously, the survey was made up of 347 LGBTI+ people aged 16 and over who live in the UK. Based on the Annual Population Survey, the ONS (2022d) estimated that, in 2020, around 3.1% of people aged 16 and over were LGB, with a further 0.7% of the population selecting the "other" option, indicating that they were something other than LGB or heterosexual/straight. The National LGBT Survey was the largest national LGBT survey, with over 108,000 participants from the LGBT community (Government Equalities Office, 2018a).

Table 9: Rate of survey participants from most overlooked populations

Characteristics	**N=371**
Overlooked gender	220 (63%)
Not the gender assumed of sex assigned at birth/trans	145 (42%)
VSC/Intersex/DSD	8 (2.4%)
Overlooked sexuality	269 (78%)
Total in most overlooked populations	292 (84%)

Table 9 shows how many of the online survey participants were part of the four most overlooked populations identified by Strand 1. The 63% of participants with "overlooked genders" were people who did not sit neatly within the categories “man” or “woman”, which included people who selected more than one gender category and those who selected an option other than “man” or “woman”, such as “genderqueer”. Moreover, 42% of participants indicated that their gender differed from that assumed of their sex assigned at birth, often referred to as being trans. Both the overlooked genders and trans samples were considerably larger than the National LGBT Survey sample (Government Equalities Office, 2018a). This could be due to the focus of this work, the age group of the participants, and/or the different gender question designs in the two surveys. In this research, the participants were allowed to select more than one gender category, whereas in the National LGBT Survey, they could only select one, and gender and trans status were asked about at the same time with the options “woman/girl” separate from “transwoman/transgirl” and the same for the categories for men (Government Equalities Office, 2018a). The participants’ perspectives on this type of survey design is touched upon in Chapter 6.

Table 10: Genders of participants overlooked due to their gender modality

Gender	**N=145**
Woman	105 (72%)
Queer	45 (31%)
Man	40 (28%)
Questioning	.
.	11 (8%)
Genderfluid	8 (6%)
Genderqueer	6 (4%)

Note: The queer option was specifically provided in the context of gender. There was also a queer option for the sexuality question. The options listed above were based on tick box responses, of which participants could select multiple.

Table 10 presents the gender options selected by participants whose genders were not that assumed of their sex assigned at birth. They could select more than one option and also had the ability to write in responses, with “agender” and “transmasculine” being two particularly common responses. The text data provided and the rate of participants selecting more than one gender option are discussed further in Chapter 6. There are limitations to the extent that the data produced on Strand 3’s sample’s genders and sexualities can be compared to the National LGBT Survey or the Annual Population Survey given that they only allow participants to select one gender option and one sexual orientation option, thus providing a more restrictive selection of options. I can note, however, that in the trans sample from the National LGBT Survey, non-binary people made up the larger portion at 6.9% of the overall survey sample, while only 3.5% were trans women and 2.9% were trans men (Government Equalities Office, 2018b). It is unclear how Strand 3’s participants would have answered if they were provided with a question where they had to select one. It could be the case that more participants would have selected non-binary if that was the only option denoted; they did not fit within one set category. However, it could also be the case that they just picked between the binary options depending on the circumstances. The insights gained by allowing participants to select more than one gender category is discussed further in Chapter 6.

In terms of participants with VSC, there was only a 0.3% difference in relative sample size between this research and the National LGBT Survey (Government Equalities Office, 2018a). All seven participants who stated that they had VSC used the term “intersex” to describe themselves, along with one participant who did not indicate that they had a VSC.

“Queer” was the most common way that Strand 3’s survey participants described their sexuality, with 56% identifying as such. “Bisexual” was the next most used label at 30%, followed by “gay” (28%) and “lesbian” (26%). In the National LGBT Survey, “gay” or “lesbian” was the most selected option, with 61% identifying as such (Government Equalities Office, 2018b). However, given that the options for gay and lesbian were grouped, a comparison to this research is limited. The proportion of bisexuals is roughly comparable, with around 26% identifying as such in the National LGBT Survey (Government Equalities Office, 2018b).

This section summarised the survey sample, highlighting its strengths and weaknesses. Overall, due to having a relativity small sample made up of mostly white and young people, this survey is not generally representative. However, it can still shine a light on some of the issues LGBTI+ people face when filling in surveys and their perspectives on the solutions proposed by the focus group participants. As stated in this section, the relationships participants had to sex, gender, and sexuality is touched on further in Chapter 7 as it highlights useful information on the nature of these concepts and how they should be represented by surveys.

3.7.3. Strand 3 methods

Using an online survey in research aiming to access survey methods had some benefits and drawbacks. The purpose of Strand 3 was to engage with a larger number of people from the LGBTI+ community as a whole to test the survey questions constructed by the focus group participants and understand the generalisability of their perspectives. Using an online survey meant that I could research LGBTI+ people across the UK in a quick and cost-effective manner. In this subsection, I will outline the different sections of the survey.

The online survey platform Jisc was employed for this research due to its versatility. One particular benefit it had over Google Forms, which was utilised for the Strand 3 questionnaire, was the ability to change the text that accompanies text box options. This was particularly important in this research due to Strand 2's participants' issue with the use of the term "other" in surveys, which was the default text option on Google Forms.

There were four core question sections in the survey (Appendix 7). The first section was labelled "Perspectives on representation" and asked what types of information participants thought was important for population surveys to ask for and how important it was. Then there was the "Where are you comfortable providing this information" section, which recorded where participants would be comfortable answering questions on sex, gender, and sexuality. It was in the third section that the questions designed by the focus group participants were tested; this section was titled "Testing survey questions". The final of the core question sections was the "Participant information section" in which demographic information on the participants was recorded. Along with these four sections, there was also a final open text box question in which participants could leave any comments on the topic. The survey also began with a participant information sheet and consent form and ended with a closing statement, which included numbers for relevant helplines if the participants were in need of support.

An unexpected benefit of the survey was the production of more qualitative data from the final open comment question. Two hundred and thirty-eight participants made use of that question, with many of them writing a few lines or paragraphs of their thoughts on this issue. Given that the subject matter of this research is not as commonly discussed as matters such as hate crimes or trans-related healthcare, it would have been understandable if most participants did not have much to say after the survey. Having this unexpected amount of text data enabled greater comparisons between Strands 2 and 3, which will be further discussed in the Strand 3 analysis subsection (3.7.5).

3.7.4. Strand 3 ethics

The primary ethical considerations for the online survey are associated with informed consent and the storage and handling of the data. This strand did not require the ability to contact participants or any identifiable information, so the survey did not ask for any, which minimised the ethical risks somewhat. Here, I will outline how I ensured informed consent before summarising the handling of the data.

The start of the survey features a participant information sheet and consent form that indicates that if they respond to the survey, they understand the information sheet and consent to the information they provide being used as part of this thesis and other potential publications. Appendix 9 provides the documentation showing the specific wording of the information sheet and consent the participants provided. The information sheet was broken down into different sections explaining the purpose of the research; that any participation was voluntary; why LGBTI+ people were the target population; what will happen with their data and who will have access to it; and contact details for myself, my supervisors, and the College of Social Sciences Ethics Office. The information sheet indicates that not only do they not have to respond to the survey, but all survey questions could be skipped. I designed the survey so that all multiple-choice questions had “prefer not to say” options and all text response questions could be left blank. The reason for this was to avoid forcing participants to answer questions they did not want to. Using “prefer not to say” options as much as possible was beneficial, as it meant that participants had to read and consider the questions rather than just scroll past them. This helped prevent participants from accidentally missing questions while always giving them the opportunity to not disclose.

Given the anonymous nature of the survey and the value that empirical evidence such as this could have for other research, I decided to make it available on the University of Glasgow’s data archive, Enlighten. The participant information sheet made it clear that people other than myself and my supervisors may have access to the data provided after the research is complete. The benefit of this for my participants is it creates new possible ways for their perspectives to have an impact.

This research posed minimal risk of causing distress. The content of the survey was clearly labelled, and the information sheet indicated what it would touch on further, meaning that anyone uncomfortable responding to questions on sex, gender, and sexuality data representation could choose not to take part. Signposting was utilised to help support any participants feeling distressed. The closing statement at the end of the online survey included contact information for the LGBTI+ Helpline Switchboard and the Samaritans mental health support (Appendix 10).

3.7.5. Strand 3 analysis

The statistical programming language R was employed to analyse the quantitative data collected by the online survey. NVivo was used to analyse the longer text responses using the same thematic analysis codes used to analyse Strand 2’s data. The analysis was broken down into three key elements. Firstly, the survey sample and how the participants described relationships to key concepts given the questions provided were assessed. Secondly, questions relating to what data should be collected and when, alongside the importance of different types of information, were analysed. Then, I investigated survey participants' perspectives on the questions designed by the focus group participants.

The first element of the analysis served two key purposes. First, in any research, it is important to understand who provides the data. I produced summary statistics and visualisations to give readers an understanding of who was and was not included in the online survey sample. The second purpose of looking at the demographics of the sample focused on how participants understood and represented their sex, gender, and sexuality. The survey provided participants with an expansive list of gender and sexuality options, of which they could select multiple. Using data from the gender and sexuality variables, I created derived variables that counted how many different identity labels the participants selected. The purpose of this was to determine whether participants would make use of the ability to select more than one label. This was seen as a useful area of investigation due to the focus group participants' calls for more questions that enabled the selection of multiple identity labels. After this, participants' choices of gender modality terms (e.g. cisgender, transgender, and transexual) were compared with whether they stated their sex assigned at birth and gender matched or not. The purpose of this was to investigate whether gender modality labels could be employed in survey questions on relationships between gender and sex assigned at birth. This line of investigation was promoted by inconsistencies in language use found in Strand 1's review of current survey practices and lack of consensus surrounding language use between the focus group participants.

The second two elements of analysis mostly featured descriptive statistics of the responses and comparisons between perspectives on different types of information and different question designs. Alongside this, 11 binomial logistic regressions were run to test for relationships between these variables and demographic factors. To decide which independent variables to include in each model, chi-square tests were conducted to identify potential relationships between variables. Only one of the regressions was significant, which will be further discussed in Chapter 7. This lack of significance was to be expected due to the survey's relatively small sample size. It is for this reason that deceptive statistics and the qualitative analysis of the text responses make up the majority of Strand 3’s analysis.

The responses to the open survey questions were analysed using the same thematic analysis as Strand 2 (Table 5), only using NVivo rather than spreadsheets and by directly comparing the text responses to the focus groups. NVivo was adopted to speed up the analysis process, which was perhaps more time consuming than was needed during Strand 2. After the first two levels of analysis depicted in Table 5 were completed, the text responses were then coded in terms of the key themes identified in Strand 2 to determine whether the themes were shared across the two strands. Alongside this, any additional themes that became apparent were also coded. The findings from this qualitative analysis are discussed alongside the quantitative analysis in Chapter 7.

Despite sample limitations, the online survey data was able to provide insights into how the participants represented their sex, gender, and sexuality using surveys, what information they thought was most relevant, and when they would be happy disclosing it. As stated previously, the adoption of an online survey also provided the opportunity to test the questions co-produced by the focus group participants.

3.8. Integrating data and methodology conclusion

The final findings of this research were based on all three of the strand’s findings combined. The findings of Strands 2 and 3 were combined to form an approach to survey representation based on the perspectives of overlooked populations. This approach was then compared to the current survey practices identified by Strand 1. This section will briefly outline how and why the data was integrated in this way.

Strand 2 provides not only questions co-produced by participants, but also insights into why some information should and should not be represented and why some questions are better than others from the participant’s points of view.

Strand 3 then found whether similar views were shared on a larger scale. Combining these two enabled the creation of flexible recommendations.

After the new practices and reasoning behind them were identified, they were compared to the findings of Strand 1 to see whether any of these practices are already in place and make specific recommendations from there. Promoting question designs already in use or with consideration of current practices is more likely to promote change than suggesting something completely different. Once these recommendations were made, they were shared with the focus group participants who agreed to respond to feedback sheets. The purpose of sharing this was to see how the overlooked populations these recommendations were based on responded to them. Given the fact that this research aimed to centre overlooked populations' perspectives, if the responses to the feedback sheet were all negative, it could indicate that I had misinterpreted my participants. If the responses were positive, it provided further evidence that these recommendations were based on overlooked populations' perspectives and could be useful when trying to represent them.

3.9. Methodology conclusion

This chapter summarised and justified the exploratory, sequential mixed-methods design of this research. It highlighted how the queer feminist foundations of this work produced a critical approach centring on those who surveys fail to represent the most. By starting at the margins, this research challenges restrictive normative assumptions which limit the potential of survey designs. In Section 3.4, I considered the influence that my positionality as an IO researcher has on this work, both in terms of benefits and how to mitigate weaknesses (Rosenberg and Tilley, 2021). Throughout this chapter, I have highlighted some limitations in this design and areas I would approach slightly differently now. However, I also demonstrated the value of utilising a mixed multi-strand approach such as this for investigating the complex issue of survey representation. Across the last four sections of this chapter, I provided justification for each of the individual strands and outlined my approach to them.

As indicated in Section 3.5, Strand 1 aims to provide a contextual understanding of how population surveys in the UK currently represent differences in terms of sex, gender, and sexuality. It also identifies who is overlooked by these approaches. The next chapter outlines the findings of Strand 1, setting my understanding of current practices and who the overlooked populations are.

4. Strand 1: Reviewing current sex, gender, and sexuality survey practices in the UK

4.1. Strand 1 introduction

To develop ways to improve surveys, I first had to become familiar with the question designs already in circulation. This chapter discusses the findings of my review of 27 UK population surveys conducted since 2011. Based on this review, I created a conceptualisation of current survey practices, which allowed me to make explicit the ontological assumptions made by survey designs and identify who they overlook. Knowing who surveys overlook has benefits, as it allows data users to know who is overlooked within samples. This means they either will not make claims about these populations based on limited survey representation or will dedicate resources to produce more inclusive data. However, utilising the sequential nature of this research, this has further benefits, as these overlooked populations became the target populations for Strand 2's qualitative exploration. This distinguishes this research from previous work on survey design which usually starts with a population in mind rather than systematically identifying who is overlooked (Ansara and Hegarty, 2014;Badgett et al., 2014;Broussard,Warner and Pope, 2018;Guyan, 2022a;Harrison,Grant and Herman, 2012).

This chapter is broken down into two main sections. The first section summarises my understanding of current survey practices based on my review and considers the assumptions they make. A key finding of this review is the lack of clarity surrounding conceptualisations of sex and gender in current survey designs. Given this, this chapter engages with debates over the sex question guidance for the latest censuses. This debate is a key example of how ontological divides manifest in survey design. Through this chapter and the Analysis chapter I try and progress these debates to recognise that, despite the controversy, guidance is an inadequate solution to the issue of questions lacking clarity.

The second section of this chapter states how Strand 1 influences the rest of this research project. Overall, Strand 1's review found that current UK surveys feature ambiguity surrounding the terms sex and gender; no representation of people with VSC, little attempt to produce gender modality data and a tendency to box people into a limited selection of sexuality categories.

4.2. Conceptualisation of current practices and identifying overlooked groups

Strand 1's findings are discussed in relation to two key questions: how the surveys reviewed represented sex, gender, and sexuality, and what populations (if any) they overlooked. The discussions of sex/gender and sexuality survey representation are broken down into two subsections.[10] However, first, I highlight what the surveys represented overall and the lack of representation of people with VSC.

Table 11: What information is asked for in the 27 surveys

Question topic	Number of surveys that asked
Sex/Gender	27
Sexuality	15
Gender Modality	4

Table 11 summarises the data on what types of information the 27 surveys asked about. It shows that that all 27 surveys featured questions on sex/gender, 15 on sexuality, and 4 on gender modality. There were no specific questions on people with VSC. The only time VSC came up was in the Crime Survey for

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[10] Remember that questions on sex and or gender are referred to here as sex/gender questions due to lack of clarity surrounding what they are aiming to produce data on – see Section 1.4.2, which explains how and why I employ this language.

England and Wales; when providing guidance on how to answer its sex/gender question, it stated that:

> “If you’re not sure how to answer, for example you are intersex, you could use the sex registered on your official documents, such as passport or driving license, or whichever answer you prefer” (ONS, 2019a p272).

This guidance is poor for several reasons. First, as a tool for data users, it provides no insight into how participants answered the question, as it leaves the interpretation of the question up to them. Second, it does not identify that the sex/gender markers on passports and driving licenses can differ (Guyan, 2020). Third, it directs this guidance at people with VSC, many of whom will be cisgender and identify as male or female, meaning they have little issue with answering this question (Spurgas, 2009). However, discussions surrounding the census have shown that questions utilising the term “sex” without guidance on what that means may be unclear to trans people (NRS, 2018). This likely reflects the conflation of intersex people and trans people, particularly non-binary ones, discussed in the literature review (2.2 and 2.4).

The literature review noted that both the ONS (2020c) and NRS (2018) mentioned people with VSC in their census design documents (2.4). However, this was often in relation to introducing a third option in the sex question, which, as will be discussed in the next subsection, lacked clarity on what it aimed to produce data on. Given this, a third option in the sex question risks creating the same conflation of people with VSC and non-binary people as the Australian census’s “non-binary sex” option (Knott, 2022) (2.4). Overall, the review highlights that people with VSC are completely overlooked in current design practices, and if they are considered in the design process, it is usually in a way that conflates them with non-binary people. The next subsection considers how sex/gender and gender modality are represented by current UK survey practices.

4.2.1. Sex/gender and gender modality in current survey practices

Here, I highlight how sex/gender and gender modality were represented in the 27 UK surveys reviewed. Highlighting the assumptions made by these questions is a key purpose of this chapter. However, as will be shown, there is a considerable amount of ambiguity around what sex/gender questions are trying to produce data on. Given this, I utilise this subsection to engage with debates over the sex question guidance in the latest UK censuses. The guidance aimed to provide clarity, but the debates surrounding it highlight key ontological divides with considerable ramifications.

Table 12: Wording of the 27 sex/gender questions

Sex/Gender question wording	Number of sex/gender questions that use this wording
Sex	20
Gender	4
Neither	3

Table 12 indicates that the sex/gender questions predominantly featured the term “sex” rather than “gender” in the question wording. Although it is often argued that “male” and “female” are terms associated with sex, and “man” and “woman” with gender (Westbrook and Saperstein, 2015), of the four gender questions, only the Scottish Household Survey question featured the terms “man” and “woman”, providing the options “Man/Boy” , “Women/Girl”, or “in another way” for participants to select (Ipsos MORI, 2019). Table 12 indicates that three surveys did not use sex or gender wording. They instead simply asked “Are you…?” or “Are you male or female?”; all three of these questions had binary male/female options.[11]

In the Methodology chapter, I explained that guidance for binary questions and expansive options were two key elements my review of sex/gender questions considered (3.5). Table 13 presents the sex/gender question formats employed in the 27 surveys reviewed. It shows that 23 questions were binary and 4 expansive. All of the expansive question designs, which allowed participants to select something other than male/female or

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[11] The 2015 Welsh Health Survey (NatCen, 2015) and 2020 Time Use Survey (Centre for Time Use Research, 2020) asked “Are you…?” and then provided the options “male” and “female”, while the 2011 Workplace Employment Relations Survey (Wanrooy et al., 2013) asked “Are you male or female?” and then provided the options.

man/woman, used the language of gender. The third options in these questions were mostly generic “other”, “in another way”, or “something else” categories. Two of the expansive questions featured text boxes meaning that anyone outside the binary could specify a specific gender.[12] One of these surveys, the 2020 Northern Ireland Life and Times Survey (Ipsos MORI, 2020), featured five options. Alongside an “Other (please write in)” text box option and the usual binary categories, participants could indicate whether they were “Male to female transgender” or “ Female to male transgender” (Ipsos MORI, 2020). This question, therefore, asks about gender and gender modality in one. Later in this thesis, I will touch on potential issues with this style of question design due to the way it separates trans men and women from cis men and women (5–7).

Of the binary questions, 15 did not provide any guidance clarifying what the sex question intended to produce data on (Table 13). Four surveys featured lived sex guidance, with three being the 2011 UK censuses and the fourth being the 2022 Scottish census. For these four censuses, trans men were recommended to select male and trans women female. Documented sex guidance, on the other hand, recommends that participants answer based on their documentation; the specific wording of this guidance will be discussed shortly. Two of the surveys with documented sex guidance were the 2021 censuses for Northern Ireland and England and Wales and another was the Crime Survey for England and Wales mentioned previously. The final survey categorised as having documented sex guidance could arguably be categorised as having no guidance at all due to the lack of clarity of the guidance provided. The 2019/2020 Continuous Household (NISRA, 2019) survey stated that:

> “By sex we are referring to their current sex. There is a question in the individual schedule regarding gender identity” (NISRA, 2019, p4).

It is not clear what “current sex” is. The word “current” infers something that may have changed, suggesting that it accounts for people who have transitioned. However, it also distinguishes itself from gender identity, suggesting that the sex question may not be intended to obtain data on how

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[12] The surveys with text boxes accompanying their sex/gender questions were The Scottish Household Survey (Ipsos MORI, 2019) and the 2020 Northern Ireland Life and Times Survey (Ipsos MORI, 2020).

trans people live. It was on this basis that this question was categorised as featuring documented sex guidance.

Table 13: Question design and guidance for the 27 sex/gender questions

Sex/Gender question design and guidance	**Number of sex/gender questions that use this design and guidance**
Binary with no guidance	15
Binary with lived sex guidance	4
Binary with documented sex guidance	4*
Expansive	2
Expansive with a text box	2

I will now highlight the context in which lived and documented sex question guidance developed and the debates over them. Here, I argue that lived sex guidance is preferable to documented sex guidance, though it is not an adequate solution to the issue of ambiguous sex question designs. As stated previously, the confusion surrounding the sex question became apparent to census bodies in 2001, in response to which they provide informal lived sex guidance for anyone who contacted them asking on what basis to respond to the sex question (Diversity Solutions, 2008) (4.2.1). This guidance was formalised in 2011, with written lived sex guidance featuring on the census bodies' help pages for the three censuses. The 2022 Scottish census continued this approach, while the other two UK censuses adopted documented sex guidance. When the 2021 censuses first went live, the guidance stated that:

> "If you are considering how to answer, use the sex recorded on one of your legal documents such as a birth certificate, Gender Recognition Certificate, or passport" (ONS, 2021a).

On the 9th March 2021, before the official census day (31st March) but after participants were able to access and respond to the census, the guidance was changed (Topping, 2021). This was after Fair Play for Women had received permission to pursue a judicial review on the ONS guidance (Topping, 2021). The guidance from the 9th March removed the words "such as" and "passport", meaning that if it was followed, only trans people with Gender Recognition Certificates (GRCs) could respond to the census based on how they live.

Fair Play for Women pursued similar legal action against NRS over the Scottish census's sex/gender question guidance. NRS did not change the guidance, so a judicial review was carried out. On the 17th February 2022, the Court of Session (2022) deliberated that lived sex guidance was lawful. These legal cases indicate a wider relevance of census definitions, which I will touch on after outlining a debate over the value of different types of sex question guidance. I will do this by engaging with the debate among Sullivan (2020a; 2020b), Hines (2020a), and Fugard (2020), which featured in the *International Journal of Social Research Methodology*.

Sullivan (2020a) presents lived sex guidance as an unprecedented conflation of sex (assigned at birth) and gender within the context of UK censuses. She argues that sex (assigned at birth) is a "powerful predictor of almost every dimension of social life" (Sullivan, 2020a, p519). She understands that lived sex guidance was used for the 2011 census, but argues that the impact of such guidance would be far greater now due to the online first nature of the 2021/2022 censuses (Sullivan, 2020a). In *Sex and the Census,* Sullivan (2020a) sets out three ways to address this, the third of which I will focus on. The first solution presented by Sullivan (2020a) was to remove guidance from the sex question in the census. This would ignore an expressed need from participants who do not understand what information is being asked for. The second solution she presented was to include guidance that states everyone must respond according to their sex assigned at birth, regardless of what their documentation says or how they live their life (Sullivan, 2020a). This solution faces issues in terms of legality.

Given the mandatory nature of the census and the fact that the sex question cannot be skipped on the online forms, sex assigned at birth guidance could conflict with the Gender Recognition Act (GRA) (2004). Under the GRA (2004), people with GRCs have greater privacy protections in place. Data can be collected on their sex assigned at birth or gender modality, but only if it is collected with their consent and/or is anonymised (Gender Recognition Act, 2004). The mandatory nature of the census and the fact all census data is made identifiable after 100 years means that a sex assigned at birth question could be in conflict with the privacy of people with GRCs (The Census Act, 1920).

The final solution presented by Sullivan (2020a) is the pro-documented sex guidance stance. Sullivan (2020a) argues that everyone should answer the sex question in terms of what is on their birth certificate. This would advise cis people and trans people with GRCs to respond based on how they live.

Both Hines (2020a) and Fugard (2020) contested this stance with pro lived sex guidance perspectives. However, they address this matter in very different ways, with Hines (2020a) focusing on contextualising the debate and Fugard (2020) primarily considering the impact of trans inclusion in data.

Sullivan argued that the census is being influenced by “postmodern fallacies about sex” (Sullivan, 2020a, p520). The fallacies presented by Sullivan are any notion that humans’ relationship to sex assigned at birth and gender identity is more complex than people born with penises are men and people born with vaginas are women. Hines (2020a) suggests that, rather than being postmodernist, the ideas Sullivan is actually arguing against are more closely linked to post-structuralist and feminist accounts of sex and gender. Hines draws particular attention to the material feminist perspectives of Delphy (1984), which emphasise the interconnected nature of sex assigned at birth and gender. This counteracts Sullivan’s (2020a) claim that sex (assigned at birth) and “subjective” gender are two completely separate entities that have only recently been talked about interchangeably due to political shifts.

Hines (2020a) then ties Sullivan’s (2020a) use of the term “postmodernist” to right wing claims of “political correctness”, which are employed in an attempt to discredit opposing perspectives without fully engaging with them (Hines, 2020, p.535). Sullivan’s response to this was that she uses the label “postmodern” as a:

> “polite shorthand for pseudo-intellectual mumbo-jumbo and anti-scientific values. I have no interest in the delineation of the various strands of thought within this worldview.” (Sullivan, 2020b, p540)

Despite arguing that Hines is being dismissive in stating that she is coming to this debate in bad faith, the above quote indicates Sullivan’s lack of willingness to engage with the terminology she herself uses.

The crux of the engagement between Hines (2020a) and Sullivan (2020a, 2020b) centres on whether Sullivan's stance is positive for trans people or not. I want to draw attention to this as it highlights something crucial about the nature of visibility in data. It indicates that not all calls for visibility and representation are made with the best interest of the group in question in mind. I wish to indicate how Sullivan's (2020a) support for the gender modality questions does not represent support for the trans community; if anything, it indicates how data can be used both for and against a group's prosperity. Discussing the gender modality questions, Sullivan states that:

> "Due to its scale, the census potentially provides a unique opportunity to provide accurate data on the diverse group described under the 'trans umbrella', as well as the opportunity to give a baseline to track change over time" (Sullivan, 2020a, p518).

When providing examples of the value of data on gender modality, Sullivan shows that her support for trans representation in data is not given with the wellbeing of trans people in mind. Sullivan (2020a) cites Littman's (2018) methodologically flawed work on "rapid-onset gender dysphoria" (ROGD) when discussing the value of longitudinal gender modality data (Restar, 2020). Ashley (2020) notes that despite facing corrections contrary to the fact shortly after publication, leading to an apology to the trans community from the publication (Herber, 2019), Littman's (2018) work has been heavily cited as evidence that some young people are rapidly coming out as trans due to exposure to trans people. It has been used to undermine access to healthcare for trans young people and narratives associated with conversion therapy, which is considered a form of torture (OHCHR, 2020;Ashley, 2020). The research pathologises trans people, presenting being trans as a contagious disease and neglecting the voices of the young people who the study concerned (Restar, 2020). Restar noted considerable issues with Littman's sampling technique, as their:

> "recruitment relied heavily on three particular Web sites known to be frequented by parents specifically voicing out and promoting the concept of "ROGD." Thus, these are not just "worried parents," but rather a sample of predominantly White mothers who have strong oppositional beliefs about their children's trans identification and who harbor suspicions about their children having "ROGD." Furthermore, this non-heterogenous sample of parental-participants already have "buy-in" about the concept of "ROGD" by frequenting three distinct Web sites known for

> telling parents not to believe their child is transgender.” (Restar, 2020 p63)

Using biased and pathologising research as a reason to represent trans people suggests that the representation is not with the intent of meeting trans people’s needs, but rather to inform attempts to undermine trans rights. This is an example of how representation in data does not inherently further the wellbeing of marginalised groups. Just as the famous, often misrepresented, claim that 10% of people are gay was used to campaign both for and against gay liberation in America, demographics on the trans population can be used for and against trans rights (Drucker, 2010).

Fugard’s (2020) response to Sullivan (2020a) first addresses the changeability of census question schedules over time and argues that the subjectivity of a variable does not make it any less worth recording data on. In her response, Sullivan (2020b) argues that the comparison between changes to the number of ethnicity categories and how sex is represented in the census is a poor one because:

> “racial categories are socially constructed in the profound sense that we are all in fact mixed race. As I write during the Covid-19 pandemic, the higher mortality rate among males starkly illustrates that we need data on sex now just as much as we did in 1801.” (Sullivan, 2020b p539)

This account wrongfully assumes that sex and gender are not socially constructed. It also appears to undermine the material significance of socially constructed factors. For example, Black African males in England and Wales were found to have the highest COVID-19 mortality rates (ONS, 2020d).

An issue with Sullivan’s (2020a) account that Fugard (2020) illustrates but does not address directly is the lack of consistency surrounding whether she problematises or disregards small populations. When discussing the population who would use lived sex guidance, she states that:

> “we currently have no reliable data on the size of the trans population either in the population as a whole or within sub-groups, and crucially, it is impossible to predict how this may change over time.” (Sullivan, 2020a p518)

It is true that we do not know how many trans people there are in the UK. However, the census is repeated every 10 years and always subject to change, so the fact that the size of the trans population may or may not change over time does not create an issue for the current census. Using gender pay gap data as an example, Fugard (2020) tries to predict the impact that people providing “false” responses to the sex question would have on our understanding of gender inequality. Sullivan (2020a) understands false responses in this context as anyone who would respond not according to their sex assigned at birth. Fugard (2020) states that at least 1 in 10 of the women sampled would have had to provide “false” data for there to be a 1.7-fold drop in percentage points and suggests that even that is a radically high estimate. This would also be assuming that trans women do not experience pay inequalities compared to men, which may not be the case (Schilt and Wiswall, 2008). Regardless, even if Fugard’s (2020) estimates of a minimal impact were accurate at the time they were writing, they could not know for sure. However, rather than seeing the uncertainty surrounding the scale of the trans population as a reason for documented sex guidance, like Sullivan (2020a), this is why we should try and represent them accurately and clearly in the census. I will now illustrate a core issue with documented sex guidance and why it does not achieve its goal of making trans people visible in data.

The first issue is that if the guidance is to be utilised by data users to clarify on what basis participants answer the sex question, it seems unlikely to do that. When researching how to utilise sex question guidance, ScotCen (2019) found that among trans participants, to whom the guidance is aimed, only 25% of participants even read, never mind followed, the guidance. This suggests that, as a tool for promoting measurement validity, guidance may have little value. When Strand 1 was conducted, the data utilised in the Epilogue of this thesis was not available, but this shows that many participants did not follow the documented sex guidance in the 2021 English and Welsh Census (ONS, 2023b) (9).

Table 14 indicates how, if the guidance is followed exactly, different groups should respond to the sex question. This depicts the central issue with documented sex guidance: even if people did follow it, which appears to be unlikely, it would count comparable trans people differently. Having a GRC enables trans people to change their birth certificates and provides greater privacy protections surrounding information about their sex assigned at birth and gender modality. Possession of a GRC, however, does not translate to differences in terms of identity, presentation, or types of social or medical transition undergone compared to trans people without GRCs. Separating otherwise comparable trans people due to the possession of a GRC appears to have little benefit, particularly since the censuses cannot lawfully identify who does or does not have a GRC.[13] Utilising the perspectives shared in this research, I highlight alternative to guidance-based solutions to the issue of question ambiguity.

Table 14: Responses if all participants followed guidance

Participants	**Lived sex guidance**	**Documented sex guidance**
Cis man	Male	Male
Cis woman	Female	Female
Trans man with GRC	Male	Male
Trans man without GRC	Male	Female
Trans woman with GRC	Female	Female
Trans woman without GRC	Female	Male
Non-binary person	Male or Female	Male or Female but determined by their documentation

Note: The lighter grey is used to highlight the representation of trans men and the darker grey is used to highlight the representation of trans women.

Source: Loosely based on table on used by NRS (2019) on page 30 of the Sex Question Recommendation Report.

Before discussing how sex/gender distinctions have manifested outside sex question guidance debates, I touch on how the use of terminology such as “legal sex” and the legal cases over census guidance highlight the wider ramifications of the ontological definitions in surveys.

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[13] Disclosing someone has a GRC without their consent is a criminal offence which can lead to the discloser being fined. Due to the census being mandatory and all census data being identifiable after 100 years, the census can lawfully ask people whether they have a GRC.

The ramifications of “legal sex” discussions can be seen in the work of the Sex and Gender in Data Working Group. On 20th June 2019, the Scottish Government announced the formation of the working group which would consider:

> “what guidance should be offered to public bodies on the collection, disaggregation and use of data on sex and gender, including what forms of data collection and disaggregation are most appropriate in different circumstances.” (Scottish Government, 2019)

This led to the production of guidance for public bodies producing sex/gender data (Halliday, 2021). Although this type of administrative data collection is not the focus of this work, the SGDWG was heavily influenced by Scotland’s approach to the 2022 census. I touch on it here because it shows how survey design influences other areas of data production and it highlights key points about the conceptualisation of “legal sex”. Due to the SGDWG’s recommendations, future iterations of the Scottish Household Survey (Ipsos MORI, 2019) – identified in Strand 1’s review as one of only two surveys with an expansive sex/gender question that includes a text box – will adopt the same approach as the 2022 Scottish census. This means that all participants will be forced into binary boxes where previously there was a non-binary-inclusive gender question.

The SGDWG guidance primarily recommends the approach that the 2022 Scottish census took towards sex/gender and gender modality data collection. However, it also stated that:

> “there may be a small number of circumstances when collecting data on self-defined sex only could contribute to the failure of a public body to comply with the PSED” (Halliday, 2021 p11).

The PSED is the Public Sector Equality Duty, which requires public bodies to publish reports on progress they have made relating to equality outcomes. The first issue surrounding the concept of legal sex is if it exists in UK law and, if so, under what circumstances must it be recorded.

The PSED is based on the protected characteristics set out in the Equality Act (2010). At no point in the Equality Act (2010) is the term “legal sex” used. The guidance stated that:

> “in UK law sex is understood as binary and a person’s legal sex is determined by what is recorded on a person’s birth certificate. A trans person can change their legal sex by obtaining a GRC and a trans person who does not obtain a GRC retains the (legal) sex recorded on their birth certificate for legal purposes.” (Halliday, 2021 p7)

This claim is based on a statement from the Equality and Human Rights Commission (EHRC, (2018), which said that:

> “a trans person is protected from sex discrimination on the basis of their legal sex. This means that a trans woman who does not hold a GRC and is therefore legally male would be treated as male for the purposes of the sex discrimination provisions, and a trans woman with a GRC would be treated as female. The sex discrimination exceptions in the Equality Act therefore apply differently to a trans person with a GRC or without a GRC.” (EHRC, 2018)

The weight of this statement is questionable given that the Equality Act (2010) not only does not use the term “legal sex”, but also at no point defines the term “sex”. Collier and Cowan (2021) emphasise that the notion of legal sex is contested in law with there being no set definition of sex or gender in either the Equality Act (2010) or GRA (2004). The contested nature of legal sex is why I refer to it as documented sex. I also do this so as not to attribute greater importance to documented sex or sex assigned at birth, which can be seen as a tool to undermine trans rights. Collier and Cowan (2021) describe this push and misinformation surrounding documented sex as:

> “concept capture that attempt[s] to embed a regressive binary and biological understanding of sex in an array of legal and administrative categories” (Collier and Cowan, 2021, p.748).

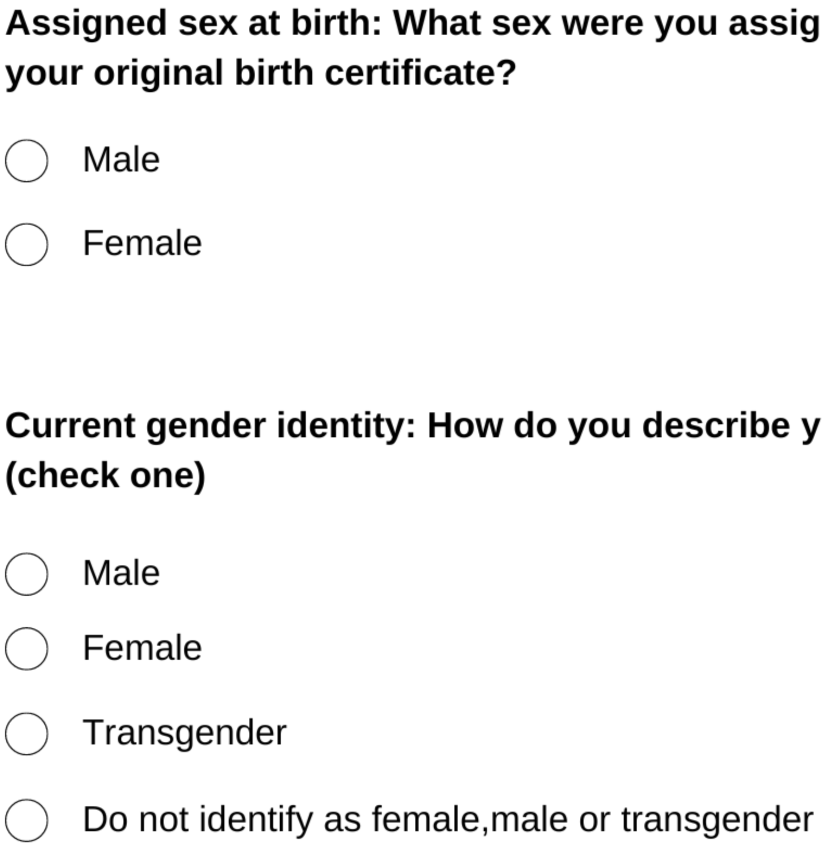
They situate the legal cases over the censuses as part of a wider anti-trans strategy to define sex in terms of a binary assigned at birth or “biological sex” (Collier and Cowan, 2021). Implementing this type of restrictive essentialist conceptualisation to law was presented as potentially harmful not only to trans people, but anyone who does not fit within these biological essentialist conceptualities of sex and wishes to exercise autonomy over their own body (Collier and Cowan, 2021). Collier and Cowan (2021) believed that:

> “the creation of such a legal and practical infrastructure through concept capture is deeply short-sighted as a self-described feminist project – it enables many of the problematic exclusionary characteristics of carceral, white feminism including the formation of alliances between feminists

> and far right organisations, white supremacists, evangelical and anti-abortionist groups, amongst others” (Collier and Cowan, 2021 p763).

What they highlighted was that rigged definitions of sex/gender in legislation, particularly those based in biological essentialism, at the very least fail to recognise the diversity of ways in which people experience and express gender today, and at worst could actively be used to police the bodies of anyone not meeting oppressive body norms.

The debate over sex question guidance is only one of the ways that sex/gender ontological debates manifest in survey design. One of the most explicit applications of the sex/gender distinction in survey design is the development of two-step question sets. Two-step sex/gender questions are those that separate the concepts of sex and gender into two different questions. The Transgender Health Advocacy Coalition (Singer,Cochran and Adamec, 1997) has been attributed with creating this question format in 1997 (Badgett et al., 2014). There is no single universally used design of this question format, but Figure 7 provides one example from the GenIUSS project. There are a number of issues with this question set, many of which will be touched on via participant perspectives later in this research (see Chapters 5–7). For now, it is key to note that including the option “Transgender” in a gender survey question may simply reduce a large variety of people with different genders to one group (Ho and Mussap, 2019). Writing on ways to address cisgenderism in psychology, Ansara and Hegarty (2014) emphasised that trans people will usually also identify with a gender category such as “man” or “woman”. I will now consider the similarities and differences between the approach taken by the UK censuses and these two-step question designs.



Assigned sex at birth: What sex were you assigned at birth, on your original birth certificate?

○ Male

○ Female

Current gender identity: How do you describe yourself? (check one)

○ Male

○ Female

○ Transgender

○ Do not identify as female,male or transgender

Figure 7: GenIUSS two-step question design (Badgett et al., 2014)

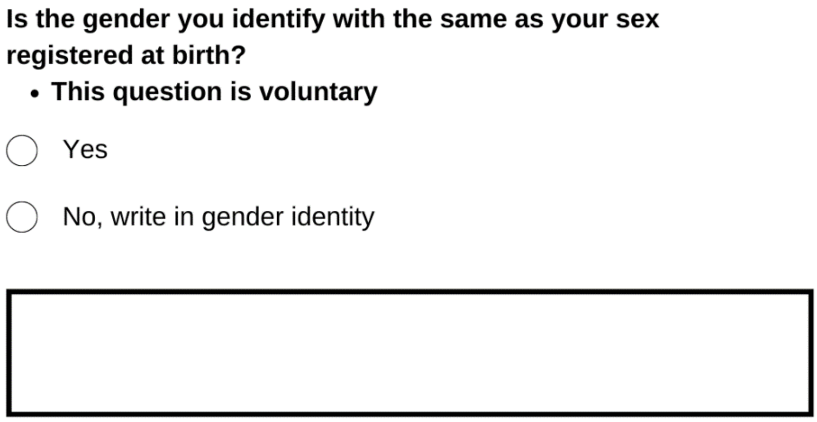
Alongside the rather ambiguous sex questions discussed previously, the censuses in England, Wales, and Scotland included questions on gender modality. The Northern Ireland Statistics and Research Agency (NISRA, (2021b p2) stated that, from their public consultation in 2015/2016 on census topics, there was limited user need for a gender identity question. There are two issues with this. First, describing the gender modality questions featured in the other two UK censuses as gender identity questions is misleading. Second, and more importantly in terms of research design methodology, NISRA (2015; 2016) did not directly ask consultation participants about gender identity questions. The participants were asked their specific perspectives on sexual orientation and other question topics, but not gender identity. Despite contradictory information in other reports, NISRA stated that:

> “Gender identity was suggested as an additional topic for inclusion. It is accepted that there is a user need for [gender identity] information, in order to inform policy development and enable organisations to meet and monitor their statutory obligations stemming from Section 75 of the Northern Ireland Act 1998 and other relevant legislation.” (NISRA, 2016 p17)

This means that even when not asked directly about gender identity, some consultation participants thought it was important enough to bring up. The Research on Measuring Gender Identity report (NISRA, (2021b) listed a number of reasons why asking about gender identity is difficult, all of which could have applied to other demographic questions in some capacity, but were not. They also made an interesting comment relating to how the different gender modality questions in the censuses have been portrayed, noting that:

> “there are plans for gender identity questions in the 2021 Census in England & Wales and a question on transgender status history in the 2022 Census in Scotland- the three Great Britain based censuses have therefore adopted different question forms and approaches to measuring gender identity/ transgender status.” (NISRA, 2021b p4)

Based on this, it would be fair to assume that the 2021 English and Welsh censuses ask for different information to the 2022 Scottish census. However, Figures 8 and 9 indicate that is not exactly the case. Yes, both questions feature different language, with NRS specifically using the term “trans”, whereas the ONS opted for a more descriptive approach. However, as made clear by the definition featured in NRS’s question design (Figure 9), the questions are concerned with the same thing: whether someone’s gender is or is not that assumed of their sex assigned at birth. In this sense, I would argue that the focus of these questions is not gender identity, but rather gender modality. Yes, both questions feature text boxes for gender identity data, but it is only for those who indicate that their gender differs from that assumed of their sex assigned at birth.



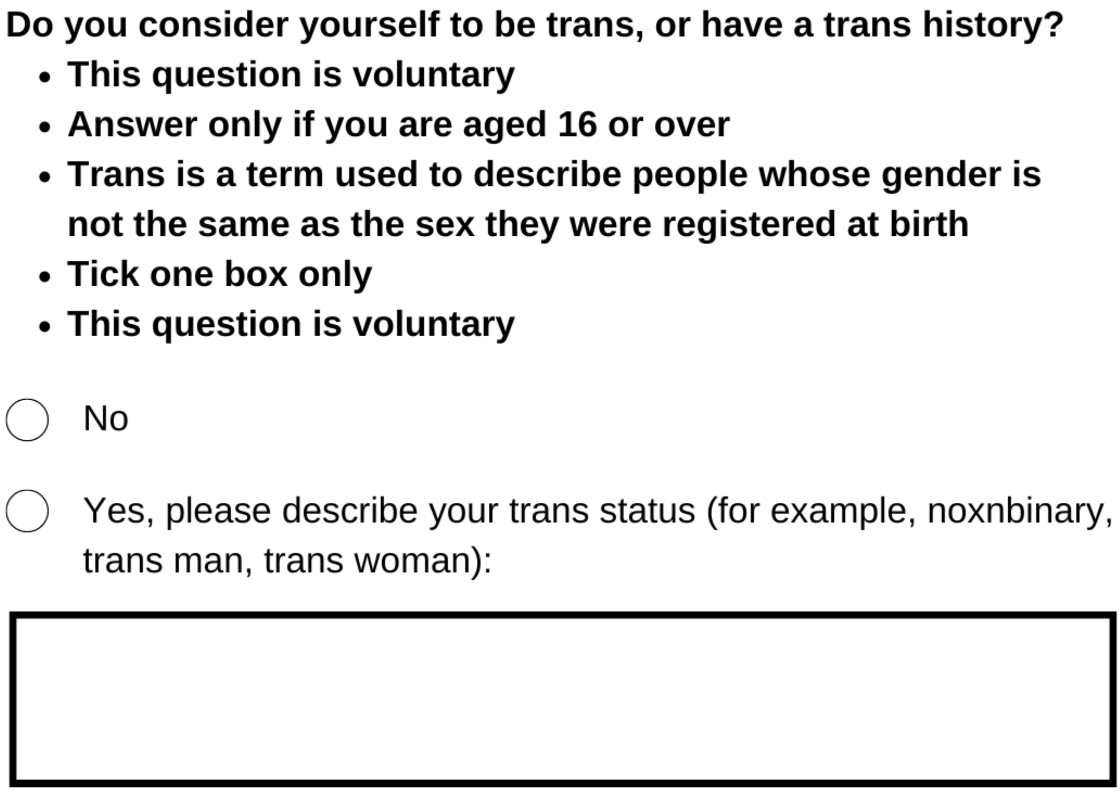
Is the gender you identify with the same as your sex registered at birth?

- **This question is voluntary**

○ Yes

○ No, write in gender identity

Figure 8: ONS English and Welsh 2021 census gender modality question (ONS, 2021b).



Do you consider yourself to be trans, or have a trans history?

- **This question is voluntary**
- **Answer only if you are aged 16 or over**
- **Trans is a term used to describe people whose gender is not the same as the sex they were registered at birth**
- **Tick one box only**
- **This question is voluntary**

○ No

○ Yes, please describe your trans status (for example, noxnbinary, trans man, trans woman):

Figure 9: NRS Scottish 2022 census gender modality question (NRS, 2020)

If the gender modality questions in the latest censuses were seen as the gender steps in the two step question designs discussed earlier, there is risk of an inaccurate and potentially harmful ontological statement being made: that gender is something trans people have where cis people just have sex. The harm of this links to the “sex, not gender” gender-critical and TERF perspectives discussed by Collier and Cowan (2021), which can lead to the rights of trans people being undermined due to not being based on a binary essentialist biology.

Returning to Table 11, two other surveys were found to feature gender modality questions in this review, alongside the latest Scottish and English and Welsh censuses. They utilised similar language to the English and Welsh census, asking if the participants’ genders were the same as their sex registered at birth and only prompted participants who indicated they were trans to share a specific gender.[14]

This subsection has summarised how the 27 surveys reviewed in Strand 1 represented sex/gender and gender modality and contributed to the debate on the UK censuses’ sex question guidance. Beyond this research, the data from this review can be utilised by others to understand the conceptualisation of sex/gender and gender modality across UK population surveys and within specific surveys. This type of data can help researchers find appropriate data sources and, in this case, also highlight key limitations within commonly used sex question variables due to their binary nature and ambiguity. Beyond this, by making explicit how sex/gender and gender modality are represented in these surveys, I was able to identify the ontological assumptions within them and the ramifications this has in terms of dictating whose ability to know their own identity is and is not respected. Through the review, I was able to emphasise the extent of the ambiguity surrounding sex and gender within UK survey practices. These are not clearly defined concepts in most cases, leading to uncertainty for both respondents and data users, producing measurement invalidity. From there, I illustrated that attempts to clarify this ambiguity feature weighted assumptions not only about the nature of sex and gender, but their importance. I engaged with and progressed the debates among Sullivan (2020a; 2020b), Hines (2020a), and Fugard (2020). I utilised this debate to emphasise that data visibility is not inherently beneficial or always carried out with the best interest of marginalised

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[14] The other two surveys with gender modality questions were the Continuous Household Survey (NISRA, 2019) and the Crime Survey for England and Wales (ONS, 2020b).

groups in mind. Grounding the contributions of my work in this understanding of visibility is essential for recognising the ramifications of data viability and finding ways to employ it positively. I summarised the debates over sex question guidance and the implications that implying someone's sex can be "legal" or not can have. In the analysis, I take my engagement with sex question debates further, showing better alternatives to guidance for the issue of confusing sex questions (7). Two-step sex/gender questions were then briefly mentioned as a clear influence the sex/gender dualism has had on surveys. I concluded by highlighting misinterpretations of what the latest UK censuses ask about and links that that can have to previously discussed ontologies. The following subsection will specifically address how binary genderism manifests in survey designs, once again focusing on the UK censuses.

4.2.2. Sexuality in current survey practices and its links to sex/gender

Of the 15 surveys that asked about sexuality, only 3 allowed participants to specify a sexual identity outwith bisexual, gay, heterosexual/straight, and lesbian. The rest all provided "other", "in another way", or "something else" options with no ability to specify (Table 16). The three surveys with the expansive questions and text boxes to specify were all the newest cohort of UK censuses. They all used the same wording, though the census in Northern Ireland features a dedicated "prefer not to say" option rather than simply being skippable on the online form like the other two censuses.

Table 15: Design of the 15 sexuality questions

Sexuality question design	**Number of Sexuality questions that use this design**
Expansive	12
Expansive with text box	3

All of the gender modality and sexuality questions had age restrictions, while the sex/gender questions could be answered by people of any age (within the target populations of the surveys). The sex/gender questions were also more likely to be mandatory, with only four of them explicitly allowing participants to skip them. All four of the gender modality questions were skippable and the same was true for all but three of the sexuality questions. Of course, outwith the censuses, survey participation was completely voluntary, so if a participant did not wish to answer a question, they could choose not to take part.

Although sexuality questions were generally more common than gender modality questions in the surveys reviewed here, on a global scale, the Northern Irish, English, and Welsh 2021 censuses were the first censuses in the world to produce sexual orientation data (Cooley, 2020;ONS, 2020c). Despite this, the sexual orientation question was considerably less contentious than the debate over the representation of trans people by the UK censuses. This is reflective of a context where the representation of different sexual orientations in large-scale data sets has been the norm for at least a decade. For example, the Annual Population Survey has featured a sexual orientation question since 2014 for Scotland, England, and Wales and since 2012 for Northern Ireland (ONS, 2022c). A census question on sexual orientation has been considered by UK census bodies since the development of the previous censuses in 2011 (Haseldon,Joloza and Household, 2009). Given this, this subsection will focus on the one key area of controversy surrounding the 2021/2022 sexual orientation census questions and its relationship to essentialism and the role that surveys play. This controversy also indicates the ties between the sex/gender ontological and representation debates that are the focus of this research and the way that sexuality data is produced.

In Scotland, questions were raised about the use of predictive text for the “other” option in the 2022 census’s sexual orientation question (Guyan, 2021). Headlines read that there would be 21 options to the sexual orientation question (Parker, 2019;Davidson, 2019;Musson and Archibald, 2019). This was misleading, as the 21 options spoken of were simply a list of commonly used sexual identities that would come up as predictive text options when someone started typing them in the online version of the census (Whitehouse, 2019). This function was to be employed to reduce the amount of typing differences in the “other” responses to make the data more uniform and easier to analyse (Whitehouse, 2019). It would have also saved some time for participants. However, due to this controversy, this functionality was removed. This does not mean that participants could not type in one of those 21 identity labels, or any others, just that the data would not be as uniform. It was also the case that predictive text was not removed from other questions with text boxes.

The essentialism at play is not apparent until you consider the reasoning behind the controversy. In Guyan's (2021) discussion of the controversy, he ties it to the desire to define sexual orientation using the wording of the Equality Act (2010), which states:

> "Sexual orientation means a person's sexual orientation towards—
> (a) persons of the same sex,
> (b) persons of the opposite sex, or
> (c) persons of either sex." (Equality Act 2010)

This argument can be seen in a letter from the LGB Alliance to the Culture, Tourism, Europe and External Affairs Committee, which was responsible for the census. In this letter, they argue in favour of only defining sexual orientation in terms of the language of the Equality Act (2010) and removing the ability to indicate a sexual orientation outside of the core LGB or heterosexual options provided (LGB Alliance, 2019). The LGB Alliance are a trans-antagonistic group who conceptualise sex in terms of sex assigned at birth, so their concepts of opposite, same, or either-sex attraction conflict with many trans people's sexual orientations, their partners, and anyone who conceptualises sexual orientation in terms of gender. This mirrors Blanchard's (1989a) ontology of trans people's sexual orientation being dictated by a biological notion of their sex and the sexes of those they may be attracted to (2.2). The LGB Alliance stated their basis for removing the "other" option is:

> "Demisexual or androphilic, for example, could apply to people who are male, female, heterosexual or homosexual. Therefore, answering the questions with one of these terms will offer no meaningful data on sexual orientation." (LGB Alliance, 2019)

This indicates a very narrow conceptualisation of sexual orientation that disregards the value of having a fuller, more accurate depiction of how people identify. The Convenor of the committee responsible for the census, Joan McAlpine, shared this perspective as she cited the letter and stated that the predictive text function “undermined and trivialised” sexual orientation based on the Equality Act (2010) (Culture Tourism Europe and External Affairs Committee, 2020). Throughout this research, I engaged with numerous people with sexual orientations outside the LGB and straight options in the censuses, and presenting them as trivialising or undermining of other identities further enforces the way they have been overlooked in surveys. Guyan (2021) presented the controversy surrounding the predictive text function as:

> “deliberations over whether the census functions as a tool to construct knowledge or facilitate the state’s capacity to govern its population. The census can bring into being a population that ‘makes sense’ to the heteronormative majority, yet this risks ‘designing-out’ queer lives and experiences that fail to match these ideals. Lastly, we cannot overlook the discrepancy in the degree of scrutiny the Committee directed at questions related to sex and sexual orientation, in particular where they pertained to the lives and experiences of trans people. The limited discussion of predictive text in questions on religion, nationality and ethnicity suggests that concerns expressed were less to do with the census technology deployed and more to do with hostile attitudes towards trans inclusive data practices.” (Guyan, 2021 p7)

Guyan’s (2021) approach to the census is similar to my own in the sense that we both use the lens of biopower and governmentality to contextualise the power that the census and, to a lesser extent, other surveys can have over populations (Foucault, 1978). Although, in the end, participants were able to use the text box to specify other identities, the discussion surrounding this issue seemed to promote the notion that everyone should be forced into the boxes that are most useful for the current narrative. This contrasts with the queer endeavour of this research, which is “making space for what is” (Crosby et al., 2012, p144). The way the Equality Act (2010) was employed is also notable as it disregarded a number of key facts about the Act. Firstly, as noted by Guyan (2021), the census questions are not required to factor in Equality Act (2010) wording, nor do they usually use the same wording. Secondly, defining sexual orientation by the Equality Act (2010) does not require a trans-exclusionary conceptualisation of sexual orientation as the term “sex” is never defined in the Act (Guyan, 2021). The way that sex in relation to sexual orientation was discussed by the LGB Alliance (2019) and the Convenor of the Culture, Tourism, Europe and External Affairs Committee (2020) can be seen as the type of concept capture discussed by Collier and Cowan (2021) (2.4.1). Finally, even if the Equality Act (2010) featured a rigid definition of sex and sexual orientation, it would not dictate legal protection as people are protected based on the intent of the Act and not on whether the victim meets a set criterion.

I highlighted at the start of this subsection that there was generally less contention in the UK over the representation of sexual orientation. However, I hope that by touching on the predictive text debate, I have shown how less contentious questions can be where fixed essentialist ontologies may be applied to dictate who is seen as legitimate.

4.1.3. Overview of current survey practices and who they overlook

Overall, Strand 1's conceptualisation of current practice appears restrictive. Table 17 presents a summary of current practice and who it overlooks. When thinking about who the surveys overlook, the lens of consent, specifically the ability to consent as an equal and of individual autonomy, is useful (Kovacs and Jain, 2020). To do this, one must consider whether everyone asked these questions has the same ability to choose not to disclose, lie, or be represented accurately. If that is not the case, there is not an equal ability to consent.

Table 16: Summary of current survey practices and who is overlooked

Type of information	Current practice	Who is overlooked
Sex/gender	Tends to use binary "sex" questions with "male" and "female" as mutually exclusive options and no guidance indicating what the question is about	Anyone who does not feel fully represented by the categories of male or female. This would usually apply to non-binary and/or genderqueer people. Some people this applies to may identify as male or female, but not only male or female; others may not identify with these categories at all
Gender modality	Rarely asks about this. When asked, it tends to be aimed at 16+	Anyone whose gender does not match that assumed of their sex assigned at birth
VSC/DSD/Intersex	Never asks about this	Anyone with a variation of sex characteristics

Sexuality	Asks about this more often than not with expansive options but no ability to specify for the most part. When asked, it tends to be aimed at 16+	Anyone who is not bisexual, gay, heterosexual/straight, or lesbian or feels their sexuality is not fully captured by those options

In the case of the sex/gender and sexuality questions, the limits on who is represented by these questions is primarily associated with the question options provided. For gender modality and VSC questions, the issue is that they are rarely or never asked. This may be reflecting binary cisnormativity, which assumes that everyone can be neatly assigned male or female at birth and that they will grow up to be the gender assumed of their sex assigned at birth (Bauer et al., 2009). In the Literature Review, I highlighted ways that people with VSC are forced to fit within binary notions of biology. Given this, the fact that they are almost completely missing from the surveys reviewed here is not surprising (2.2).

Some surveys allowed participants to utilise text boxes to specify genders and sexualities not listed. However, no single survey allowed participants to do this without also forcing them into a binary box. The 2022 Scottish Census is arguably the most expansive survey reviewed here, due to featuring text boxes for both the sexual orientation and gender modality question. By employing lived sex guidance, it is also recommending an approach to data collection that is more respectful of trans people’s ability to know themselves. However, the question itself not only remains ambiguous, but also features binary options, meaning that regardless of how people outwith the binary live, they must choose between binary options. This means that non-binary people have less power over how they are represented when responding to surveys than people who fit within the binary. They can lie or they cannot participate; these are their only options in most cases. For the censuses, they do not even have the choice of non-disclosure as the sex question is mandatory in all UK censuses. In Section 2.4.2. of the Literature Review, I tied this type of binary genderism/deprioritising of non-binary people to a broader political context of disregarding non-binary people even when it contradicts empirical evidence such as NRS’s (2018) findings that there should be a non-binary-inclusive sex question in the Scottish census.

4.3. Strand 1's influence on Strand 2

Strand 1 had two major influences on Strand 2. First, it identified the target populations of the qualitative strand. Second, it identified current practice question designs to share with the focus group participants (Appendix 5). In this section, I will discuss the overlooked populations identified by Strand 1 in order to better understand the target populations of Strand 2 before it is discussed.

Having variations of sex characteristics was not represented by any of the 27 surveys reviewed, meaning that people with VSC represent the most overlooked group. Although all participants were asked if they thought the element of their sex, gender, and/or sexuality being discussed should be represented, for participants with VSC, there was a greater emphasis on this question. It is becoming more common for sexuality and gender modality to be represented by surveys, so the focus groups on those matters primarily discussed the process for doing this. For participants with VSC, there was more to consider surrounding whether providing data on having a variation was beneficial for them or not.

People who do not identify with their sex assigned at birth were another overlooked group. This is due to a lack of questions on gender modality in surveys and cisnormativity. Bauer et al. (2009) define cisnormativity as the assumption that everyone identifies with how they were assigned at birth. This means that people born with penises are assumed to grow up to be men and people born with vulvas are assumed to grow up to be women. In the context of data collection, this would lead to the assumption that, when posed with male/man and female/woman options, someone will select the same one their entire life.

People whose relationships to gender are not fully captured by the categories male/man and female/woman were another overlooked population identified. This group is part of the greater population of people whose identity does not strictly match that assumed of their sex assigned at birth. The surveys reviewed in Strand 1 tended to construct sex/gender as an exclusive binary, which poses specific issues for this group; hence, a focus group was set aside to discuss these issues specifically. Although not all people who fall outwith the categories “male/man” and “female/woman” identify with the term “trans” (Darwin, 2020), when conceptualising the trans population and considering the material needs of this population, it makes little sense to categorise some trans people as binary and others as non-binary or to exclude non-binary people altogether (Scottish Government, 2021;Vincent, 2020).

The final overlooked population engaged with via Strand 2 are people whose relationship to sexuality is not fully captured by the categories “bisexual”, “gay”, “heterosexual/straight”, or “lesbian”. Although Strand 1 found some inclusion of “other” options to survey questions, these options sometimes lumped together vastly different groups due to not being accompanied by a text box. In Strand 3 of this research, there is an extension of this overlooked group to anyone whose sexuality is not fully captured by the category of heterosexual/straight. This is due to sexuality questions not always being present in surveys, and the heteronormative assumptions that take place if differences in sexuality are not considered (Baumle, 2018).

In this section, I have primarily used descriptive language rather than prescriptively using identity labels. This may appear less direct, but is employed due to the requirement for clarity. Although labels such as “intersex”, “trans”, and “non-binary” may be commonly used by many of the participants in Strand 2’s target populations, I did not want to exclude anyone who is being overlooked by surveys simply because they do not use the same language as me to describe themselves. In the following chapter, I discuss how these overlooked groups feel about these current survey practices and their representation in data generally. In Chapter 7, the influence of Strand 1 on this research can be seen as the conceptualisation of current survey practices based on this strand and compared to the perspectives shared by the participants in Strands 2 and 3 (7.3).

4.4. Strand 1 conclusion and contributions

The first strand of this sequential mixed-methods research provided an understanding of current practice to compare against, and identified populations overlooked by these practices. It did this via a systematic review of 27 UK population survey designs conducted since 2011. I categorised these populations in terms of whether there were survey options that allow them to be represented in terms of how they know themselves, which is a novel approach. Most research in this area starts by focusing on a specific type of question or population rather than systematically identifying who is being overlooked (Ansara and Hegarty, 2014;Badgett et al., 2014;Broussard,Warner and Pope, 2018;Guyan, 2022a;Harrison,Grant and Herman, 2012). Making explicit who is overlooked can help researchers think about who may be missing from their samples. This could lead to more expansive research designs or at least researchers recognising the fact that populations are missing from their analysis.

As noted in the Methodology chapter of this thesis, I took inspiration from Baumle's (2018) discussion of how the demography of sexuality produces more rigorous insights via combining two largely contracting perspectives. In this research, I take a similar approach by critiquing current survey practices via the perspectives of those that the current practices fail to represent (3.2). In other words, I queer survey design by considering ways to improve previously exclusionary surveys via the perspectives of those they excluded, using those most outside the set boxes to improve the way knowledge is produced about them and others like them.

Overall, Strand 1 found that sex and gender are heavily conflated in UK population surveys, to the extent that it is confusing for participants regarding the basis on which they are being asked for information. This conflated conceptualisation of sex/gender was found to be largely binary, forcing non-binary people into ill-fitting boxes. Given that binary sex/gender data is widely utilised, the findings of Strand 1 have wide reangling implications for data users considering the value of this data. This strand highlighted that people with VSC are not only excluded form survey representation, but are misunderstood in survey deign discussions. This further evidenced the ways that people with VSC are conflated with trans people and their needs neglected as indicated throughout Sections 2.2.1 and 2.4.1. I found little attempt to understand how many trans people there are and a tendency to lump together gender modality and gender in a way that may infer that gender is something only trans people possess. If sexuality is featured, it is via a sexual orientation question with a limited range of options and a tendency to lump together different identities under the label of “other”. Debates surrounding predictive text functions for participants in this “other” category highlighted gender-based assumptions about the nature of sexual orientation. None of the 27 surveys reviewed would allow someone outside the gender binary to use a text box to state both their gender and sexuality without also forcing them into a binary box. These surveys are, at best, indicating that the overlooked populations do not matter (D'Ignazio and Klein, 2020a) and, at worst, producing understandings of the world in which they are not expected to exist (Browne and Nash, 2010). Utilising the data from Strand 1’s review, this chapter not only constructed an understanding of survey representation and its assumptions, but also highlighted the broader social and legal ramifications it had, emphasising the importance of data representation within the relationship between knowledge and power.

5. Strand 2: Exploring overlooked groups' perspectives on representing differences of sex, gender, and sexuality in surveys

5.1. Strand 2 introduction

This chapter features the findings from the exploratory strand of this research. Strand 2 explores the perspectives of the overlooked populations identified by Strand 1. It does this via four focus groups, each one aimed at discussing the representation of a different overlooked population. There were 20 focus group participants in total (see Section 3.6.2 of the Methodology chapter for insight into the makeup of the survey sample and information on how they were recruited). There were two purposes of the focus groups: first, to provide an in-depth understanding of survey representation and design from the point of view of those most overlooked by UK population surveys in terms of their relationships to sex, gender, and, to a lesser extent, sexuality; and second, the focus groups functioned as a space where participants could actively engage in the knowledge production process by co-producing survey questions in their groups. The aim of the survey questions was to represent their overlooked population.

The co-produced element of Strand 2 was driven by the queer feminist approach I take to this topic as it aims to resist cis/het norms via creating questions that centre those who do not fit within the current boundaries set by surveys (3.2). The element of co-production was adopted to enable participants to be active negotiators over the information they provide. The ability to negotiate is an essential element of consent (Kovacs and Jain, 2020). Alongside the active element of negation within this research, it is hoped that if new questions are designed and applied based on this research, more respect will be shown towards participants' ability to know themselves.

In the previous chapter, I highlighted how current survey practices do not provide overlooked populations with an equal ability to consent due to a lack of options to accurately represent them (4.4). In this research, I could have simply designed survey questions with more expansive options. However, there is no guarantee that these questions would not be exclusionary in different ways. More importantly, given the queer post-structuralist foundations of this work, I recognise the contextual nature of identity, which means that no single question set can work in every situation and that surveys must continually adapt (Foucault, 1978). This is why the qualitative nature of this strand is so important, as it not only highlights ways to represent people that centre overlooked populations, but highlights why these approaches are important. Being able to pinpoint specific question design elements and why they are useful, as I do in the Analysis chapter, allows for more flexible applications of this research (7.2).

A deductive thematic analysis was adopted to analyse the focus group data. The first two sections of this chapter represent the highest-level themes, involving responses relating to survey representation and those tied to specific question design elements (Table 5). From there, they are broken down into subsections based on the key themes that emerged. The third section of this chapter summarises the questions co-produced by the focus group participants and the final two sections note how this strand influences the research and the overall contributions of this qualitative exploration. A participant questionnaire was utilised to obtain background information about the focus group participants. Relevant information from this questionnaire is included under each quote shared (3.6).

5.2. Perspectives on representation

Understanding the participants' perspectives on representation was the first objective of Strand 2. When discussing sex, gender, and sexuality representation in population surveys, I focused on populations whose existence is not reflected in the data produced by the survey questions. For the overlooked populations identified in Strand 1, representation is about whether surveys can tell us how many people with VSC there are, how many people identify with their sex assigned at birth (gender modality), or the specific gender or sexual identities of the people in the population. Across all four focus groups, the participants favoured more representation in population surveys. However, they still identified some potential risks of representation and conditions under which some representation should and should not occur. Here, I will outline the participants' perspectives on the costs and benefits of further survey representation.

5.2.1. Risk of representation

When considering the risks of representation, the way that participants framed responses to sex, gender, and sexuality survey questions is important. The trans focus group featured one of the only participants who was sceptical of the merits of trans representation in surveys. She stated that when disclosing that she is a trans woman in a survey, she was:

> "outing myself at the same time, and there are situations I may not want to do that, situations where I may not want to out myself or just be a woman, that's fine, and if I feel comfortable, I could say trans, then that's fine" (Jess | trans focus group | trans woman | she/her).

The framing of disclosing information about sex, gender, or sexuality as coming out is useful as it portrays the potential risk and significance this could have to participants. Jess went on to say that being asked about her gender modality felt like an "invasion of privacy" that was not anyone else's business. Jess's stance prompted a group that was otherwise very in favour of increased representation to consider that not everyone is comfortable being outed in the same manner. Charlie responded to Jess, stating that where they live:

> "it's quite easy to be gay, out and proud, but then as you say, not everyone really wants to be… Actually, quite a lot of people just want to chuff off with their lives and get on with it and not be bothered, and feel like, not feel like an interesting data point, actually just want to be accepted, which I, do see why that would be really important to a lot of people, to just carry on in a very British way" (Charlie | trans focus group | non-binary | they/them).

It was also highlighted that coming out due to responding to a survey might not always be an intentional act. This could either be because the data you provided is being used to infer other information about you or, as Drew (non-binary focus group | non-binary and trans | they/them) suggests, it could occur when people see you filling out the form. They stated that they were concerned about the safety of young people who are not out to their parents but may be outed due to their parents seeing their responses to a survey. This was suggested as a potential reason for age limits on gender modality and sexuality questions. A similar point was brought up in Macapagal et al.'s (Macapagal et al., 2017) research on the benefits and risks of sex research with young people, highlighting that requiring parental permission to participate was a barrier to some young people due to potentially outing them. Due to the use of household surveys in the UK censuses, the census providers considered this matter and allowed participants ages 16 and over to request individual questionnaires, which, if completed, would override their responses on the household form. However, it is yet unknown how heavily utilised this option will be. It could be the case that many LGBTI+ people are not represented in the census due to not being out to people in their household.

In regard to disclosure happening indirectly, Jo reflected that when civil partnerships were first introduced:

> "every time you filled in a form, you had to tick if you were civil partnered as opposed to married, and by that rationale you were automatically outing yourself on a form where you necessarily might not want to. So there's that kind of, if this data is being recorded, who is using it and for what purpose, and are there safeguards to like, someone else mentioned stuff, it backfiring on, on people" (Jo | trans focus group | trans man | he/him).

The impact of these sorts of unintentional disclosures are made particularly apparent by the ways that relationship data has been utilised as a key tool for understanding people with marginalised sexualities (Durso and Gates, 2013). In their discussion of best practices for producing data on sexual minorities, Durso and Gates (2013) argued there was a need for more data on sexual minorities and listed data on same sex couples as one of few sources of information which has been utilised to highlight matters of health inequalities and family structures.

Jess brought up issues relating to information being inferred rather than asked directly. She stated that service providers should ask about what is specifically relevant to the service they provide, rather than inferring that information from the categories that service users are placed in, for example, asking about relevant body parts and sexual acts in sexual health situations rather than making assumptions based on gender and sexuality identities.

Jo's previous comment also highlighted that, when it comes to making this sort of disclosure, knowing who is collecting the data, why they want it, and what privacy protections there are is essential. Jess drew upon this when outlining her concerns surrounding the risk of being visible in the data:

> "I think when you say being visible, it's like, being visible to whom, I would want to be told who I'm visible to. Whether this is on a database somewhere in the government, then people could pay to get access to it and who knows about me, we don't know what they know about me, and that just freaks me out a bit" (Jess | trans focus group | trans woman | she/her).

Jess's concerns highlight the significance of participants' understanding of who has access to their data; this and the reasons why it is being collected are both crucial pieces of information participants must know. Jess's concerns link to the notion that visibility does not have inherent value and can, in fact, be risky. In Foucault's (2019) presentation of visibility as a trap, he argues that to be visible means that more can be known about you, enabling your control. Jess was concerned that the people she may become visible to would not have her best interests in mind. An example of this can be found in the previous chapter where I indicated that Sullivan's (2020a) support for the production of gender modality data in the latest UK censuses did not appear to be with the best interest of trans people in mind (4.3). The possibility of data being used against the marginalised groups disclosing it is further discussed in the Analysis chapter.

Multiple participants in the overlooked sexualities focus group noted frustration around being asked things they saw as "irrelevant". Across the four focus groups, some comments on the irrelevance of questions related more to the sheer abundance of data recorded in the participants' daily lives, not specifically to population surveys. However, despite this, there were clear indications that knowing how the data will be used or being comfortable with who is collecting the data made the participants more willing to disclose. Rick commented that he is:

> “fairly forthcoming with that, I’m fairly forthcoming with that, I’m a man because I know that there are a lot of occupations where they are actually like, we are looking for more women in this role, because they are underrepresented in our organisation, that’s fine with me" (Rick | trans focus group | trans man | he/him).

Rick tied his willingness to provide information on his gender to his understanding of how gender data is used to understand and address gender inequalities. Jane also tied understanding of data use to willingness to respond, but highlighted how this understanding can be contextual. When discussing detailed data collection on people with VSC, she stated that:

> “It might put some people off as well, if it’s a general survey, if it’s going to be detailed, well why do they want to know that much detail, whereas if it’s an intersex survey, you know basically what it is that you are signing into, or even if it’s an LGBTQIA+ survey, then you know what it is you are signing into and what the information’s doing and where it’s going, and you have full trust. In a general one, that level of detail would freak a lot of people out, to use an old-fashioned term” (Jane | VSC focus group | she/her).

Jane’s stance was that due to understanding why they would ask for the data and trusting organisations that would conduct LGBTI+- and people with VSC-specific surveys, she would be comfortable disclosing more detailed information.

So far, the focus group responses have established that responding to survey questions on sex, gender, and sexuality is a significant disclosure, and given that, information should be provided on why and how the data will be used. This represents one of many conditions the participants identified for when it is appropriate to collect these types of data.

In the non-binary focus group, there was a feeling that data on gender is recorded too often. Once again, this was not specifically in refence to population surveys. For example, Sam (non-binary focus group | ambivalent | he/him and they/them) mentioned frustration at being asked to disclose their gender when signing up for a supermarket card. Cameron (non-binary focus group | non-binary | they/them, ve/vem, and ze/hir) noted how ze felt that sometimes in research gender is added in for the sake of it rather than it being adopted as part of the analysis. Given the participants’ emphasis on understanding why the data is collected, a possible way to address this discomfort would be to consider new ways to improve communication surrounding the relevance of data and not asking questions if the reasoning for it cannot be communicated.

Participants presented sex assigned at birth data as particularly private information they did not want to share unless absolutely essential. Medical situations were identified as one of these essential times in which the data may be relevant. Cameron stated that they:

> "feel like most surveys that you are filling out do not need to know your like, sex or like assigned gender or whatever like, unless you are getting very specific medical procedures it is not relevant at all" (Cameron | non-binary focus group | non-binary | they/them, ve/vem, and ze/hir).

However, other participants noted that not all medical situations require the same information and that a tendency to include questions on sex by default can become a barrier for some people. One participant noted that when facilitating drop in HIV tests for LGBTI+ students, they:

> "had to talk to the [HIV testing] charity and be like, can we ignore that [male or female sex] box [on the test consent form] for basically everyone that comes in, because most of the people who come to our society are not this, and do not feel comfortable filling those out. You were sat there, you were giving them your blood to be tested for HIV, like you are in a very difficult situation, because it's part medical, but also it doesn't make a difference, this is just for data collection, and yet they still had to pick a box and that feels incredibly uncomfortable, especially for someone who's you know, not cis and not binary. So no, it's horrible I think" (Rick | trans focus group | trans man | he/him).

This is yet another example not directly related to population surveys but providing insight into the participants' perspectives on sex assigned at birth questions and their relevance to different situations. Other participants noted that being trans or having a VSC is often assumed to be overly relevant to their medical needs. Charlie (trans focus group | non-binary | they/them) referred to the "trans broken arm" situation in which medical professionals consider being trans to be relevant to medical conditions or injuries not relating to gender such as having a broken arm. Both Jane and Amy from the VSC focus group referred to their variations being subjects of fascination for medical professionals when it had little relevance to their care. This is important when designing population surveys. Researchers should not take information that could be considered private for granted and should be able to justify why it is required so participants can determine whether providing the information is in their best interest.

Participants from the VSC focus group also drew attention to the ways that the level of detail surveys asked for can impact participants' willingness to disclose. In response to the Equality Network example question (Appendix 5.1), Amy said:

> "I think certainly if you are talking about people asking to tick a box saying about their genitalia, I think people would have a higher level of anxiety about that" (Amy | VSC focus group | she/her).

Jane agreed with this point and provided more insight into specifically why questions relating to genitalia in the context of VSC may make people uncomfortable, stating that:

> "if you are going to go into like, genitalia, sort of detail and that, there's a lot of people going to feel really uncomfortable about that, because it's something that's affected you since you were an infant, and things that have been done to you without your consent, that can be very… triggering is an overused word, but it can be very unsettling perhaps would be a better way of putting it, rather than triggering, although some people might trigger too" (Jane | VSC focus group | she/her).

In the question design themes subsection, I will explain how these perspectives on private and sensitive data impact the participants' perspectives on acceptable question design.

Before moving onto why Strand 2's participants were in favour of greater representation overall, I wish to draw attention to the participants' identification that representation in data is neither good nor bad in itself. Charlie summed this perspective up when they stated that:

> "if it's used for anything useful or important, then having sort of gender variance or trans people, or, and LGBTQ people on there would be useful in some areas, but it, it may have the power to backfire in other areas… so there's two sides to it, which could be really useful or, or it could be abused by people in power. I'm a cynic" (Charlie | trans focus group | non-binary | they/them).

This relates to the potential benefits and dangers of visibility, which were touched on in Section 2.3.1's discussion of limitations surrounding quantification and is further explored in Chapter 7's engagement with the integrated data.

5.2.2. Validation, findings, community, and awareness

The participants identified that there was a risk of their data being used against their best interests. However, despite this, the consensus of all four focus groups was that there should be the option to be represented. I will now discuss the reasons why Strand 2's participants were in favour of having the choice to be represented in survey data.

When addressing how questions were designed, the participants often noted that a question's design can be perceived as making value judgements on survey participants. They also noted that representation, or a lack thereof, can also seem like a value judgement on who matters. Jane (VSC focus group | she/her) argued in favour of representing people with VSC in population surveys because it would acknowledge that people with VSC are a "significant part of the population, not huge but significant". This indicates that by not counting how many people have VSC, population surveys give the impression that people with VSC are insignificant.

Participants in the overlooked sexualities focus group drew particular attention to ways that being included in data collection could be validating and being excluded could undermine their ability to self-identify. Beth (overlooked sexualities focus group | pansexual, demisexual, queer, and sometimes bisexual because it is easier to explain | she/her) referred to questioning her queer identity when she was working out her sexuality. She stated that seeing queer listed as an option to a sexuality question would be validating. She also noted that if that question were used within a particular space, say at her place of work, it would make her more comfortable talking about her identity openly there. Beth's response noted that attempts at data representation can help people not second-guess themselves and feel generally more accepted. The sorts of value judgements that survey questions are perceived to make will be discussed more when addressing question design, as most of it came up in relation to inadequate survey options or poor language choices.

Although participants across the board showed an awareness of how sex, gender, and sexuality data can be utilised in service provision and to address inequalities in a material sense, much of their discussion focused more on representation's significance to visibility and awareness. Population data on overlooked groups that can help reassure people that they are not alone was brought up by several participants. Kennedy said that:

> "sometimes it feels like you are the only one around you who, who doesn't identify with what they were assigned at birth, and I think it would be really interesting to be able to just see on a population's, on a countrywide scale like, how many people are like yourself or whatever" (Kennedy | trans focus group | genderqueer and non-binary | they/them).

Amy noted that even the presence of the question itself can have a validating impact on people who are often completely overlooked. She thought that:

> "to see something on there, even if people decide not to fill it in at that point, I think just seeing it there is that validation of, oh my god, I do exist, and it is there. So I, I think it is a whole, a whole range of things actually, because the population survey without us is like, it's like well are we not in the population then" (Amy | VSC focus group | she/her).

Knowing not only that there are other people like you, but also where they are was deemed useful by a participant who was in the process of moving. Blake stated that they were:

> "looking to move house at the moment and when we have been looking at places, I look on the, I can't remember the name of the website, but I look the street up on the website and it shows you based on like the last census , which is like ten years ago now, but like the sort of demographics of that street, and like who lives there, and for me if I could know that there was more queer people on the street, I would be more likely to live there. Like I think yeah, I think it's quite important for us to know that we exist" (Blake | trans focus group | queer and non-binary (though they don't care for the term non-binary) | they/them, though generally pronoun-indifferent).

As stated previously, LGBTI+ people are not evenly geographically spread. Blake's response indicates that if the data were available on where the communities they relate to are located, that could be a contributing factor in choosing to live there. In this sense, sex, gender, and sexuality data could not only be used to show that marginalised communities exist, but also for locating them.

The possibility for visibility via survey data was identified as historically significant as well. Rick from the trans focus group found this particularly important given that they had previously completed a dissertation on historical queer experiences. Rick stated that:

> "collecting data for that was a nightmare, and anything I can do to make future historians looking now, not have as much of a hard time as I did, I'm up for it" (Rick | trans focus group | trans man | he/him).

Jo's response to Rick's point about historical records identified another reason why historical accounts of people with marginalised genders and sexualities are important.

> "I have heard the sort of argument of, oh well there weren't queer people then, kind of argument, and it's like, yes there were, it's just no one was talking about it or writing about it, or you know, it wasn't recorded in historical documents" (Jo | trans focus groups | trans man | he/him).

The discussion between Rick and Jo highlights that by producing more representative survey data on sex, gender, and sexuality today, it becomes harder to erase the existence of marginalised groups in the future.

Awareness and education were also highlighted as an important impact of further representation. Just as Amy said, the sheer presence of the question can be validating. The participants noted that simply asking about VSC, being trans and non-binary, or an expansive range of sexualities can get people thinking about sex, gender, and sexuality. When reviewing previous research on asexuality, Kelleher, Murphy, and Su (2023) found a common theme of asexual people actively disclosing their identities with the aim of educating others to combat stigma surrounding asexuality. Jane noted that for people with VSC, including them in surveys could lead to:

> "intersex [becoming] more talked about and understood, rather than having to educate people all the bloody time because they can't use Google, and even when they do use Google, the information half the time is incorrect" (Jane | VSC focus group | she/her).

This focus on education indicates that participants view representative data as something valuable for everyone, not only those who are currently overlooked. Browne (2010) discussed the options in governmental statistics as a matter of biopower in which the possibilities of existence are set. If you are not one of the options listed and there is not room to write in another, then your existence is delegitimised, rendered invisible in the data, and not catered to in the contexts in which the data is used. The way participants discussed education and visibility links well with this notion of biopower. In the overlooked sexualities focus group, it was stated that:

> “if you offer more options, generally on like all surveys, but even governmental ones, you are sort of creating a space where it’s okay to say, this is my sexuality. It’s like just another step towards being inclusive generally, is having just the existence of your sexuality acknowledged by whoever, like, other people and people who aren’t necessarily, who don’t necessarily identify the same way as you, because it’s easy for me to go to another pansexual person and be like, hey pansexuality and they are like, yeah, but if you do that to a straight person who doesn’t know what it means, they are like, are you not just bisexual, and it’s like, no, no, and it’s kind of you know, the more of a, the more it’s out there, the more accepted, the more sort of accepted it will be by people generally. Hopefully that’s, that’s, that’s the dream I suppose” (Beth | overlooked sexualities focus group | pansexual, demisexual, queer, and sometimes bisexual because it’s easier to explain | she/her).

Beth’s perspectives matched with Browne’s (2010) account of survey options being a type of biopower. Beth shared that survey options can not only create space for people to be represented, but also make space for them to be accepted as it indicates that they are a legitimate population.

5.2.3. Addressing needs and political value

Before moving on to the themes surrounding question design, I wish to end on the potential power of being represented for those who are currently overlooked, not only in the data, but also political discourse.

> “"To be counted, they will know how many of us there are, they can’t then ignore us, as some infinitesimal part of society that can be ignored because so small, so weird, so strange that you don’t need to provide services, or even think about that community” (Jane | VSC focus group | she/her).

The above quote from Jane was part of a broader discussion between her and Amy in the VSC focus groups. They touched on the ways that people with VSC are at best ignored and at worst have their autonomy disregarded in ways that infringe their human rights. The type of experiences they discussed were touched on in Chapter 2’s engagement with literature on the way that binary understandings of sex and biology impact people with VSC (2.2). To Amy and

Jane, data representation was seen as an important step towards having their autonomy and needs – and the autonomy and needs of all people with VSC- recognised and respected.

The focus group participants in Strand 2 acknowledged that being represented by population data can come with risks, but that those risks can be minimised and do not detract from the benefits of representation. They say being represented in survey data is important not only for addressing their needs, but for showing they matter in the first place and not allowing them to be ignored.

5.3. Perspectives on survey designs

The themes that emerged relating to survey designs can be broken down into three overlapping categories: format, language, and options. Format relates to the overall design of the survey, such as multiple choice, "tick however many apply", or text box questions. This also relates to what information is required and what can be optionally given, which heavily overlaps with the perspectives the participants shared surrounding the risks of representation and survey response as coming out. The language category relates to the words used in survey questions and the participants' perspectives on these words. Options refers to what/how many response options the participants felt are needed for a representative question and how these options should be presented.

5.3.1. Format

The first two core format themes heavily relate to the concept of providing data about yourself being a form of coming out. Owing to this, the participants saw the key issues with surveys as addressing one characteristic at a time, and whether questions are mandatory. In this subsection, I will address these two matters before moving onto the subject of mutually exclusive or inclusive survey options.

In the representation section, it was emphasised that some participants valued having the choice to provide information about themselves if and when they want to. Jess from the trans focus group stated that when asking about gender and gender modality, keeping them separate means that she can choose when to disclose she is trans and when to only identify as a woman based on comfort levels. Jess also emphasised that by combining gender and gender modality, question design can become more othering when she stated that sometimes survey options are:

> “man and woman, trans man, trans woman. So you’ve got normal, normal, not normal, not normal and I think getting away from that would be very good "(Jess | trans focus group | trans woman | she/her).

This highlights how this type of question design could potentially exclude trans men and women from the broader categories of men and women. This could be solved by the use of the term “cisgender”, changing the options to “cisgender man”, “cisgender woman”, “trans man” and “trans woman”. However, this takes for granted that the term cisgender is used and understood by the people it describes. When discussing the data from Strand 3, it will be highlighted that this is not necessarily the case (6.2). This can also apply to the term trans, as not everyone falls neatly within a cis/trans binary (Darwin, 2020) (2.2.2.1). Furthermore, given that separate questions provide participants with more control over what information they disclose, this likely would not be the preferred question choice. When discussing the benefit of separate questions, Charlie highlighted the importance of having power over what information is shared, stating that:

> “a lot of people who just want to get a job or just want to go and see the doctor, or something, or whatever, [when gender and gender modality is asked about separately] you can just say, man, woman, non-binary… well not for non-binary genders of course, but if you just put woman and then is your gender different to that you were assigned at birth, yes/no, prefer not to say, then you can prefer not to say, because you can’t draw any conclusions from that at all, well theoretically you can’t" (Charlie | trans focus group | non-binary| they/them).

Here, Charlie emphasised that if gender and gender modality are asked about separately, then participants can choose what element they wish to disclose. Maximising participants’ control over what they disclose and what they retain can be understood as an important element of informed consent, as it ensures that participants do not have to make a choice between disclosing something they are uncomfortable with and not being represented at all (Kovacs and Jain, 2020).

The VSC focus group participants further emphasised the harms of questions that address too many things at once. Amy voiced the perspective that:

> “"the key thing for me is not conflating it with anything else, which is obviously something that we’ve experienced for a very long time, and it gets very tedious, you know, being confused around you know, gender, being confused around sexual orientation, being you know, confused you know, oh you, in total you have chosen to be this or you know, very bizarre interpretation. So I think it would go some way to, as a really strong education as well for people because if it’s in a separate box it makes it quite clear, and I like the idea of separating out the two chromosome and born differences as well, I think that’s interesting” (Amy | VSC focus group | she/her).

The above quote highlights three key things. First, conflating having a variation of sex characteristics with gender or sexuality is something Amy had experienced before. Second, this conflation is indicative of a lack of understanding surrounding VSC. Third, utilising separate specific questions could also be useful for identifying specific types of variations people have, as experiences will differ significantly depending on the type of sex characteristic variation someone has. The Literature Review chapter noted ways that people with VSC are conflated with non-binary people in data production, using the Australian censuses “non-binary sex” option as a key example (ABS, 2022) (2.4.1). The discussion between Amy and Jane also highlighted that, combined with questions that present their options as mutually exclusive, the assumption that having a VSC is about sex/gender or sexuality limits intersectional understandings by either reducing people with VSC to simply that or by making that element of their experience invisible. This was particularly tied to the idea of “intersex” being a third option in sex/gender questions. Both participants made it clear that this conflation made little sense, as being intersex/having a VSC does not mean that someone does not have a sex assigned at birth and gender like other people. Separate VSC questions would enable an estimate of not only how many people with VSC there are, but also the demographics of their population.

The other major theme surrounding the format of questions was whether the options were presented as mutually exclusive or inclusive. All of the questions reviewed in Strand 1 asked participants to tick one option. The focus group participants saw this as an issue, owing to not all options being mutually exclusive and identities not always being stable enough that it would make sense only to select one. In the overlooked sexualities focus group, Beth found:

> “"The idea that you could choose more than one is really interesting […], because my sexuality definitely like, fluctuates with the time, you know, there’s no kind of this is definitely me, we are this gay today, or whatever, so having been able to go, well sometimes I think I’m like, pan, sometimes I just say I’m queer, sometimes if someone asks, I will be like, I’m bi because I don’t want to have to explain myself, so it’s like being able to just go, tick all that apply would be pretty cool, but potentially confusing for straight people who don’t understand the complexities, and the queer identities” (Beth | overlooked sexualities focus group | pansexual, demisexual, queer, and sometimes bisexual because it’s easier to explain | she/her)

Beth’s experiences of sexuality indicate the contextual nature of sexual identity, which is overlooked by mutually exclusive options. Problems with confining people under one identity label have been reflected in past research (Galupo,Mitchell and Davis, 2015;Galupo,Henise and Mercer, 2016) (2.2.3.1). Galupo, Mitchell, and Davis (2015) found that people attracted to more than one gender, such as Beth, were more likely to identify with more than one sexual identity label compared to monosexual people. Despite past research highlighting that not everyone can be represented by one sexual identity label, all of the sexual orientation questions reviewed in Strand 1 represented participants in terms of one category. Data from this research, such as Beth’s perspective on the use of labels, highlights the issue of reducing populations in terms of one category when multiple will apply. I explore this further in the next chapter.

Beth provided some insight into the rationale of her identification, stating that some identities are more readily understood than others. Given this, she identifies as bi when she does not want to provide further elaboration. This is notable, particularly given that “bisexual” is one of the four commonly used sexuality options according to Strand 1. She also showed awareness of different levels of understanding among heterosexual people about sexuality, and this could equally apply to survey participants or those interpreting the results.

Moving away from mutually exclusive question options opens up possibilities for representing overlooked groups. This is particularly significant for those who do not fit neatly within one category, which has been found in previous research on conceptualisations of sexual identity (Galupo,Mitchell and Davis, 2015;Galupo,Henise and Mercer, 2016). However, this would also have ramifications for how the data is analysed, which will be addressed in the integrated data analysis chapter (7.3.2).

According to the focus group participants, the ideal question designs are those which address different concepts separately, allowing participants to choose what they disclose and producing data that represents them as multifaceted individuals. They also do not present options as mutually exclusive when they are not, allowing for a complex depiction that better reflects how some populations experience identity.

5.3.2. Language

There were two areas of discussion that arose surrounding language. The first was about conceptualisations of identity and how the use of identity labels could exclude or misrepresent some populations in a way that conflicts with the question designer's intent. The second is about attempts to include making exclusionary value judgements with the language they use.

The first issue centred around the representation of people who do not identify with their sex assigned at birth. Throughout this research, I have used this type of descriptive language to describe what many (including myself) would usually refer to as the trans population. The focus groups further highlighted the importance of this. In all but the overlooked sexualities, the focus group participants noted that "trans status" questions could potentially exclude some people who do not identify with their sex assigned at birth from the trans sample, particularly non-binary people. As indicated previously, there is evidence to suggest that not everyone who does not identify with their sex assigned at birth describes their gender modality as trans (Darwin, 2020). However, when shown the "trans status" question from the Scottish 2022 census (Appendix 5.2), the participants noted that the accompanying definition was helpful, as it states that:

> "Trans is a term used to describe people whose gender is not the same as the sex they were registered at birth" (NRS, 2020).

This shows what is meant by trans in a more inclusive manner. The fact that this definition is directly above the question it applies to on the questionnaire itself rather than on an accompanying webpage is also beneficial, as online question guidance has been found to have limited engagement (ScotCen, 2019). However, the focus group participants generally seemed more in favour of sex registered/assigned at birth questions due to the descriptive approach they took, which avoided using labels such as trans that not everyone will use. This mirrors concerns raised by Darwin (2020) about over-reliance on a cis/trans binary, leading to the exclusion of non-binary and other gender-diverse people who do not identify as either.

The participants also noted that the language of "trans history" used in the Scottish census question was difficult to understand and not the way that anyone in gender overlooked or gender modality focus groups talked about being trans. That being said, Blake contributed that:

> "I think the only thing that I would kind of throw into this, is that I think trans history feels like a term, I know a lot of older trans people who have maybe transitioned ten years ago, fifteen years ago, who use that language, and I wouldn't want to sort of throw them out because it doesn't necessarily feel great to us, if that makes sense" (Blake | trans focus group | queer and non-binary (though they don't care for the term non-binary) | they/them, though generally pronoun-indifferent).

Here is a clear example of why focus groups were a beneficial method for this research. The focus group format encouraged participants to think about the representation of people from their population more broadly rather than simply their own needs. Blake's comment also highlighted although inclusive language use may not always be the natural way that everyone discusses sex, gender, or sexuality, it does not mean that using that language would exclude them.

Value judgements in the phrasing of questions came up throughout the focus groups in a number of ways. It mostly occurred in relation to the phrasing of additional options, which were sometimes accompanied by a text box. "Other" options in the survey questions were described as "literally othering" by Blake, which summed up a common account across the focus groups that by grouping participants in an "other" category or even stating that they identified "in another way" could indicate that they were less important than those that fit into the listed options. Participants' attributing value judgements to survey designs may speak to the power that surveys possess. When seen as a form of biopower, the way that surveys categorise and count is a judgement of the ways that populations are expected to be (Browne, 2010). Participants' views on the "other" category indicate that this power is not simply a matter of being represented or not, but also how populations are represented. There is not one wording option that would perfectly address this issue given that any additional option is always there to indicate there is something not being listed, and what is and is not listed may always appear to be a value judgement. Having a more expansive list of options could help mitigate this slightly. The participants also agreed that, when listing options, they should be in alphabetical order so not to create/reproduce a hierarchy of identities.

This subsection discussed some of the language considerations highlighted by the focus groups. Given the size of the sample, this research will not come to generalisable conclusions on the best language use for survey questions. There likely is not one perfect way to phrase any given question that will work across a range of contexts, but this subsection indicates the sorts of things to consider when attempting to phrase inclusive questions. This is further discussed in the procedural issues section in the data integration section (8.2.3).

5.4. Co-produced questions

Representing differences in sex, gender, and sexuality, according to the focus group responses, requires at least five questions. This section will outline the questions, highlighting why the participants designed them this way. Understanding why the questions are designed this way is important not only to justify their use, but also in case they need to be altered in any way, ensuring that this can be achieved without changing important elements that the participants identified as essential to represent people like them.

The first two questions were designed by the VSC focus group participants. As stated previously, Amy and Jane felt it was important that surveys represent people with variations of sex characteristics (5.2). Figure 10 depicts the main question they would use to do that. In the other focus groups, there was an emphasis on the importance of optional questions. Due to the extent to which people with VSC have been overlooked in data collection, Amy and Jane felt that a mandatory question would indicate the significance of representing people with VSC. Amy described the mandatory status of a question as giving people with VSC “equal weight” in representation compared to other groups. This contrasted with the perspectives of the other focus groups, which emphasised the importance of having the ability to prefer not to say.

Via the feedback sheets shared with the participants summarising their responses, having a “prefer not to say” option was identified as a compromise, allowing people to opt out of disclosing whether they had a VSC or not but still requiring them to engage with the question.

Do you have a variation of sex characteristics? (Often referred to as being intersex)

Yes

No

Figure 10: VSC question 1

The second VSC question indicated by Figure 11 would only be visible to participants who states “Yes” to the previous question, indicating that they have a VSC/are intersex. The aim of the secondary question is to gain additional information which could be utilised to understand potential experiences or needs of the VSC sample. Amy and Jane described variations as either “born differences” or “chromosomal differences”; the significance of these differences were illustrated when Jane stated that:

> "…they are two completely different issues in many respects, for the two different people that are, or groups of people that are, intersex" (Jane | VSC focus group | she/her).

This highlights that having a “born” or “chromosomal” difference could lead to radically different experiences for people with VSC to the extent where Jane almost saw them as two different groups. The feedback sheet was utilised to extract exactly what the participants meant by “born” or “chromosomal” to make sure I did not misrepresent them. They explained that this was a rough shorthand to refer to whether a type of VSC was apparent at birth (born) or later in life (chromosomal). As noted in the Literature Review, those with visible variations at birth face particular challenges to their body autonomy as children, but that very few people have visible variations at birth (Intersex Society of North America;Ghattas, 2015) (2.2.1). To represent this, the secondary VSC question asks participants when in their life their variation became apparent (Figure 11).

If you stated yes to the previous question, when did your variation become apparent?

At birth

During early childhood

At puberty

As an adult

Prefer not to say

Figure 11: VSC question 2

Throughout this research, issues are highlighted with inferring information rather than asking for it directly. However, when Amy and Jane were shown an expansive example of a VSC question taken from a survey conducted by the Equality Network (Appendix 5.1), they indicate that questions on VSC can become too technical with too many options. By asking about when a participant's variation became apparent rather than the specific nature of the variation, some indication of the nature of their variation is gained without being too technical or invasive. Inference was utilised in this case to allow further information to be asked for without requiring people's specific medical diagnosis. Further research that applies a question such as this is needed to determine whether categorisation in terms of when variations became apparent relates to differences in experiences.

How would you describe your gender? (select however many apply)

Man

Non-binary

Woman

Another way not listed: [text box provided]

Prefer not to say

Figure 12: Gender question

The next two questions were primarily designed by the overlooked genders and marginalised gender modality focus group participants. Both focus groups identified that, depending on the context, it could be important to represent both a person's gender and their gender modality. For example, Rick said that:

> "like the idea of being able to tick multiple options as well, that feels like a, a useful way to say, well yes, I'm a man, but I'm also a trans man if that's something that's relevant for the person seeing the data to know about." (Rick | trans focus group | trans man | he/him)

There are two key elements to Rick's point: first, that he wanted both his gender and gender modality to be represented; and second, as noted previously, relevance was an important element to Rick's reasons for sharing this information.

Figure 12 shows the focus groups' design of the gender question. The key qualities of this question are that it includes more than just binary options; it allows participants to select however many options apply to them, it features a text box for any additional responses, and allows participants to withhold a response. As stated previously, the focus group participants thought that sex assigned at birth should not be represented in data collection exercises in most circumstances. Due to this, they opted for a specific "gender" question. The next major issue they identified with sex/gender questions was that they were often binary, which is why a third "non-binary" option and text box were added to this question. The options to these questions were presented as not mutually exclusive to represent the complex realities of how the participants experienced gender; such complexities have been found in previous research (Galupo,Mitchell and Davis, 2015;Galupo,Henise and Mercer, 2016) (2.2.3.1).

Do you identify with your sex assigned at birth?

Yes

No

Prefer not to say

Figure 13: Gender modality question

Figure 13 indicates how the participants thought gender modality should be represented. In this example, the term “sex assigned at birth” is mentioned; it should be noted that the term “gender assigned at birth” was also used by participants and could potentially work as well. The other key element is that it is a separate question from the gender question due to the participants’ emphasis on not conflating different issues and allowing participants the ability to choose what information they disclose.

How would you describe your sexuality? (select however many apply)

Aromantic

Asexual

Bisexual

Gay

Heterosexual/straight

Lesbian

Pansexual

Polyamorous

Queer

Another way not listed: [text box provided]

Prefer not to say

Figure 14: Sexuality question

The final question was designed by the overlooked sexuality focus group participants to represent differences in sexuality in a way that includes them (Figure 14). Much like the gender question, this featured a “tick all that apply” format and a more expansive range of options. Both of these questions also listed the options in alphabetical order, so as not to imply that any identity was more important than the others. When co-producing the sexuality question listed above, particular emphasis was placed on there being an expansive list of options and the ability for participants to select more than one. Beth was the first to ask about ticking multiple identities in the co-production stage of the focus group, asking:

> “One thing that came to mind when you were listing the identities, is that will it be possible to tick multiple boxes, because you can be polyamorous and various other, so it’s…?” (Beth | overlooked sexualities focus group | pansexual, demisexual, queer, and sometimes bisexual because it’s easier to explain | she/her)

It was due to Beth’s specific mention of polyamory and the emphasis placed on having an expansive list of options that the options “polyamory” and “monogamous” were included. However, upon reflection, and given the issues with categorising polyamory as a form of sexual identity, it could have been beneficial for me to have probed further on this matter to better understand the focus group participants’ perspectives surrounding it (Willey, 2015;Klesse, 2014) (2.2.3.1). In Chapter 6, I further discuss issues with this form of categorisation in relation to the survey respondents’ reactions to this question (6.4).

This section has summarised the five questions co-designed by the overlooked focus group participants. Allowing the focus group participants to play an active part in the knowledge production process by asking them to design rather than simply react to questions is a major contribution of this research. It is one of the key aspects that sets this research apart from the type of cognitive, acceptability, and quantitative testing already conducted with design surveys (2.4).

5.5. Strand 2’s influence on Strand 3

All of the co-produced questions presented in the previous section were shared and tested via the online survey utilised in Strand 3. Here, I will highlight three other ways that Strand 2 influenced the design of Strand 3.

First, due to limitations in the sample of Strand 2 and lessons learned in the recruitment process, I tried to engage with a broader range of groups working with LGBTI+ people. By comparing Appendix 2 to Appendix 8, it can be seen that 77 more organisations were contacted to share the online survey than the call for participants for Strand 2.

Strand 2 influenced my move away from Google Forms for designing and sharing the survey in Strand 3. When sharing the participant questionnaire and feedback sheets for Strand 2, I had utilised Google Forms due to its simplistic but flexible nature. However, the focus group participants highlighted that using the option “other” in surveys can be literally othering. In Google Forms, text options can only be labelled “other”, while on Jisc, researchers can edit the text to whatever they want.

The final influence Strand 2 had over Strand 3 was the introduction of context questions. In Strand 2, it was clear that participants did not tend to separate large-scale surveys in which population estimates are produced from other ways that survey methods are utilised. For this reason, the Strand 3 survey participants were asked about the context in which they were comfortable disclosing different types of information. This brought a whole new plane of analysis to the research. This is a key benefit of the sequential nature of this research, i.e., being able to open up new lines of investigation based on participants’ insights.

Given the sequential design of this research, the influences that Strands 2 and 3 have over each other is not limited to these two factors. In Chapter 7, I will illustrate how the data from these two strands was integrated to create standards of “best practice” based on the participants’ responses. These standards will then be compared against the current survey practices highlighted by Strand 1 (7.3).

5.6. Strand 2 conclusion and contributions

Strand 2’s exploration of overlooked participants’ perspectives on survey representation highlighted several useful points regarding the significance of representation and how to improve survey design. These were the intended outcomes of this strand, but it also illustrated a way to make surveys more inclusive by working with the populations that past questions have overlooked. Before moving onto Strand 3’s findings, I will briefly summarise the core contributions of Strand 2.

Given that Strand 2’s data is all based on participants who willingly engaged with this research, it is not surprising that they were largely in favour of increased survey representation. However, despite this, they were all very aware that data representation in and of itself is not useful. This can be seen in their emphasis on the context and intent behind data collection exercises. Later in this thesis, I place considerable emphasis on only producing data that will actually be used. This may seem fairly basic, given it is reflected in policy such as the General Data Protection Regulation (UK Government, 2018).[15] However, my participants placed such emphasis on feelings of unnecessary questions being asked that either this was the case or there has been a lack of clear communication about why these questions are asked – both of which I try and address via the data production principles based on this research (7.2).

This research builds upon Browne's (2010) queer perspective of survey representation being a form of biopower, which actively sets the boundaries of expected ways of being. The legitimising force of surveys and the power of the knowledge they produce are reflected in both the focus groups' hesitant perspectives on survey representation and their calls for more representation. Although most participants were in favour of being represented by surveys, Jess, one of the trans focus group members, articulated concerns over who would have access to the data and their intent. This underscores the fact that there is no guarantee that data will be applied for the benefit of the populations asked about (5.2). On the other hand, recognising the legitimising force of surveys across the focus groups, there was an emphasis on how representation can be validating and educational.

When discussing ontologies of sex relating to sex characteristics, I noted the ways that people with VSC have been forced within binary frameworks and their autonomy disregarded (Davis, 2015b;Holmes, 2016;Fausto-Sterling, 2012) (2.2). In Section 2.4.1's engagement with prior work and in my review of UK population surveys, it was apparent that people with VSC are barely considered, and when they are, they are conflated with non-binary people or trans people broadly (4.3). It was in the face of all this that Jane and Amy, the participants in the VSC focus group, emphasised the legitimising force that survey representation could have for people with VSC. Recognising that they exist and that they matter, notions of legitimisation and education were mirrored in the other focus groups as well. For example, seeing an option you identify with in a sexuality question

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[15] The second principle of the GDPR is about producing data only for specific purposes and communicating said purposes. See Chapter 7 for more information.

was associated with feeling legitimised and creating space for different ways of being. I associated this with the biopolitical power of the survey (Browne, 2010), but it also ties to the queer endeavour of “making space for what is” (Crosby et al., 2012, p144).

The themes surrounding question design emphasised that participants want as much control over what they disclose in surveys as possible. To enable this, they need the ability to select options that represent them, which means more expansive question designs, with more options and/or the use of text boxes. The need for more question options and/or additional text box is well documented throughout the literature (Broussard,Warner and Pope, 2018;Badgett et al., 2014;Harrison,Grant and Herman, 2012). By engaging with overlooked populations directly, particularly via the focus groups, I have been able to develop a better understanding of the rationale behind this and useful ways to implement it. I have noted that the focus group participants associated feelings of validation and recognition with being represented by surveys. However, Strand 2 also found that not all forms of representation were seen as equally validating. The use of “Other” options, particularly without an accompanying text box, was presented as literally othering by participants as they perceived it as being the category that lumps together all those not important or legitimate enough to be explicitly listed. Although they recognised the value of text boxes for additional options not listed, they also felt that always being represented via a text box can also feel delegitimising. Given this, Strand 2’s engagement with overlooked populations not only calls for questions with a broader list of options, but establishes that, although questions should also feature text box options, they should not be referred to as the “Other’ option. The question should be designed to capture as many participants as possible via the provided tick box options. This could be used as a basis to update question options based on common text box responses to minimise the number of participants reliant on them.

Given the contextual nature of meaning and the how changeable language surrounding sex and gender can be, definitive approaches on the specific language used in question deigns cannot be established. However, surrounding the production of data on gender modality, participants did emphasise the need for either a descriptive approach that states that the question is about the relationship between sex assigned at birth and gender, or clear definitions if the term “trans” is to be used. Dawrin (2020) emphasised that cis/trans binaries can overlook many non-binary people who, for various reasons, may not identify as trans. The focus group responses mirrored this, emphasising that if terms such as transgender or trans are utilised in surveys, they must also state a non-binary-inclusive definition of them.

Overall, Strand 2 indicates a possible way of engaging with overlooked populations to involve them in the knowledge production process. In Section 2.4.3 of the Literature Review, I outline currently used approaches to testing survey designs. Although these approaches are extensive and very useful, they all start with questions designed by researchers and then shown to participants. Here, I am building an approach to survey design with participants from overlooked populations that centres their perspectives and needs.

6. Strand 3: Online survey with LGBTI+ people

6.1. Strand 3 introduction

This strand sought to determine whether the perspectives of the overlooked populations in Strand 2's focus groups were shared by a larger sample of LGBTI+ people across the UK. It also aimed to test the survey questions co-produced in the focus groups to establish whether LGBTI+ people would answer them, understand them, and feel represented by them. These were the two original aims of Strand 3. My engagement with the demographic data from the online survey in this chapter also highlights matters about how LGBTI+ people identify, which pertain to how they should be represented by surveys.

There are four sections to this chapter. The first builds upon the discussion of the survey sample in the methodology, focusing on the ways participants utilised identity labels when posed with a "tick all that apply" question format (6.2). This provides valuable insight into the ways that different survey designs may overlook crucial elements of identity. The second section addresses what information the online survey participants thought should be represented, when, and why (6.3). The third section summarises how the survey participants reacted to the co-produced survey questions created in the focus groups (6.4). The final section summarises the overall contributions of this strand of the research, setting the stage for the analysis of data from the three strands combined.

6.2. The survey participants' use of identity labels

In the Methodology chapter, I provided an overview of the demographics of the survey sample. This highlighted the strengths and weaknesses of the sample and provided insight into the participants' backgrounds. Here, I delve deeper into the demographic data relating to the way that participants utilised gender, gender modality, and sexuality labels. This data provides two key insights: first, into the number of people who use multiple identity labels, who would only be partly represented by the type of “choose one” option question found in Strand 1’s review of survey designs (4); and second, into the ways that gender modality labels such as “transgender”, “transexual”, and “cisgender” are utilised in this sample.

Figure 15 depicts what labels participants selected to describe their relationship to gender and gender modality when provided with an extensive list. “Woman” was the most commonly selected option, with 144 (41.5%) participants selecting it as a term they use to describe themselves. The bar chart features a count of how many of the following options each participant selected: “man”, “woman”, “gender fluid”, “gender queer”, “queer”, “non-binary”, and “in a way not listed”. It did not include labels for gender modality, VSC, or sexuality. The transgender and cisgender bars include a small selection of participants whose label count was 0, meaning they did not identify with any gender identity labels but did identify as transgender or cisgender.

A text box accompanied the gender question and was utilised by 73 participants. Two commonly occurring labels in the text box were agender and transmasculine (trans masc). Eighteen participants stated that they were agender and ten stated that they were transmasculine specifically rather than using terms such as “trans man”. Nine participants used terms like “butch” and “femme” to describe their gender. Butch and femme are terms derived from lesbian, bi, and other queer women subcultures (Coyote and Sharman, 2011). A butch is usually someone who presents or identifies with masculinity and a femme is someone presents or identifies with femininity (Coyote and Sharman, 2011).

Nine participants used terms usually associated with sexuality such as “lesbian” and “gay” to describe their gender. This indicates the ways that gender and sexuality can overlap. Butler’s (2002) conceptualisation of the heterosexual matrix is useful here as it illustrates that assumptions of compulsory heterosexuality tie to assumptions of gender, with people seen as women assumed to be attracted to men and people seen as men assumed to be attracted to women. Tredway (2014) argues that the heterosexual matrix being open about not abiding to the norms of heterosexuality can lead to judgements being made about one’s gender.

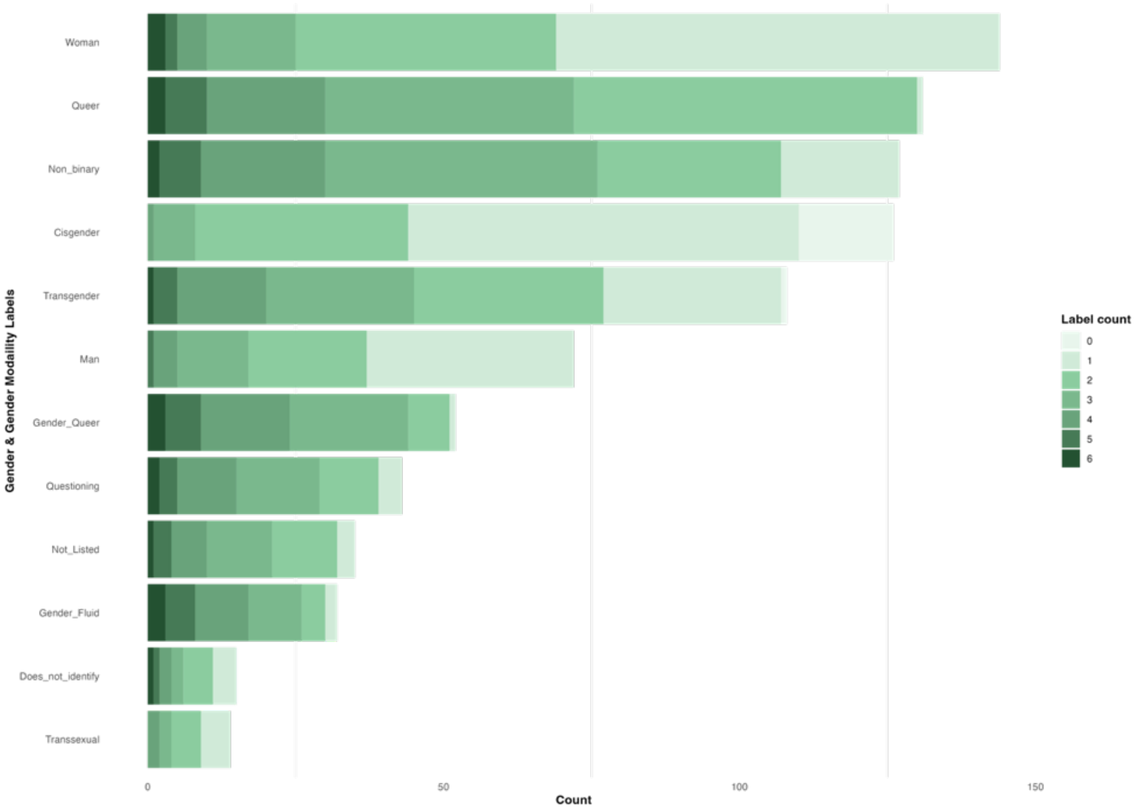

Figure 15: How participants described their genders and gender modalities

Four participants specifically stated that they were gender non-conforming, either in those words or using the acronym GNC. Another four stated that they do not identify with any labels. A total of seven used the text box to specify that they were male or female. In the survey question, the options “man” and “woman” were provided over “male” and “female”; however, this may not work for everyone. Sixteen of the text box responses were longer responses which did not simply list the identity labels the participants used.

The data presented in Figure 15 reflects responses to a question that recognised that not everyone has a gender identity, as it asked:

“What labels (if any) would you use to describe your relationship to gender, gender modality, and variations of sex characteristics? This format of question is used here because understanding the words you use to describe yourself will help me find question designs that represent you well. Please tick all that apply and use the text box if there are any other relevant terms not included.”

Being agender myself, I was conscious of the fact that not everyone identifies with the notion of gender. However, the participant-co-produced questions did ask “how would you describe your gender?”, which could be perceived as assuming that everyone has a gender, though it allowed participants to state otherwise via a text box. The wording of “describing your gender” or “describing your relationship to gender” could benefit from cognitive and acceptability testing to determine whether one is more suitable than the other.

The main purpose of counting the number of gender identity labels people use was to see whether information was being missed by questions where participants could only select one option. Focusing on the “woman” and “man” bars, it is clear that information is being missed out by “choose one” question formats. Assuming that participants who selected “man” and “woman” would select binary options if that was all they were provided with, then a binary sex/gender question such as that found to be commonly used in UK population surveys would overlook 131 of the participants to this survey completely, overlooking the intricacies of identities for the men (72) and women (144). In total, 185 participants selected two or more gender options, indicating that they would be at least partly overlooked even by an expansive survey question if it only allowed them to select one option.

Table 17: Use of gender modality labels

Gender modality	Cisgender (cis)	Transgender (trans)	Transexual	Did not select any	Total number for each gender modality group
Identified with sex assigned at birth	125	0	1	48	174
Did not identify with sex assigned at birth	0	101	12	43	145

Along with the labels question, there was a binary gender modality question. By combining data from both of these questions, Table 18 indicates how prevalent the use of different gender modality labels were between different groups. “Transgender” or “trans” was more commonly used than “transexual”. Not everyone who identified with their sex assigned at birth used the term “cisgender (cis)”. Not everyone who did not identify with their sex assigned at birth used the terms “transgender” or “transexual”. This indicates that using identity labels like “cisgender”, “transgender”, and “transexual” may limit the representation of gender modality in surveys.

Figure 16 depicts the sexuality labels used by the survey participants to describe themselves. It also included a count of how many labels they used. The count did not include labels for gender modality, VSC, or gender. By far, “queer” was the most frequently selected sexuality, with 203 participants stating that is how they describe themselves. A text box accompanied the sexuality question and was utilised by 47 participants. “Demisexual” and “panromantic” were the most listed labels on the text box. Fourteen participants indicated they were demisexual and five indicated they were panromantic. Two participants used the text box to state that they do not identify. Most participants listed between one and three labels in the text box.

There were 15 longer responses; some of which stated that “polyamorous” and “monogamous” should not have been included in this question. This will be touched on further when discussing responses to the focus group co-produced survey questions.

Table 18: Count of sexuality labels for participants who indicates they were LGB or heterosexual

	Count	>1 identity
Lesbian	95	76
Gay	104	85
Bisexual	112	96
Heterosexual/straight	11	4
None of the above	101	50

Table 19 indicates that commonly used sexual orientation questions would completely overlook 101 participants from this survey and ignore the intricacies of identities for a further 250 participants.[16] It does this by showing how many participants within these samples selected more than one sexuality label and how many did not identify as LGB or heterosexual. Given that the terms gay and lesbian are often used interchangeably, it is fair to subtract participants that selected both gay and lesbian; even then, the intricacies of at least 210 participants’ sexual identities would be overlooked. If we were to assume that “queer” was being used as an umbrella term and removed that from the count as well, then 179 participants remained.[17] This corresponds with previous research that also found evidence of LGBTI+ people utilising more than one sexual orientation label (Galupo,Mitchell and Davis, 2015;Galupo,Henise and Mercer, 2016). In this thesis, I utilise this information to make the case for

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[16] 250 is the number of participants who selected two or more sexuality identities.

[17] This calculation was based on the number of participants who selected two or more options (250), subtracting those who selected “gay” and “lesbian” (40), and, finally, subtracting the additional few who selected “queer” and at least one other option that was not “gay” or “lesbian” (31).

population surveys moving away from question designs that require participants to select from one option.

This section summarised the survey sample, highlighting its strengths and weaknesses and discussing what could be learnt from the participants' responses to these demographic questions alone. Overall, due to having a relatively small sample made up of mostly white and young people, this survey is not generally representative. However, it can still shine a light on some of the issues LGBTI+ people face when filling in surveys and their perspectives on the solutions proposed by the focus group participants.

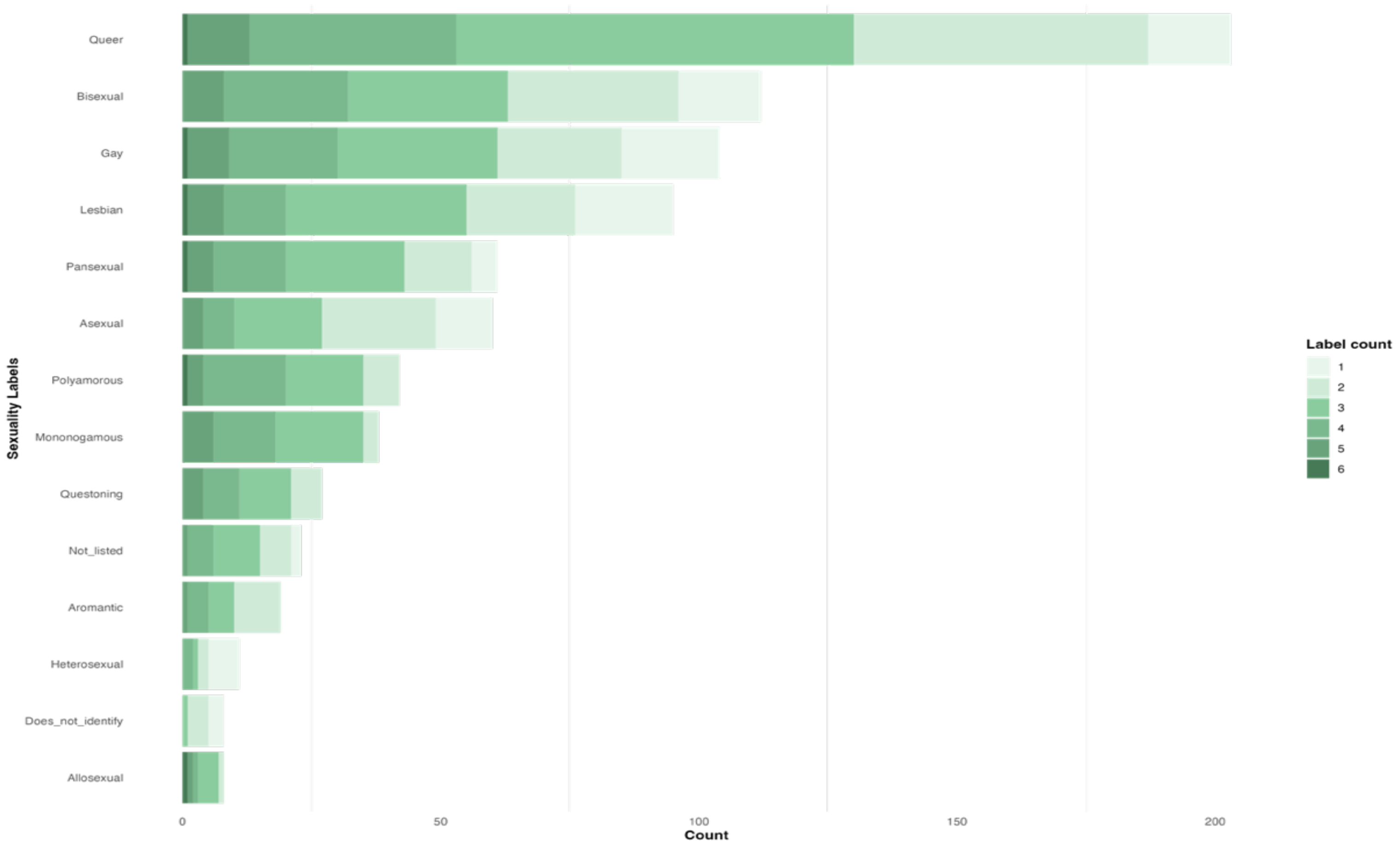

Figure 16: How participants described their sexualitie

This section summarised the survey sample, highlighting its strengths and weaknesses and discussing what could be learnt from the participants' responses to these demographic questions alone. Overall, due to having a relatively small sample made up of mostly white and young people, this survey is not generally representative. However, it can still shine a light on some of the issues LGBTI+ people face when filling in surveys and their perspectives on the solutions proposed by the focus group participants.

6.3. What information should surveys represent and in what context?

This research is focused on population surveys. However, the focus groups made two things clear: the participants' thoughts on survey designs did not only apply to population surveys, and context was a major determinant for question acceptability. Originally, matters of what information should be represented and in what context participants were comfortable disclosing information were going to be addressed separately. However, the survey responses emphasised that what information to collect is a highly contextual matter. Here, I will discuss what information the participants thought should be represented, how important they judged that information to be, and in what context they were most comfortable disclosing these types of information. The key types of information were sex assigned at birth, gender, gender modality, having a VSC or not, and sexuality.

Table 19: What information should be represented by population surveys

Type of information	How many participants thought it should be represented
Sex assigned at birth (SAB)	169 (51%)
Gender	333 (96%)
Gender modality (or trans status)	286 (85%)
VSC/DSD/Intersex	268 (87%)
Sexuality	321 (93%)

Table 20 presents the number and percentage of participants who indicated that each piece of information should be represented by population surveys. The data was produced by a set of binary questions asking whether these variables should be represented by surveys or not. Later in this chapter, I discuss data representation in a broader contextual manner. Sex assigned at birth was the most divisive, with only 51% of participants stating that it should be represented by population surveys. Compared to gender modality, which had the second least support, there were 117 fewer participants in support of representing sex assigned at birth in surveys. Due to the divisiveness of representing sex assigned at birth in surveys, a binomial logistic regression was run to see whether there were relationships between the demographics of a participant and if they thought sex assigned at birth should be represented. When controlling for having an overlooked sexuality and gender, gender modality was found to have a significant relationship with stating that sex assigned at birth should be represented by surveys (p-value = 0.01). The regression indicated that, within the survey sample, participants whose sex assigned at birth did not match their gender were 45% less likely to state that sex assigned at birth should be represented by population surveys. However, when evaluating the classification of the model, it only correctly predicted 53% of the outcomes. Trans people may have negative perceptions regarding the representation of sex assigned at birth in population surveys, but the quantitative survey data does not give strong support of this either way. There were relevant comments on this matter within the written survey responses, though, as one participant who did not identify with their sex assigned at birth stated:

> “Information of this nature needs to be assessed for usefulness on a case-by-case basis. As a trans person, I should never be asked, nor have to declare, my assignment at birth (especially as this can become legally complicated), but will happily respond to questions about whether or not I identify with it (unless the question points to a particular gender). My assignment at birth, even in medical contexts (where direct anatomical and individualised care is more beneficial), has very limited use or utility outside of experiential discussions, particularly around areas such as variant socialisation” (woman, genderfluid, non-binary, queer, and transgender).

This indicates not only an unwillingness to provide data on sex assigned at birth, but also a question on whether there is value in asking for such data. Medical contexts were singled out as one possible area in which sex assigned at birth data could be useful. In the text responses, when singling out a context in which sex assigned at birth data could be useful, medical care was often mentioned. For example, one participant stated that their survey design preference would be:

> “a gender question like the one you used (making it clear that this is self-defined gender), a question that gives the definition of trans and says 'Do you consider yourself to be trans? Yes/No?' (similar to what is often done with disability), and then, only if really necessary, a question that asks sex assigned at birth. In most instances, I honestly can't see how my sex assigned at birth is useful data – even for medical purposes, chances are that the most useful data would be something more nuanced and specific (e.g., in a context where it was useful to identify people who could get pregnant – well, I can't, even though I'm AFAB. So asking 'Is it possible for you to get pregnant?' would be a more specific and useful question than sex assigned at birth for that survey)” (transgender man).

The participant quoted above appeared to have a strong preference for gender and gender modality questions first and foremost over sex assigned at birth questions outside of medical contexts. They also suggest a sex-characteristic-centred approach to asking about sex, which will be touched on more in the following section. Other participants indicated a lack of comfort surrounding sex assigned at birth questions and did not understand its relevance if gender was also being represented.

Only eight participants stated that they had a VSC. Other participants stated that they did not think it was their place to comment on the representation of people with VSC. This may be why the question on whether having a VSC or not should be asked about in surveys had the highest amount of non-response, with 38 participants not answering that question. Some participants commented on whose perspectives on question design should matter or not, which will be further discussed when addressing specific question designs. This reluctance to comment on questions that they felt had little relevance to them further reinforces the importance of centring overlooked populations in this research.

Among the participants who stated that they had a VSC, all but one thought that having a VSC or not should be asked about in population surveys. Of those who stated that it should be represented, it was seen as relatively important, with participants rating it between 5 and 10 on the importance scale. Three of the participants with variations selected a rating of 10, indicating that they thought it was very important and should always be asked about in population surveys. Figure 17 depicts the importance score provided by the entire sample of participants for each type of information.

Only participants who stated that they thought the relevant piece of information should be represented by population surveys were asked the follow-up question on how important they thought it was. It is for this reason that there are significantly fewer responses to the importance question on sex assigned at birth, since only 169 participants were asked that question. The main takeaway from Figure 17 is that if someone thought a piece of information should be represented, they tended to think it was important, with 10 being selected by most participants in every case

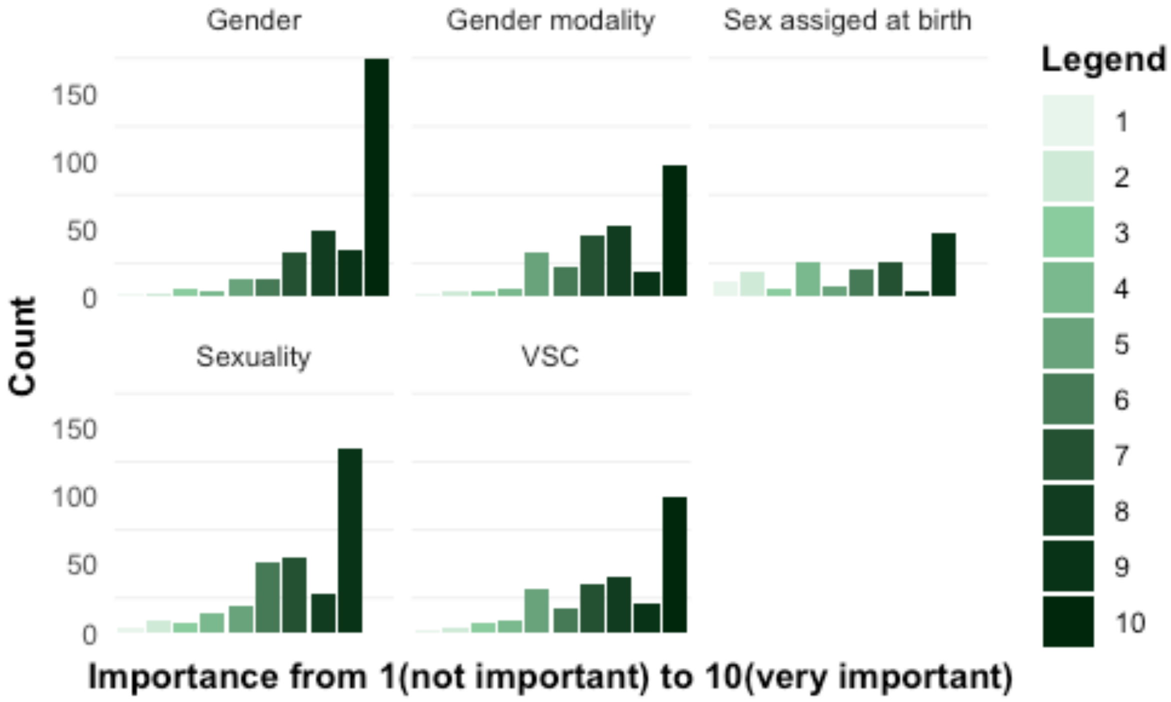

Figure 17: How important did the survey participants think different types of information were?

In Strand 2, it was clear that the participants did not tend to separate large-scale surveys in which population estimates are produced from other ways that survey methods are utilised. For this reason, the survey participants were asked about the context in which they were comfortable disclosing different types of information. Table 21 depicts the responses to the context question. The fewest participants stated that they were never comfortable disclosing information on gender and sexuality, with only six participants each stating so. Gender and sexuality were also the types of information most participants felt comfortable disclosing in all of the contexts listed, though this was slightly more common in the case of gender (65%). In most contexts, the participants stated that they were less comfortable disclosing their sex assigned at birth or whether they have a variation of sex characteristics. This was reversed when it came to medical care and/or research contexts, which corresponds with the way that medical contexts were singled out in the text responses. The employment context had the lowest overall comfort level, as fewer participants thought data should be collected across all of the different characteristics.

I have briefly summarised the survey findings surrounding what information should be asked for, how important it is, and in what contexts participants saw different types of data as relevant and/or appropriate. Sex assigned at birth was by far the most contested type of information, with only 51% of participants thinking online surveys should represent it. However, it was clear that within medical contexts, sex assigned at birth questions were seen as more acceptable. An overwhelming majority of participants thought that gender and sexuality questions should be asked in population surveys and saw them as important. The final section of this chapter will discuss survey participants' perceptions regarding specific survey designs, based on the focus group participants' co-produced questions.

Table 20: In what contexts were participants comfortable disclosing different types of information?

	Never	**Medical care and/or research**	**Non-medical research not related to SGS***	**Non-medical research related to SGS***	**Employment**	**Education**	**Services**	**Always**
Sex assigned at birth	24 (7%)	212 (61%)	67 (19%)	164 (47%)	19 (5%)	18 (5%)	51 (15%)	117 (34%)
Gender	6 (2%)	117 (34%)	95 (27%)	126 (36%)	51 (15%)	62 (18%)	82 (24%)	225 (65%)
Gender modality	17 (5%)	179 (52%)	80 (23%)	165 (48%)	31 (9%)	39 (11%)	67 (19%)	133 (38%)
VSC/DSD/Intersex	32 (9%)	154 (44%)	56 (16%)	116 (33%)	13 (4%)	17 (5%)	42 (12%)	121 (35%)
Sexuality	6 (2%)	150 (43%)	113 (33%)	176 (51%)	44 (13%)	59 (17%)	96 (28%)	159 (46%)
Total	85	812	411	747	158	195	338	755

Note: SGS stands for sex, gender, and sexuality.

6.4. Testing co-produced questions and perspectives on question design

The survey participants were shown gender, gender modality, VSC, and sexuality example questions based on the perspectives of the focus group participants from Strand 2 (Appendix 7). For each question, they were asked whether they would answer the questions relating to their acceptability and measurement validity. The survey participants reacted quite positively to all of the questions. Figure 18 depicts how acceptable the different questions were, showing whether the participants would answer the co-produced questions always, sometimes, or never.

The first question the survey participants were shown was a gender question labelled Question 1 (Q1). The question asked "How would you describe your gender?" and included the options "Man", "Non-binary", and "Woman" in alphabetical order as well as a "Prefer not to say" option and a text box labelled "A way not listed" (Appendix 7). The question prompted participants to tick however many applied, meaning that, for example, if someone was a man and non-binary or non-binary and another gender listed in the text box, they could state that. As shown in Figure 18, this question had the highest rate of acceptability, with only one participant stating that they would never answer it and 75.2% stating that they would always answer it. This could be partly due to having the lowest rate of participants who did not find it clear and easy to understand (4.3%) (Figure 19). Alongside the sexuality test question, it also had the lowest rate of participants (4%) who felt it would not represent them at all. However, compared to the sexuality (17.3%) question, a much larger percentage of participants stated that the gender (31.4%) question would only somewhat represent them (Figure 20).

There was no clear relationship between those who felt the gender question would not represent them. Half of the participants used the text box to write a gender not listed; perhaps they stated that they were not represented due to not having their gender listed explicitly in the question design. The participant who specifically identified as an "adult human female" and another who stated that "there is no need for quasi 'inclusion' on this topic" were amongst those that indicated they would never be represented by the gender question co-produced by the focus group participants. Stating that they could not be represented by such a question may be part of a broader objection to expansive question designs. However, this is purely speculation. Additional open questions on the quality of each of the test questions could have led to more conclusive insights on any issues with these questions, but it also would have made the survey even longer, which is why I avoided it.

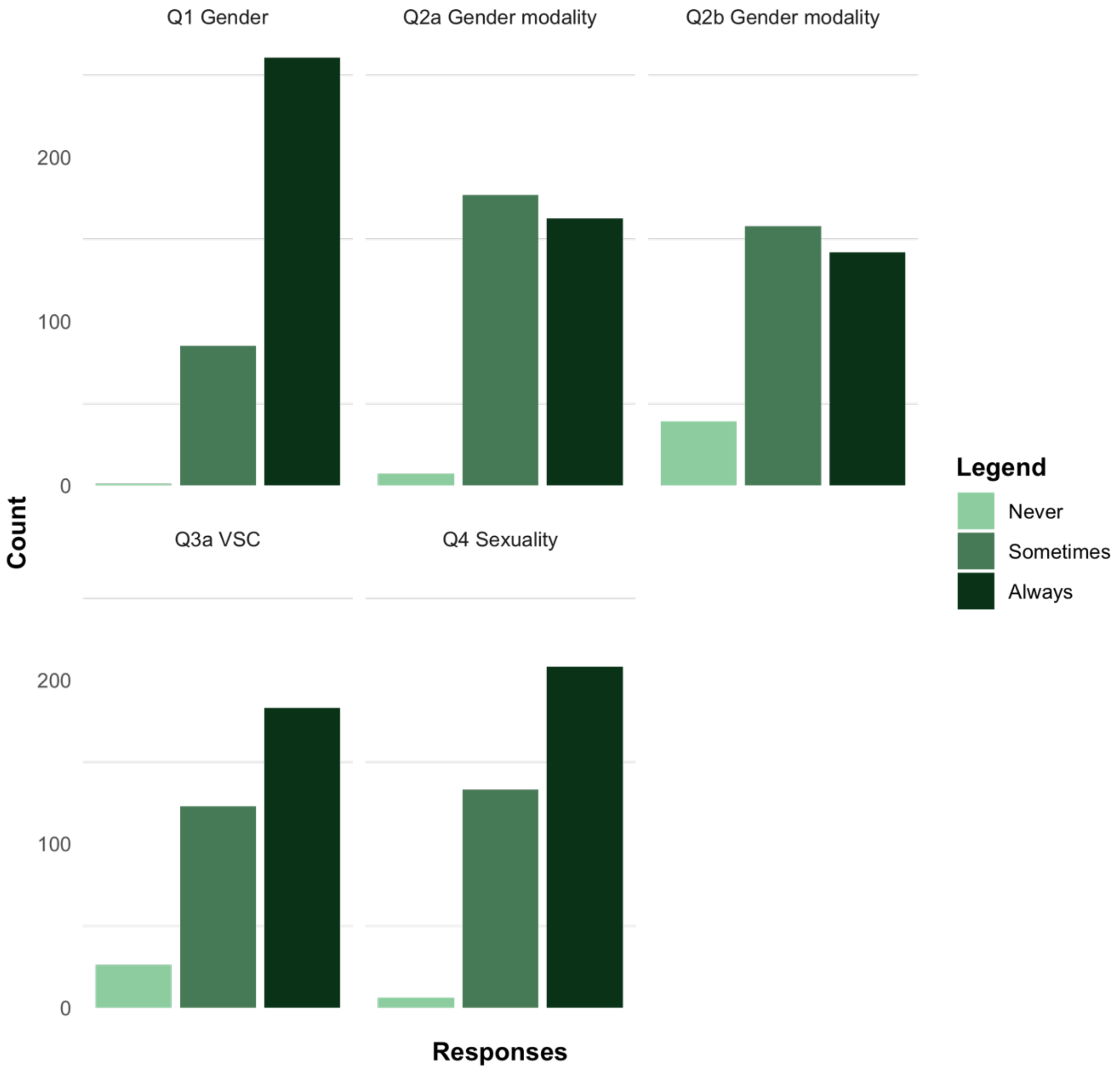

Figure 18: Would the survey participants answer the co-produced questions?

The survey participants were asked their perspectives on two approaches to collecting data on gender modality. The first (Q2a) was co-produced by trans members of the focus groups. It was a binary question with "Yes" and "No" options and the ability to select "Prefer not to say"; it asked:

> "Do you identify with your sex assigned at birth? Your sex assigned at birth is if you were registered as male or female on your birth certificate when you were born. People who do not identify with their sex assigned at birth often identify as trans" (Appendix 7).

The focus group participants opted for the sex or gender assigned at birth wording over trans status, as they saw it as less likely to exclude non-binary people. They also indicated that definitions, such as that used alongside the 2022 Scottish census trans status question, made questions like this more clear (NRS, 2020). In the further comments data, some participants stated that they preferred questions that directly used the term trans with the positive "Yes" option used to disclose a trans identity. It was also noted that identifying "with a sex assigned at birth" or not may not be a consistent state, particularly for genderfluid people. The second gender modality question set (Q2b) was based on this design but asked separate questions for people assigned male or female at birth. The purpose of this was to see how participants felt about a question indirectly representing sex assigned at birth. Across the board, Q2b was the question with the worst response. While 98% of participants stated that they would sometimes (51%) or always (47%) answer Q2a, only 86.5% said the same for Q2b (Figure 18). This could be due to it being a lot less understandable than the other questions, with 37% of participants stating that the question was not clear or easy to understand (see Figure 21). The gender modality questions were the only ones to have a higher number of participants stating that they would "Sometimes" rather than "Always" answer these questions, indicating that they were more contextual than the other questions. In theory, the question set split by sex assigned at birth had the capacity to represent more information as it produced gender modality and sex assigned at birth data. However, as shown by Figure 20, the lowest number of participants stated that it completely represented them (52%) and the highest stated that it did not represent them at all (12%). This could be due to the lower acceptability of the question, which may be tied to the way it attempts to represent two pieces of information at once, one of which being a particularly sensitive type of information. This will be further discussed in Chapter 7's integration of all three strands' data.

There were two VSC questions designed by the VSC focus group participants (Q3a and Q3b in Appendix 7). However, the second question was only for people who indicated that they did have a variation of sex characteristics. I mistakenly asked all survey participants for their perspectives on the second VSC question. However, this ended up being beneficial as it emphasised the importance of focusing on overlooked groups, as some endosex participants argued that their perspectives on questions aimed at people with VSC were not needed, stating that:

> "I am not intersex so I don't have a right to say what the phrasing of an intersex/VSC question should be and cis people should not get to dictate what the phrasing of a trans status question is." (survey participant)

This survey participant thought that their perspectives were not needed on VSC questions given they were not intersex (did not have a VSC). They also argued that trans people's perspectives were crucial when designing gender modality questions. Another participant shared a similar perspective, elaborating on the reasoning behind it by saying that:

> "As a cis woman, I am by necessity coming from a position of privilege when discussing the genders and identities of others. I am almost always happy to discuss my queer identity openly, but I know that for some trans and non-binary people, questions about the gender they were assigned at birth, and the specifics of their transition or gender variance can be triggering and make them feel at risk. There are some times when, in solidarity, I would choose not to answer certain questions about gender, because I feel that they are loaded, or contain exclusionary agendas. However, I would love to see all the many facets of queer identity represented according to the participants' definitions. I think the ideal questions would be open-ended enough for participants to feel safe and included, rather than excluded by many categories which don't fit exactly" (survey participant).

They tied their stance of their perspectives being less important than some others to their relatively privilege as a cis person. These quotes give the sense that not only were some participants more privileged than others, but they recognised that their privilege may lead to there being lower stakes involved with regard to how and when they disclose information about themselves, due to being the privileged norm in some way. Given this, I only discuss question 3b in terms of how the eight participants with VSC rated it; thus, Figures 18-20 exclude that question as they focus on the survey sample.

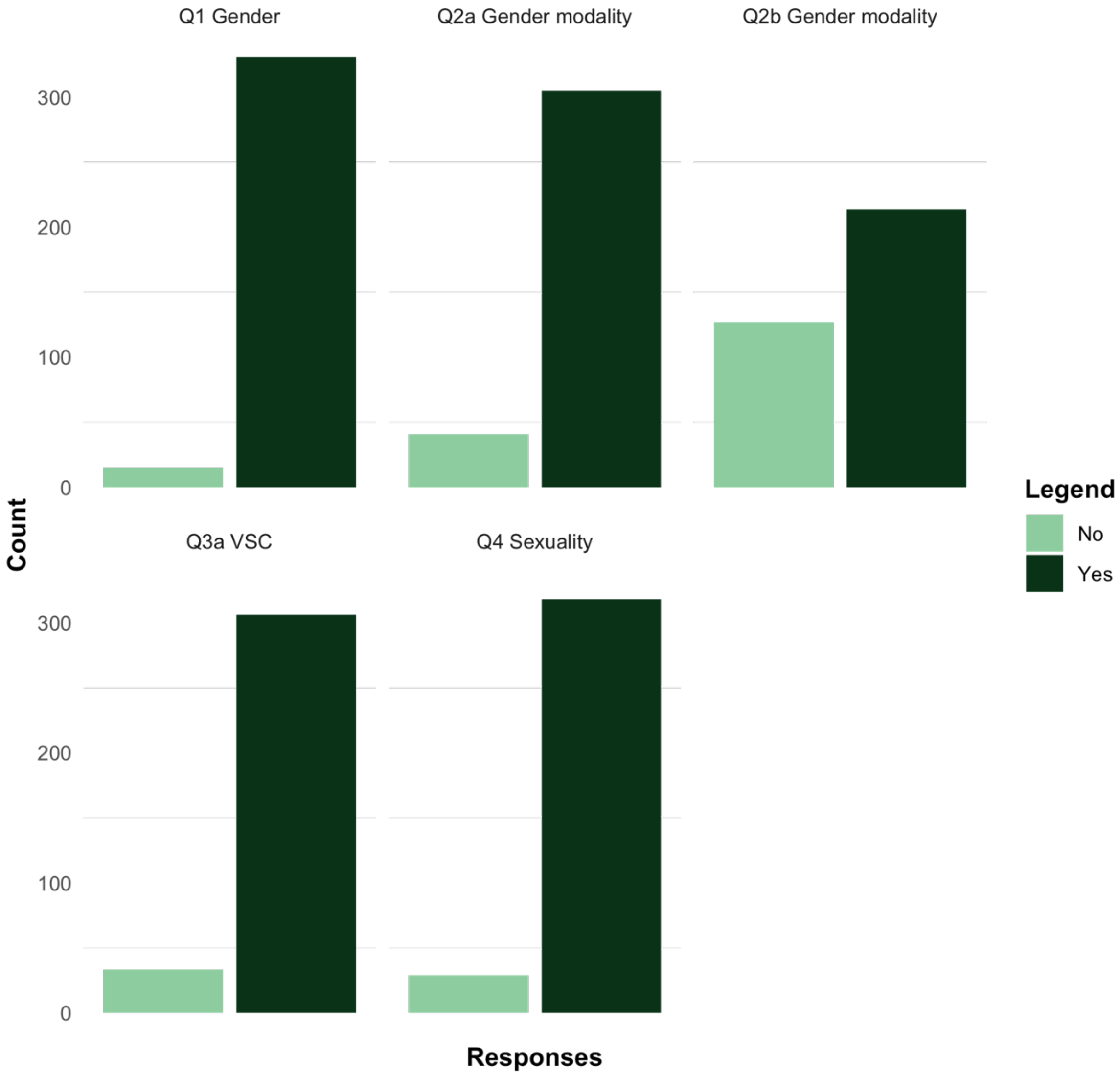

Figure 19: Did survey participants find the questions clear and understandable?

When compared to the other questions in Figure 18, the second highest number of participants stated that they would never answer the first VSC question (7.5%). All eight of the participants who shared that they had a VSC stated that they would sometimes answer this question, indicating that the acceptability of the question was determined by the context and by whom it was asked. The overall sample mostly found it clear and easy to understand, and all but one of the participants with VSC stated that it was clear (Figure 19). In the first VSC question (Q3a), almost the same number of participants as those for the gender and sexuality questions felt it did not represent them at all (Figure 20). Of the participants with VSC, all thought it somewhat represented them, which is not surprising given that the focus group participants designed the second VSC question to provide more detail. The second VSC question (Q3b) asked when participants' variation of sex characteristics became apparent, as that would enable some understanding of the impact their VSC had on their life without asking for specific medical information (Appendix 7). Just as with Q3a, the participants with VSC stated that they would sometimes answer Q3b, and all but one found it clear and easy to understand. Differences began to become apparent when they were asked whether the question represented them, as one stated that it would not represent them at all, three said it somewhat would represent them, and four thought it completely represented them. Given the exploratory nature of this research and the small number of people with VSC I was able to engage with, much more research is needed to design questions that meet their needs. However, in Chapter 7, I will further elaborate on what this research has indicated in regard to representing people with VSC.

As stated previously, alongside the gender question (Q1), the sexuality question (Q4) had some of the most positive responses from the survey participants. As indicated by Figures 18–20, most of the participants stated that they would at least sometimes answer it, it was easy to understand, and would represent them. However, in the further comments, two areas of contention arose: the representation of relationship types and the representation of asexual and aromantic identities. It is important to note that the example question designed by the focus group participants included the options "Aromantic", "Asexual", and "Polyamorous", but when recording what labels participants in the surveys used, I also included what can be seen as the related opposite "Allosexual" and "Monogamous", which some of the comments may have been aimed towards. I did this to avoid designing a question which further stigmatises certain populations by only representing those deviating from the norm.

Twelve comments mentioned the "Polyamorous" and "Monogamous" options. Some argued that this type of data was worth collecting, but should not be lumped together with sexual orientations. One participant said they were polyamorous in practice but would not identify as such. Some participants were concerned that the inclusion of the polyamory option was making a judgement about cis/het polyamorous people being part of the LGBTI+ community. These comments speak to criticisms of understanding polyamory as a sexual identity, as discussed in the Literature Review (Willey, 2015;Klesse, 2014) (2.2.3.1). The final issue about relating polyamory to LGBTI+ identities, although not the intent of this question, does reflect issues highlighted in the literature regarding framing polyamory as a minority, which not all polyamorous or non-monogamous people would identify with (Klesse, 2014). Given these issues this research is not suitable for making comments on the representation of different types of relationship formation.

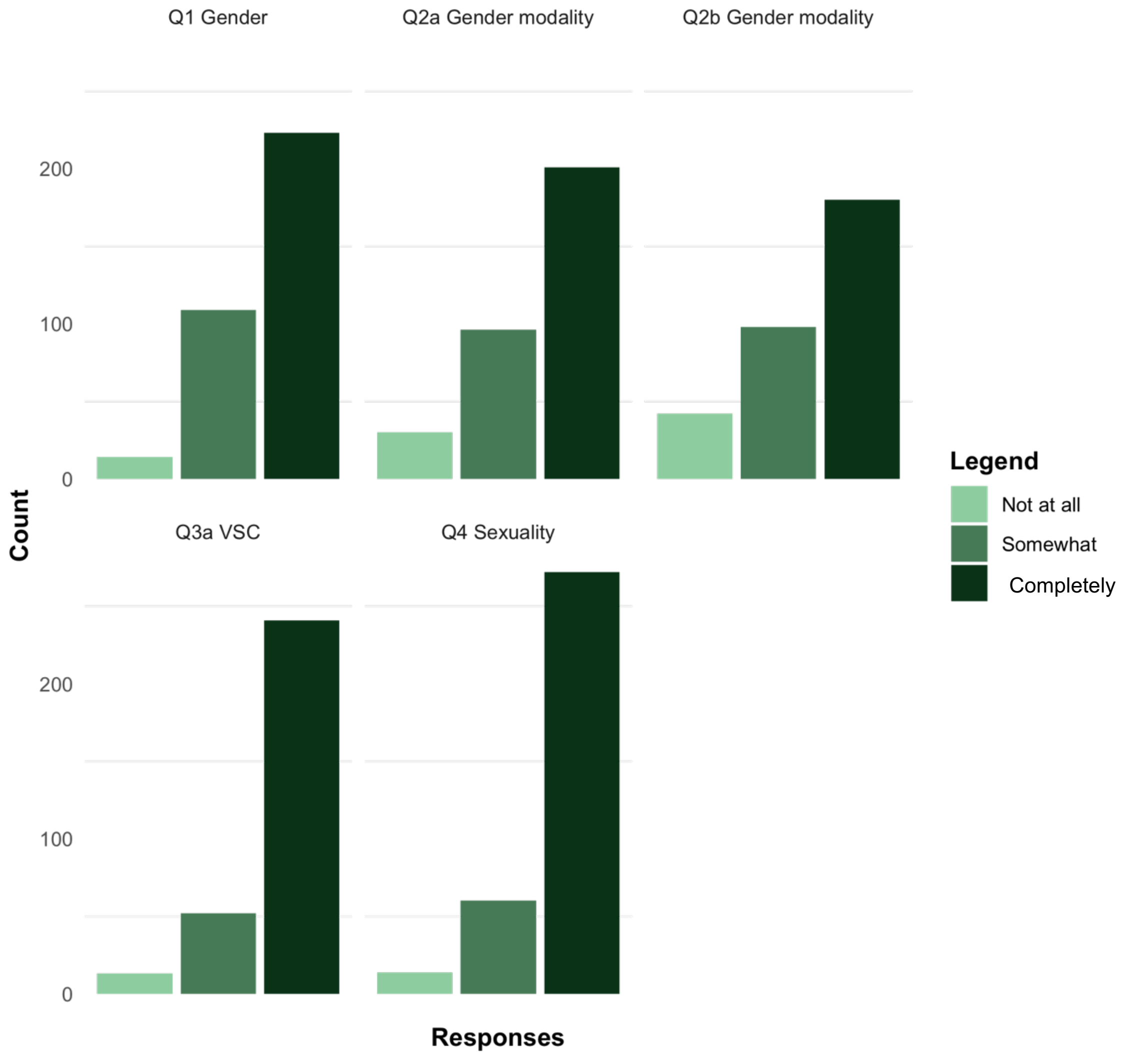

Figure 20: Did the survey participants feel these questions would represent them well in the data?

The survey participants seemed to support the representation of asexual and aromantic identities and praised the ability to tick more than one box in the sample question, as it enabled the representation of these identities and other identities that are sometimes mistakenly presented as mutually exclusive. However, some participants saw the conflation of sexual and romantic attractions as an issue. One participant suggested that:

> "It would be useful to include questions around the Split Attraction Model where one's romantic orientation is different to their sexual orientation. This model can apply to people who are heterosexual (or any sexual identity). I think it is worth noting that aromanticism is not necessarily a sexual identity, it is a romantic identity" (survey participant).

Representing sexual and romantic attraction separately or even just acknowledging that a question looks at both is an area that will require further investigation. Some participants also conceptualised relationships towards sexual and romantic attraction as a spectrum, which could be important to keep in mind when challenging the assumption that everyone fits these types of attractions.

So far, I have summarised how the survey participants assessed the questions co-produced by the focus group participants. Now I want to briefly touch upon a type of question not tested in this research but with much potential for further investigation. In the previous section, I shared a participant quote which promoted the use of sex-characteristic-specific questions regarding matters such as whether a person could get pregnant or not. This was promoted by other survey participants; for example, one stated that:

> "I think it is important to shift the focus away from "assigned sex" etc. towards specific questions that are relevant in specific circumstances/surveys. For example, a survey on reproductive or sexual health may ask "Do you have a cervix?" – this is arguably much more useful than an off-the-shelf "Do you identify with your assigned sex?" type question. I think a key issue is that the nuances of sex characteristics – and trans and intersex bodies – are seen as too complicated for standard survey question design, and/or the ignorance around our embodied experiences means there is no awareness of these nuances and our lived realities are not reflected in the questions designed and used, and I also think there is a belief that asking "assigned sex" is going to reveal some

> fundamental 'truth' about people's experiences/embodiments (cis, trans, inter and endo), when that just is not the case” (survey participant).

This survey participant argued for more direct questions on relevant sex characteristics rather than ones based on assigned sex categories. They also reflect on potential reasons for why surveys currently focus on assigned sex categories. The first part of their perspective on this relates to the lack of awareness about sex characteristics and their relevance in different contexts, which is why I argue for further research on this matter (8). The second element of their perspective speaks to the way that essentialism, and the pedestal that sex assigned of birth is placed upon within it, manifests in survey design (2.2 and 4.2).

Before concluding this chapter, I will highlight four elements of the question designs that were particularly praised in the further comments made by the survey participants. First, as stated previously, the ability to tick more than one option enabled participants to provide more detailed depictions of their relationships to gender and sexuality, as different parts of their identity were not assumed to be mutually exclusive. Having expansive lists of options that went beyond the binary for gender and the LGB and heterosexual options for sexuality was also presented as key. The final way that accurate representation was ensured, which the survey participants recognised, was the use of text boxes alongside the questions. One participant stated that they did not:

> “mind most given answers not including my own preference as long as there's a box to write in my preference. But having it on there to start with is better” (survey participant).

Collecting data via tick boxes rather than text data is generally easier for researchers to analyse. This participant also indicated that it was preferable for them, but that text boxes were an important back-up solution in case any options were missing.

The final element of the questions that the survey participants praised regarded respect for privacy and the survey participants’ ability to choose when to disclose information. One respondent tied privacy to safety, stating that:

> “I think that there should always be a "prefer not to say" option on most of them especially the gender identity and sexuality ones, you don't know whether or not that person is safe to enter those – especially with surveys

> like the census, where people may be forced to let the people who they are living with see their answers" (survey participant).

This type of acknowledgment of the risk of data visibility will be further discussed in the next chapter alongside all of the key elements of survey design touched on here. The purpose of this chapter was to give a brief overview of the data collected by the survey. Here, I explained that the survey sample featured significant limitations, which mirrored the limitations of other LGBTI+-specific research such as the National LGBT Survey (Government Equalities Office, 2018a). Due to this, the survey data can only highlight what some issues and potential solutions are, and not make representative claims about how the UK's 16+ LGBTI+ population feels about survey representation and design. All of the points made in this chapter will be touched on in further depth when integrated with Strand 1 and 2's data to make my final analysis.

6.5. Strand 3 conclusion and contributions

Strand 3's survey responses from 347 LGBTI+ people across the UK further emphasised the importance of context, intent, and clear communication when designing surveys and indicated support for the questions designed by the focus group participants. In the next chapter, I will discuss how data from Strand 3 integrates with the rest of this research. Here, I want to highlight two key contributes to the field of survey representation that Strand 3 provides by itself: the first relating to the use of multiple identity labels and the second on the sensitivity of sex assigned at birth data.

In Section 6.2 of this chapter, I reviewed data on how the survey sample described their relationships to gender, gender modality, and sexuality. It highlighted that amongst this LGBTI+ sample, 53% would have an element of their gender overlooked even if an expansive survey question with a range of options was adopted to represent them. In terms of sexuality, at least 51% of this sample would have an element of their identity overlooked even with the use of an expansive question. This means that the questions featured in the 27 surveys reviewed in Strand 1 would fail to represent these participants fully due to only allowing them to tick one box (4). How multiple-option data is analysed differs from single-option survey data. However, by asking for fuller data that better represents participants, we have a better basis to produce an analysis that reflects their lived realities. I discuss this further in the Analysis chapter, with examples of other "tick all that apply"-style questions already in circulation within population surveys (7.3.2).

Previously, I mentioned how "sex, not gender" narratives and the essentialist ontologies they are associated with have featured in survey design debates (Collier and Cowan, 2021) (4.3). Strand 3's data indicates that, in most contexts, this sample of LGBTI+ people were in favour of the reverse, advocating for the importance of representing gender over sex assigned at birth. This can be seen in Table 18, where only 51% of participants thought that sex assigned at birth should be represented by population surveys, compared to 96% supporting gender representation. These represent the two extremes of responses with sex assigned at birth having the lowest support of all the concepts asked about in the survey and gender the highest.

This does not suggest that sex assigned at birth has no relevance; the participants emphasised its importance in medical situations, with 61% stating that they would be comfortable providing sex assigned at birth data in that context. However, of all the concepts asked about, it had the lowest rate of participants who would be comfortable disclosing it in all data production situations (34%). The contextual comfort level creates the most issues for "sex, not gender" narratives in data production as, regardless of the ontological debates which I address elsewhere, a survey question is only as good as the data it produces. This means that it does not matter whether a question is asked if many people are unwilling to answer it accurately – or worse, the pressure of it would put them off responding to a survey entirely. If you consider that when asking for gender data, you are also indicating the sex assigned at birth of the cisgender participants, sex assigned at birth questions can be understood as mostly focused on trans participants, among whom only 10% indicated that they were comfortable always disclosing their sex assigned at birth. When data on gender and gender modality are paired, the sex assigned at birth for all participants other than those outside the binary can be inferred. Among non-binary participants, only 13% stated that they were always comfortable disclosing sex assigned at birth. This indicates that regardless of whether the question is asked, many of the participants whose sex assigned at birth would not be reflected by a gender question may not answer a sex assigned at birth question anyway.

In the next chapter, I integrate Strand 3’s findings together with Strand 2’s to produce what I refer to as co-produced survey practices. These practices are then compared to current survey practices highlighted by Strand 1. Together, this highlights the areas of disconnect between current practices and the perspectives and needs of overlooked populations and provides recommendations on how to bridge the gaps.

7. Analysis and discussion of integrated data

7.1. Integration of data: introduction

In this chapter, the true potential of this exploratory sequential research is realised as the data from the three strands is integrated and analysed. Each strand of this research has built upon the previous and provided further insight into the assumptions within current survey designs and how to improve them based on overlooked populations' perspectives. Through this, I emphasise key principles for producing data that, based on my participants' experiences, are not being carried out. The biggest outcome of my exploratory sequential approach is the TEMPS Question Design Standards, which are key elements of question design promoted by the participants to more effectively represent overlooked populations. The principles and standards aim to maximise the equal ability to provide informed consent and respect participants' ability to know themselves. This directly contrasts restrictive survey designs built around essentialist ontologies of sex/gender.

The analysis begins by presenting the perspectives on survey representation shared produced by strands 2 and 3 and the survey design approaches promoted by their participants (7.3). The approach to survey designs from Strands 2 and 3 centres the perspectives of overlooked populations and will be referred to as co-produced survey practices. These practices are built around questions co-produced by Strand 2's focus group participants (5.4) and further developed based on Strand 3's survey participants' reactions to them (6.4). The second core section of this chapter compares this approach to the conceptualisation of current survey practices produced by Strand 1 (7.4). Before discussing the analysis, I will reiterate how the strands integrate (7.2).

7.2. Integrating the three strands

The three strands of this research each provide useful insights into survey representation, how it is achieved, its significance, and ways to improve upon it.

Here, I reiterate how the strands integrate. Although alone each strand contributes to understandings and perspectives on survey representation, it is only when integrated that their true potential is realised.

Analysing the data together allows for a direct comparison to be made between the co-produced survey practices developed by Strands 2 and 3 and the conceptualisation of current survey practices produced by Strand 1. This enables a precise critique of current practices, highlighting how the boundaries they set fail to represent the lived realities of the participants in this research. This is a queer feminist approach, which holds population surveys to the highest standard of scrutiny by centring the perspectives of those who do not fit within the boundaries. I drew inspiration from Baumle's (2018) account of the demography of sexuality, finding rigour by combining contrasting queer and demographic perspectives. This approach can be seen as queering survey design by critiquing it in terms of how the boundaries they set fail to capture queer lives, which do not meet cis and hetero normative assumptions (Browne, 2010;Compton,Meadow and Schilt, 2018b;Compton, 2018;Baumle, 2018;Warner, 1993). It is feminist in its emphasis of the importance of overlooked population's perspectives, drawing upon feminist recognition of the importance of the subjective standpoints of those with direct experience (Collins, 2002;Haraway, 2020;de Vries, 2015).

In the Literature Review, I highlighted a range of different essentialist ontologies of sex and gender. Some of these ontologies present a biological essentialist account where different sexes are seen to be universally different due to their biology (Raymond, 1979;Jeffreys, 2014b). Others present a cultural essentialist understanding where being assigned male or female at birth leads to differences via socialisation (Chodorow, 1978). In this research, I see both of these perspectives as essentialist due to their belief that there are universal essences that make males and females different from each other (DeLamater and Hyde, 1998). Essentialist ontologies relating to sex and gender can be tied to "sex, not gender" perspectives, which present sex as the important differencing factor, dictating inequalities (Collier and Cowan, 2021). This relates to this research in two key ways. First, regarding what surveys should represent, from these essentialist perspectives, the emphasis is placed on producing data on binary sex (Collier and Cowan, 2021). The second element concerns the boundaries set around how we produce data. Throughout this research and within the analysis chapter, I highlight how essentialist conceptualisations hinder the production of valid and reliable data. The comparison between the co-produced survey practices and current practices also highlights useful elements of current practices that can be further promoted. When highlighting issues with current survey practices, I frame it in terms of how they impact participants' engagement with surveys and ability to be represented in terms of how they see themselves.

Strands 2 and 3 gathered perspectives of overlooked populations. Populations were conceptualised as overlooked or represented based on Strand 1's review of 27 UK population surveys (4.3) (Appendix 1). Strand 2 engaged with the four most overlooked populations identified in Strand 1, which were:

- People with variations of sex characteristics (VSC);
- People whose gender did not match that assumed of their sex assigned at birth (trans people);
- People whose relationship to gender does not neatly fit within the man/woman binary (non-binary people);
- Anyone whose sexual orientation cannot be fully described using one of the following: bisexual, heterosexual/straight, homosexual/gay or lesbian.

Strand 3 also engaged with these populations, but expanded the target population to include lesbian, gay, and bisexual (LGB) people. This was due to only 15 of the surveys reviewed in Strand 1 including a sexual orientation question (4.2.2). Heteronormativity renders heterosexuality the assumed default, meaning that without the active representation of people of other sexual orientations, they are overlooked (Warner, 1993). This is why, although LGB identities were not as overlooked as non-binary identities, for example, Strand 3's online survey targeted the entire LGBTI+ population of the UK aged 16 and over (3.7.2).

Strand 2 was exploratory in nature, looking to provide in-depth insights not only into the participants' views of surveys, but also the reasoning behind them (Creswell and Clark, 2007) (3.6). It also provided a space for the participants to play an active role in knowledge production by co-designing survey questions on relevant elements of sex, gender, and sexuality. Strand 3's online survey investigated whether the perspectives shared in Strand 2 were present in a larger LGBTI+ sample and tested the questions designed by the focus group participants (3.7).

The exploratory, qualitative nature of Strand 2's focus groups meant that a greater level of depth was possible in the insights it provided. In the Methodology chapter, I explained that Strand 2 was analysed using a deductive codebook with four main codes at the first level of analysis (3.6):

1. What should/should not be represented?
2. Perspectives on the significance of representation or reasons for representation.
3. Question design methods.
4. Perspectives on question design methods.

As stated previously, these codes were broken into two broad categories; matters of representation and matters of survey question (3.6). This was reflected in Chapter 5's discussion of Strand 2's findings. In both Strands 2 and 3, the participants were asked about what types of information they thought should be represented directly. In Strand 3, questions relating to how context interacts with perspectives on representation were introduced to the survey due to Strand 2's focus group participants' emphasis on the importance of context (5.2.1). Via the focus groups in Strand 2, I was able to gain insights into why different types of information were seen as more private or important to represent via surveys (5.2). In this chapter, I will highlight how these views on representation were repeated and built upon in Strand 3's survey data, as it further highlighted the contextual nature of participants' willingness to disclose information (7.2). A key point the participants emphasised was the notion of relevance: they were willing to disclose information about themselves if they thought it would have a useful application (5.2). This ties into ontological matters, as rather than seeing sex as a key characteristic with relevance in all situations, across both the focus groups and the surveys, the participants viewed sex assigned at birth as mostly relevant to medical situations (5.2 and 6.3).

In Strand 3, perspectives on question design were collected based on the online survey participants' perspectives on the questions co-produced by Strand 2's focus group participants. For each of the co-produced questions, participants were asked whether they would answer them, if they were clear and easy to understand, and if they would be represented by these questions (Appendix 7). In this way, Strand 3 gave insights into the acceptability of the co-produced questions (6.4), where Strand 2 provided in-depth insights into the focus groups' reasoning for picking specific design elements (5.3 and 5.4). Alongside this, some survey participants utilised the open text question to share insights into specific question design elements. Combining this data allowed me to move beyond just saying some questions are good or bad, but rather identifying the specific question design elements that participants preferred and the reasons why. This is beneficial, as it makes the recommendations of this research more flexible and therefore adaptable to different contexts where surveys are applied. Given the queer post-structuralist understanding of identity I take in this research, which recognises meaning as contextually produced, the production of a flexible approach to improving survey designs was key (Foucault, 1978;Butler, 2002).

Thus far in this thesis, the discussions of Strands 2 and 3's findings have been broken down in terms of representation and design. This is repeated in this analysis. However, it became apparent that tying together the perspectives on representation and question design was the importance of having the choice to be represented or not in data, in terms of self-identification. Following this, participant autonomy over their data representation should be integral to the design of all surveys. This should be a minimal requirement, which is already emphasised in data collection guidance and legislation such as the General Data Protection Regulation (GDPR) (UK Government, 2018). However, this research indicates that my participants' autonomy over their representation is currently not being respected (5.2.1 and 5.3.1). In Section 7.3.3 of this chapter, I break down the participants' views on how to respect their autonomy into five data production principles. Although these principles are not an original contribution to knowledge in themselves, my emphasis on them, based on my participants' experiences, is. I further emphasised the importance of autonomy over representation when considering how data representation links to power.

Throughout this research, the census and data collection exercises are presented as forms of biopower through which those with power control populations via categorisation (Browne, 2010;Foucault, 1978). This particularly applies to governmental data collection, which Browne (2010) argues is not only used to understand populations for the purpose of resource allocation, but also to set out the perimeters in which citizens are expected to exist. Addressing this by developing survey tools that maximise participants' ability to be represented in terms of how they know themselves is part of the queer endeavour of "making space for what is" (Crosby et al., 2012, p144).

Combining this recognition of the power of knowledge production with an awareness of the transphobic and homophobic culture in the UK, the risk of population visibility is clear. In 2015, the UK was ranked the most LGBTI+-friendly place in Europe based on ILGA's 74 point criteria (ILGA-Europe, 2023b;ILGA-Europe, 2015). In 2015, the UK was reported to have achieved 86% of LGBTI+ equality, but in 2023, this dropped to just 53%, lowering them to 17th place on the European ranking (ILGA-Europe, 2015;ILGA-Europe, 2023a). This drop in ranking was reflective of the UK's failure to ban conversion therapy, complete lack of funding for intersex organisations, hostility to LGBTI+ asylum seekers, and the intensified transphobia which has led to it being dubbed "TERF Island" (ILGA-Europe, 2023a;Lewis and Seresin, 2022).

A recent and alarming example of governmental transphobia comes from correspondence between Kemi Badenoch and the chair of the EHRC, Kishwer Falkner. As Minister for Women and Equalities, Badenoch (2023) wrote to the EHRC to clarify the definition of sex in the Equality Act (2010). In response, Falkner (2023) indicated support from the EHRC for understanding sex in the Equality Act (2010) to mean "biological sex". This could have extremely negative impacts for trans people and has been heavily criticised primarily in terms of its regressive and impractical nature (Scottish Trans, 2023;Queen and O'Thomson, 2023). The push for "biological" and "legal" conceptualisations of sex was touched on previously in regard to the debates over sex question guidance (4.2.1). Collier and Cowan (2021) presented the push for "legal sex" (documented sex) guidance as a form of "concept capture", in which the census was being utilised as an avenue to promote essentialist understandings of sex. I highlighted Falkner's (2023) letter as an example of the hostility that trans populations could become more exposed to due to heightened visibility from survey data. This hostility makes ensuring participants are informed and provide their information willingly after an assessment of risk even more crucial.

I have labelled the findings based on the integration of Strands 2 and 3 as co-produced survey practices. These are practices directly based on the perspectives on overlooked populations engaged with in Strands 2 and 3 of this research. The discussion of these practices starts with a summary of what participants thought should be represented, in what contexts, and why (7.3.1). I then highlight key question design elements that the participants promoted, and their rationale (7.3.2). I named these elements the TEMPS Question Design Standards, with TEMPS being an acronym for the question design elements promoted by the overlooked populations. Finally, I outline the Five Data Production Principles that tie both the perspectives on representation and question design together (7.3.3).

The second part of this chapter compares the co-produced survey practices to the findings of Strand 1's systematic review of current data collection practices. The purpose of this is to produce specific recommendations on how UK survey practices could be improved based on the perspectives of my participants. I begin this comparison by highlighting any elements of the current survey practices that already meet the standards of the co-produced data collection practices (7.4.1). The issues with current survey practices, as seen via the lens of overlooked population perspectives, are then broken down into two sections based on whether they are preventative or procedural. Preventative issues are those that stop participants from having autonomy over being represented or not (7.4.2). Procedural issues do not necessarily prevent participants from being represented based on how they identify or force them into ill-fitting boxes, but they may make questions harder to understand and respond to (7.4.3).

This research is particularly useful for highlighting preventive issues, but does also shine a light on some perspectives relating to procedural issues. Preventative issues stop participants from being represented accurately in all cases, so any participant highlighting them means that there is an issue that needs to be addressed. Procedural issues can be more contextual, often relating to the language used in the question. Given the size of the samples I engage with, I cannot make definitive claims on whether the procedural issues highlighted here are always seen as issues or how to address them. However, given the contextual nature of procedural issues, there is likely no one definitive solution that works in every context. Therefore, even with a much larger and more diverse sample, recommendations on procedural issues would remain difficult to make and have limited application.

Table 1 showed that the integration of the data would address the ways in which overlooked populations' perspectives on survey representation and design compared to current practices. It indicated that alongside producing specific recommendations on improving UK survey practices, I would highlight ways of involving overlooked populations in survey design processes. Through this chapter, the integral role that the participants' perspectives played in this work should be apparent. The key thing that distinguishes my engagement with participants from the quantitative, cognitive, and acceptability testing currently used to design the censuses is that people from overlooked populations co-designed survey questions from the start (2.4). Therefore, rather than working from a set of survey questions pre-designed by researchers, this research began and built upon questions made by the very people rendered invisible by current UK survey practices. Rather than asking how these populations can fit into the survey questions, I ask how survey questions can reflect these populations in a way that respects their ability to know themselves and their autonomy over their own information.

7.3. Integration of Strands 2 and 3: Co-produced survey practices

7.3.1. <u>What should be represented, when, and why?</u>

How participants feel about disclosing information differs depending on the context. This research set out to focus on population surveys, but given the significance of context to the focus group participants and its potential for highlighting how relevant or sensitive different types of information are seen to be, the online survey asked about contexts outside of this (5.2 and 6.3). This subsection summarises what types of information Strands 2 and 3's participants thought should be represented, the contextual nature of said representation, and the reasoning behind these perspectives.

As indicated by Strand 3's quantitative survey data, gender and sexuality were the types of information participants thought should be represented the most (6.3) (Table 20). There was also support for gender modality data, although this was seen as slightly more contextual, with only 38% of survey participants indicating that they would always be comfortable disclosing this data compared to 46% for sexuality and 65% for gender (6.3) (Table 21). This mostly mirrors the perspectives of Strand 2's focus group participants, although the non-binary participants did think that there was too much emphasis on gender data in some contexts (5.2.1).

Later in this subsection, I will discuss why that is. Data relating to variations of sex characteristics and sex assigned at birth were seen as more sensitive and as having less relevance in some data collection circumstances (5.2.1 and 6.3).

The focus group participants brought up a range of contexts outside of population surveys where data on sex, gender, or sexuality could be collected (5.2). They placed emphasis on the relevance of information within context, which would determine whether they would disclose it or not (5.2). Based on this, the survey participants were asked whether they were comfortable sharing specific types of information in a range of contexts (Table 21).

Across the six contexts asked about, two were found to be those participants were most comfortable sharing a range of information about and two the least. Medical situations – be that for patient care or research and non-medical research on sex, gender, or sexuality – were the contexts in which the participants were most comfortable disclosing the different types of data, including data on sex assigned at birth and sex characteristics (Table 21). Medical care or research was the only context that sex assigned at birth in which the participants were most comfortable disclosing information, with 61% stating that they would share their sex assigned at birth in that context (6.3). Once again, this is similar to the perspectives shared in Strand 2's focus groups, where medical situations were often singled out as the context where sex assigned at birth may be relevant (5.2.1). However, the focus groups enabled greater elaboration on this matter and it was indicated that not all medical situations required sex assigned at birth data, and that in some cases, requiring the disclosure of such data may put people off accessing care (5.2.1).

Employment and education were contexts in which the participants were less comfortable sharing information (Table 21). The qualitative data from the focus groups and text responses to Strand 3's online survey shine a light on the reasoning behind the different comfort levels surrounding different types of information and different contexts.

As highlighted previously, even participants generally in favour of data representation saw that it could be potentially risky (5.2.1). Therefore, the reasoning behind when they are comfortable disclosing different types of information can be seen as a calculation of benefit versus risk. Previously, the benefits of data representation were discussed in terms of matters such as validation, finding community, awareness, and meeting needs (5.2). Broadly, these all relate to matters of either relevance to application or social and political importance. The term "relevant" came up a total of 32 times across the survey responses and focus groups, all in relation to whether different types of data should be collected. Participants made it clear that they would happily provide data if they could understand why it was asked for and saw it in their best interest to provide it (5.2.1). This speaks to feminist notions of consent being embedded within power imbalances (Kovacs and Jain, 2020). Who has the power to dictate what is relevant in different contexts? If that relevance is communicated, is participants' autonomy over their information respected? Matters of social and political importance are intertwined with these judgements on relevance. I will now discuss different types of data specifically to show how this manifested for the participants in this research.

The findings from Strands 2 and 3 clearly show that participants favoured representation of gender over sex assigned at birth, outside of medical contexts (5.2 and 0). It is important to recognise that the dominance of sex questions impacts trans participants the most. Cisnormativity presumes that if someone ticks “male” in response to sex question, then their gender is “man” and the same goes for “female” and “woman”. Therefore, for cis people, no matter what the question is, both their sex assigned at birth and gender will be represented. For trans people, the use of a sex assigned at birth question over a gender question is a judgement based on biological essentialism. Viewing data collection, particularly governmental data collection, like the censuses, as a form of biopower means that this type of judgement on relevance has significance outside of the data itself (Browne, 2010). It is saying that sex assigned at birth is a legitimised basis of difference and will be a basis through which the government knows and controls its population. This links to some TERF and gender-critical concepts of biological essentialism in which sex assigned at birth is presented as an inherent fact, while gender is seen as harmful and to be challenged (Raymond, 1979;Jeffreys, 2014b). This essentialist approach undermines trans people as experts of themselves, arguing that sex assigned at birth, which, as shown in the data, the participants did not always see as relevant outside of medical contexts (5.2.1 and 6.3).

The non-binary focus group in Strand 2 was largely in favour of gender representation, but did note that gender questions do not always seem relevant (5.2.1). This reflects that, for many non-binary people, gender is a less significant part of identity and the fact that many of the gender questions they currently face may feature a binary assumption and fail to represent them (Richards,Bouman and Barker, 2017). The non-binary focus group’s discussion of gender questions not always being needed related to notions of relevance and purpose. In the Risks of Representation subsection of Chapter 5, I shared how Cameron felt that gender data may be produced but not always incorporated meaningfully into analysis. This highlights the importance of not simply relevance, but function that will be applied to a core purpose.

How to represent people with VSC requires further research. There are two reasons for this. Firstly, of the types of information investigated in this research, VSC is the only one not currently asked about in UK population surveys (4). This means that no questions have been tested at a large scale to compare against. Secondly, there were only 10 participants who disclosed having a VSC in this research (two in the focus groups and eight in the survey) (3.6.2 and 3.7.2). Further research would need to establish when data on VSC is relevant, what language to use in the question, and whether there is value in a secondary VSC question and how to design it. However, this does not mean that survey designers should ignore people with VSC, which would just reproduce the invisibility in data and policy discussed in Section 2.4.1. The participants did generally support the inclusion of questions on sex characteristics, particularly in medical settings (6.3). The focus group participants emphasised that part of the reason for supporting these questions is much needed recognition that people with VSC matter (5.2). From early on in this thesis, I have indicated how the two-sex model has rendered people with VSC invisible in a way that neglects their needs and bodily autonomy (Holmes, 2016;Reis, 2019) (2.2.1). The focus group participants linked being seen to matter in data to having foundational human rights met such as those over body autonomy (5.2.3). Asking these questions with a “prefer not to say” box, at least in medical contexts, while further engagement with people with VSC is underway could be a step towards the needs of people with VSC being more visible. Later in this chapter, I will argue in favour of a “prefer not to say” option for all questions, but in this case, it has particular importance as it allows for the inclusion of a less heavily tested question while still allowing participants control over whether they disclose that information or not.

In the question design subsection, I will touch on potential ways of representing sex characteristics that do not rely on binary sex assigned at birth questions or “are you intersex?” questions (7.2.2). This area requires further investigation, but I mention it here as it highlights an important point about conceptualisations of sex and medical relevance. In Strand 2’s trans focus group, a participant noted that although they are generally willing to provide sex assigned at birth data in medical situations, not all medical situations require it (5.2.1). This highlights the importance of understanding what significance sex characteristics can have in different medical contexts, as simply asking for someone’s sex assigned at birth may not provide relevant information. The importance of this is signified in endeavours to improve how sex and gender are included in biomedical research, such as the Medical Science Sex and Gender

Equity (MESSAGE) Project (The George Institute, 2022). Medical research and care is not the focus of this research, but these points about the nuances of relevance, particularly surrounding sex assigned at birth and sex characteristics, highlight areas that require further investigation.

Survey data that shows that not everyone is heterosexual or cisgender could be seen as queering data, as it resists normative assumptions surrounding sex, gender, and sexuality (Browne, 2010). This can be seen as the social and political foundation for the participants' support for representing sexuality and gender modality (5.2). This is reflected in the points made by Strand 2's focus group participants relating to validation, finding community, and awareness (5.2). The participants emphasised that being reflected in survey questions and data showed that they mattered, and could open up possibilities of being. This speaks to the significance of biopower and survey representation, as data collection does not simply reflect what is there but dictates what is expected to be there and therefore stating what people can be (Browne, 2010). However, it is important to recognise that support for this type of representation was still being weighed up against potential risks of data visibility (5.2). This is apparent in the fact that participants tended to be warier sharing gender modality data compared to gender and sexuality data (6.3). This could be due to the hostility shown towards trans people in the UK.

There was considerable support for asking about gender modality in a separate question to gender (5.3.1 and 6.4). There was particular emphasis on the importance of being able to choose to disclose your gender modality, as it could be seen as an intrusive question to ask or a risky one to answer. Asking for information separately was associated with having greater control over what you disclose, which I perceive as a matter of maximising participants' autonomy over their data and ability to provide informed consent equally to other participants (Kovacs and Jain, 2020) (5.3.1). Later in this chapter, I will indicate how different designs can help facilitate this choice.

I cannot know for certain why some participants in the online survey seemed less comfortable disclosing information in education and employment situations. However, it is reasonable to assume it is due to the risk versus benefit factors discussed throughout this subsection. One survey participant commented that:

> "if I was applying for a job in a large company and they asked me about my sexuality or gender so that they can analyse if these characteristics have an effect on whether or not a candidate is successful, and they made it clear that the information would have no bearing on whether or not I was hired, I will and have answered. However, if I was asked at interview, or if it was a small company that may not have formal measures in place to deal with discrimination, I wouldn't be comfortable answering." (survey participant)

This indicates that if communication of relevance to a specific application is made, participants may be more comfortable disclosing data. If there is not clear communication, participants are left to speculate about whether the data may be used to their disadvantage. As indicated previously, this was mentioned throughout the focus groups as well (5.2.1).

This section discussed specific considerations around what types of information surveys should ask, when, and why. Strand 2 and 3's data emphasised the importance of relevance and the social and political significance of different types of data. It was made clear that gender and sexuality were seen as the most widely applicable forms of data, with gender modality often being relevant and data relating to sex assigned at birth or sex characteristics being more sensitive. A key point I want to emphasise is that the need for further research should not be used as an excuse to completely ignore overlooked populations. Adopting "prefer not to say" and/or making all questions skippable across all survey questions means that participants can skip questions that may need further development while still being given some opportunity to be represented in data. This is also important to this research's broader argument that questions can always be improved and developed. There is no such thing as a "perfect" survey question, so we should not be ignoring populations while we endeavour to reach unattainable perfection.

7.3.2. Question designs and the reasoning behind them

The previous subsection highlighted what information participants are comfortable disclosing, when, and why. This subsection moves onto the types of question designs the participants favoured for disclosing this information. Given the flexible, contextual demands of population surveys, I do not promote a specific question set, but rather use this section to highlight different elements of question design that could make up a good question set.[18] To summarise the question design elements promoted by the participants, I created the acronym TEMPS, which stands for:

- Text boxes;
- Expansive options;
- Multiple option selection;
- Prefer not to say options;
- Separate questions for separate characteristics.

Broussard, Warner, and Pope (2018) conceptualise expansive gender questions as those that feature options outside the man/woman binary. This research found that including text boxes and a list of expansive options helps minimise the preventive impact of researcher bias (5.3.1). For example, if a gender question only features the options “man” and “woman”, it cannot represent anyone outside of that binary; however, if other options such as “non-binary” are included, this expands who can be represented. When reviewing previous work, I highlighted existing support for expansive question designs (Broussard,Warner and Pope, 2018;NRS, 2018;Badgett et al., 2014;Westbrook and Saperstein, 2015;Harrison,Grant and Herman, 2012;Sumerau et al., 2017) (2.4.2). In this research, the lack of expansive options or the ability to specify an identity via a text box was associated with preventing participants from being able to disclose information and misrepresenting them by forcing them into ill-fitting boxes (5.3.1). In the introduction of this thesis, I noted that one of the survey respondents stated that often they would “love to say” how they identify in a survey, but are prevented from doing so due to a lack of options (1.2).

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[18] Throughout this research, I have faced continued demand for guidance on survey question design; hence, I shared some of the information in this section via a blog post: ENGLISH, K. K. 2022. T.E.M.P.S Question Design Standards Available from: https://kenglish95.github.io/posts/2022/06/TEMPS.

Some survey designers expand their questions by including an “other” option. The participants in this research saw this as literally othering, as it was seen to indicate a lack of care about anyone who did not fall within the listed categories (5.3.2). Throughout this work, I have highlighted the power that surveys can have to construct understandings of identity and make claims of who “counts”/matters (Browne, 2010;D'Ignazio and Klein, 2020a;Cahill and Makadon, 2017;Beauchamp, 2019) (2.3 and 5.2). This can be seen in the value judgement the focus group participants attributed to the term “other” or when categories are always relegated to that additional text box option (5.3.1). In the language and ontology section of the introduction, I discussed some benefits and limitations of umbrella language that can create issues via lumping together radically different populations, which is an issue also associated with “other” categories (1.4.4). This was particularly explicit in regard to sexuality, where, in this research, some of the identities that would often be relegated to this “other” category included asexual, demisexual, pansexual, aromantic, and queer. These categories can vary significantly from each other, so compiling them all together based on what they are not makes little sense. Yes, they may represent small populations and some grouping of observations may be required during analysis, but hardcoding this into the design of the question limits the depth of analysis and can be seen as making a value judgement on who matters (5.3.2). When discussing the findings of Strand 3’s online survey, I noted that if questions with limited options were utilised, then 38% of participants’ genders would be overlooked and 29% participant sexualities (6.2).

Text data is generally more difficult to analyse than categorical data, but including a text box allows for an analysis of what participants are rather than what they are not. However, this should always be used alongside an expansive list of options since participants still perceived a value judgement in what categories were and were not listed, and the fewer the text responses, the easier the data will be to analyse (5.3). When discussing the data shared from the 2021 census of England and Wales, I will highlight that the value judgements perceived by participants hold some truth (9).

The focus group participants emphasised that survey questions often present categories as mutually exclusive when they are not (5.3). This was incorporated into the questions they designed and the ones I utilised in the survey to gather demographic data (Appendix 7). Issues associated with the conceptualisation of people in terms of one sexual identity label have been found in previous research (Galupo,Mitchell and Davis, 2015;Galupo,Henise and Mercer, 2016) (2.2.3.1). When discussing the value of expansive question designs, I highlighted the rate of respondents to Strand 3's survey that would be overlooked by limited question options (6.2). There is also a larger group of participants who may be partly represented by questions with limited options but could not be fully represented due to the inability to select more than one category. In the data from the online survey, 62.3% of participants would have had an element of their gender overlooked and at least 64% would have had an element of their sexuality overlooked (6.2). Allowing participants to represent themselves in terms of more than one category is the most radical recommendation of this research, given that none of the sex, gender, or sexuality questions reviewed in Strand 1 utilised this format, and it creates new challenges and opportunities for analysis. However, this format of question is not completely unheard of in population surveys. The 2022 Scottish Census question on disabilities and long-term health conditions prompts participants to select all that apply to them from a list of nine non-mutually exclusive options (NRS, 2020). Although not directly related to sex or gender, this indicates that multiple-option questions are possible at a large scale. Edwards and Allenby (2003) noted that the analysis of "pick any format" questions can become difficult at a larger scale but is not particularly uncommon, and provided guidance on how to utilise regression models to analyse them (2003). Participants not fitting neatly within one box may be inconvenient in terms of analysis, but that does not mean we should not try to represent them accurately. We do not know what an analysis that reflects the complexity of multiple identities may uncover. The previous section summarised why "prefer not to say" options are so important, so I will now move onto why asking about different demographics with separate questions is so crucial.

Sometimes, questions conflate characteristics when asking about more than one at a time. This can have three negative impacts:

1. It can create confusion regarding what the question is asking about, which leads to measurement invalidity.

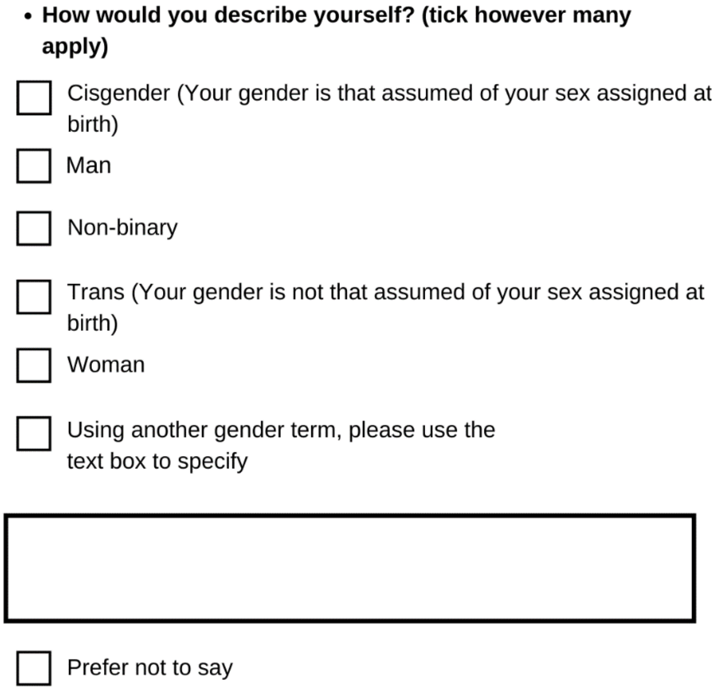
2. If it is clear what the question is asking, it may take away some of the participants' ability to choose what information they share.
3. It makes intersectional analysis examining issues on the basis of multiple characteristics more difficult.
4. It can send inaccurate messages about the nature of sex, gender, and sexuality.

The latest Australian census provides a clear example of the first issue as its use of the term "non-binary sex" created confusion due to its conflation of non-binary genders and VSC (2.4.1). This issue severely impacted the quality of the data, making it useless for both non-binary people and people with VSC (Knott, 2022). Some question designs pair gender and gender modality together. For example, the GenIUSS "current gender" question design depicted in Figure 7 presents the options "Male" and "Female" as mutually exclusive from the option "Transgender", despite trans usually being used to describe gender modality and not gender (Badgett et al., 2014). Gender is who someone is, while gender modality is how that relates to their sex assigned at birth (Ashley, 2021). Pairing these together may make it so that trans people cannot disclose one element of themselves without disclosing the other. It may also separate trans men and women from the categories of man and woman generally, which is not only a harmful and inaccurate message, but adds extra steps for researchers wishing to examine the experiences of all men and women, trans and cis alike. In the trans focus group, the participants reflected on how othering it can be when survey questions use gender modality prefixes only for trans people and not cis people (5.3). This reinforces cisnormative notions that cis people are the assumed default and that trans people do not belong to the same categories as those who share their genders.

The grouping together of different demographic characteristics can occur in how questions are discussed. Previously I noted how gender modality questions in UK censuses are sometimes referred to as gender identity questions (4.2.1). Although it is true that these questions feature a text box for trans people to state their gender, that is not its primary function. My concern is that by labelling this a gender identity question, it implies only trans people have gender and that cis people have sex. In Section 4.2.1, I tied this to Collier and Cowan's (2021) discussion of how, in an attempt to undermine trans rights, there have been attempts to establish sex assigned at birth as more legitimist than gender.

In response to the online survey, some participants promoted sex-characteristics-based questions rather than sex-category-based questions (6.4). These are questions that would ask about sex characteristics such as hormones, genitals, or chromosomes over sex assigned at birth. The potential benefits of these questions are that they do not exclude people based on gender and could lead to improved measurement validity. They also do not feed into the "sex as biological and gender as social" binary, which has been criticised as overly simplistic at best and harmful at worst by feminists such as Delphy (2005) and Butler (2002) (2.2.2). Sex category questions could be seen as an unhelpful grouping of specific traits, which leads to confusion over what specific element is relevant. However, further research is required to establish how to design characteristic-based questions in a clear manner and in what situations they would be useful and acceptable to participants. Without further research, questions could be adopted which are seen as intrusive or hard to understand, leading to a poor response rate and/or not producing the required data.

Before moving on to the next section, I wish to reflect on a key benefit of my choice to focus on design elements rather than recommend set questions. The TEMPS question design standards are more flexible than any specific question set due to their basis not only on survey data, but also the focus group data, which highlights reasons why these standards matter, which researchers can use to inform their survey designs. For example, if, rather than promoting an expansive range of options, I provided a list of acceptable options for different questions, this would risk the production of questions that do not work in other contexts and become outdated. Throughout this research, I have highlighted how understandings of sex and gender are contextually produced with shifting meanings over time and space (Foucault, 1978;Butler, 2002) (1.4, 2.2, and 3.2). The ideal application of expansive options would be constantly updating them based on the most prominent identities and language surrounding them at the time. In an annual survey, the most common text responses to a gender question could be considered as new options to the next year's gender question. This would help address the value judgement participants feel when only ever being able to identify via a text box (5.3.1).



- **How would you describe yourself? (tick however many apply)**

☐ Cisgender (Your gender is that assumed of your sex assigned at birth)
☐ Man
☐ Non-binary
☐ Trans (Your gender is not that assumed of your sex assigned at birth)
☐ Woman
☐ Using another gender term, please use the text box to specify

☐ Prefer not to say

Figure 21: Example question using TEMPS question design standards

Another example of the benefit of the TEMPS question standards is apparent when considering surveys that cannot meet all of the standards. If a survey had little room for new questions to the extent that the meeting the recommendations for separate questions for separate concepts was not possible, there are two ways to deal with this. Firstly, taking the recommendations at face value, the designer could just choose to ask about less, for example, simply representing data on gender rather than gender and gender modality. However, if gender modality is relevant to the research, this could be severely limiting. The other option is to consider why separate questions are so important. By doing so, it becomes apparent that both concepts could be asked about together if they are not presented as mutually exclusive, and participants still have control over what information they disclose. Figure 21 provides an example of a question asking about gender and gender modality at once but still meeting the needs expressed by participants that I communicate via the TEMPS standards.

This section on co-produced survey practices is based on the findings from Strands 2 and 3 combined. The first subsection discussed considerations surrounding the sensitivity of different types of sex, gender, and sexuality data. This subsection highlighted key elements of the survey question design emphasised in the focus group participants' co-produced questions and throughout the survey. By emphasising question design elements, I aimed to promote survey design influenced by my research participants that can fit within the context in which the data is being collected. The next subsection discusses data production principles that link the points about what topics should be represented to how questions are designed.

7.3.3. Data production principles

The data production principles discussed here are overarching considerations that anyone designing a survey should keep in mind. These principles are what link the participants' views on what should be represented by surveys and question design. At a glance, these seem like standard data production principles which should already be in place, but they are based on the insights the participants in this research provided due to their own experiences of being surveyed, indicating that these principles are not being executed. There are five key principles based on participants' experiences of being surveyed on their sex, gender, and/or sexuality:

1. Only ask for information you need.
2. Make it clear why you need the information you are asking for and what you intend to do with it.
3. Never assume or require information.
4. Make room for everyone in your question designs.
5. Ask for information in the format in which you plan to analyse it. Do not make assumptions based on labels or behaviours.

Following these principles helps participants make informed decisions about whether disclosing information will be in their best interest and helps ensure measurement validity. The principles all come down to the following question: Will collecting this data be helpful or harmful for those providing the data? The five principles will be compared to the principles within the General Data Protection Regulation (GDPR) (UK Government, 2018). I will also discuss them in terms of previous points about autonomy and what is being represented when we ask questions surrounding sex, gender, and sexuality. The feminist approaches to data science presented by D'Ignazio and Klein (2020b) are another lens through which these principles will be discussed.

Principle one was influenced by the common perspective amongst focus group and survey participants that unnecessary questions were being asked, particularly surrounding sex assigned at birth and, to a lesser extent, gender (5.2.1 and 6.3). From a researcher's perspective, it should be paired with principle two when surveys are being designed. Researchers should only ask for the information they require and should be able to communicate that need to their participants. This ties into the first three principles of Article 5 in the UK's GDPR legislation (UK Government, 2018). The first GDPR principle regards lawful, fair, and transparent data collection, which is the overarching endeavour to only collect data from informed, consenting participants without deceit (UK Government, 2018). The second principle is about purpose limitation, meaning that data should only be used for specific purposes communicated to those who provided the data (UK Government, 2018). The third principle is that of data minimisation, meaning that only essential information should be collected (UK Government, 2018). The research participants shared experiences of poor communication surrounding the reasons certain questions were asked and some questions seeming to be asked for no reason, suggesting a failure to meet these principles (5.2.1). The importance of these principles can be seen in this survey participant's comment:

> "I would feel happy sharing all my personal details if I were sure that the info was going to be used for queer positive things, like normalising minorities and getting rid of stigma, but I would feel uncomfortable doing so if I felt I might be discriminated against." [survey participant]

Ensuring that only essential data is asked for, from people who know why that information is needed, has benefits for researchers and participants alike. From the researcher's perspective, it may make participants more willing to disclose information, leading to greater response rates. If there is any confusion surrounding what data is being requested, knowing why the data is required may provide clarity, leading to greater measurement validity. From the participant's point of view, information about why questions are being asked and how that data will be used can enable an assessment of the risks of disclosing information. The third principle derived from this research, to never assume or require information, means that participants can act on their assessment of the risk of disclosing information.

Figure 22: Illustration for data collection principle 2: Inform participants of reasons behind questions

If participants do not have the ability to choose not disclose information via “prefer not to say” options or questions being skippable, they are left with two options if they want to protect their privacy: To lie and provide false data, or to not participate. Neither of these options benefit the research. This is not to assume that when participants want to refrain from disclosing, they will always pick the “prefer not to say” option. For example, drawing on the work of Betts, Wilmot, and Taylor (2008), Browne (2010) noted that:

> “there was an assumption that LGB people who were nervous of ‘coming out’ would use the ‘other’ or ‘prefer not to say’ option to disguise their sexuality. in contrast to this, during the lesbian, gay and bisexual focus groups participants said that if they were fearful about revealing their lesbian/gay identities they would define as straight/heterosexual in order to draw minimum attention to themselves” (Browne, 2010 p242).

Including a “prefer not to say” option or allowing participants to skip questions while still taking part maximises participants’ control over what information they do and do not share.

Not taking part in data collection to protect your privacy is not possible in the case of the legally mandated UK censuses. Consent being freely given is a key element of consent (Kovacs and Jain, 2020). The UK census process is inherently coercive, as failure to respond to the census could lead to a £1,000 fine. This is not to say that census bodies claim that census data is collected via consent, but rather to argue that the lens of feminist conceptualisations of consent are useful for highlighting issues within this current coercive approach (ONS, 2022a). Kovacs and Jain (2020) tie the neglect of consent to seeing data as a resource that exists in the world to be collected rather than something belonging to and embodied by individuals. Throughout this research, I have challenged the notion of collectable objective data, presenting data as something produced within specific contexts rather than passively collected (2.3). The legal mandate of the UK censuses and the reason that the data can be collected without relying on consent, while complying with UK GDPR law, is due to the census being deemed in the public interest (ONS, 2022a). The notion that demographic data on the entire population that can be used for a range of matters from service provision to research is in the public interest is not something I will try to refute. There are many examples of the uses that census data can have. However, potential public benefit does not render privacy unimportant or address the risks that representation and data visibility can have for oppressed groups. Anonymised census data is publicly available. This means that while it can be used for public benefit, it could also be used for other reasons as well. In the Epilogue, I demonstrate this by summarising discourse surrounding the 2021 trans population census estimates for England and Wales.

To examine and challenge power were two of the key principles of feminist data science laid out by D’Ignazio and Klein (2020b). Feminist criticisms of claims of objectivity link to the power that is being unexamined when researchers claim to be objective (Oakley, 1998;Caplan, 1988). There are several ways that power manifests in data collection exercises like the census. Who is the counter and who is being counted? Who has influence over how populations are counted? Who can choose to be represented? Who can choose to not be represented? The ability to negotiate, which means potentially having influence over the situation and being able to step away from it if a compromise cannot be found, has been emphasised as an important part of balancing power in the context of sexual consent (Kovacs and Jain, 2020;Braun,Gavey and McPhillips, 2003). This can also apply to data collection and signifies why the inclusion in the production of knowledge via co-produced survey questions within this research is so important. Engaging with overlooked populations who normally have the least power over how they are represented in data can provide them the opportunity to influence the way data is collected, which, combined with the ability to not participate or not answer specific questions, can help address the power imbalance. Rather than researchers being the knowers and the people providing their data being the known, this approach to data production attempts to make researchers and participants collaborators in the production of knowledge.

The final elements of consent I wish to discuss here are that it is a process, and it must be specific. The step of negotiating, by allowing participants a role in knowledge production, should not be seen as a one-time thing that will forever dictate how data should be produced. Throughout Chapter 2, I engaged with works that have indicated how contextual and changeable attitudes, behaviours, and language surrounding sex, gender, and sexuality can be. This requires flexible data collection tools which change with these shifting contexts. Having a contextual approach to survey design rather than a one-size-fits-all question set speaks to feminist recognition that there is no one objective form of data (D'ignazio and Klein, 2020b). The final element of consent is that it must be specific and ongoing; in the context of sexual relationships, this means that consenting to one sexual act does not mean consenting to any sexual act (Gruber, 2016;Kovacs and Jain, 2020). Applied to surveys, this means that just because someone willingly participates in a survey, it does not mean they will want to or should have to answer every question.

Thus far, I have discussed the importance of the first three data production principles in terms of them helping facilitate consensual data collection. Considering why people may not wish to disclose certain information further emphasises why the need for consent is important. As mentioned previously, all but one of the focus group participants were largely in favour of data representation, although still aware of some risks (5.2.1). One participant, referred to in this thesis as “Jess”, was more sceptical of disclosing information in surveys, seeing it as a form of “outing” oneself and saw questions on gender and gender modality as potential invasions of privacy (5.2.1). Framing disclosing information in a survey as “outing” also came up twice in the text responses to the online survey. This framing is notable as it highlights what is at stake when people are made visible in data. Being out as part of the LGBTI+ community can mean facing homelessness, unemployment, estrangement, and all forms of abuse. The need to come out signifies that a person is not an assumed default, which some may attempt to enforce on them if they are open about who they are. Being out as who you are can be extremely rewarding, but it is not a choice made without consideration.

In most cases, data is completely anonymised, so the risk of being out as an individual should be minimal. The thing that separated Jess from the other participants was less her recognition of the risk of being visible as part of the LGBTI+ community and more a lack of faith in researchers’ and data holders’ ability and willingness to protect her privacy (5.2.1). It was also highlighted that there is a risk of outing during the survey response process if other people saw someone’s responses accidentally. Participants saw this as the only good reason to be wary of asking young people for information on their gender, gender modality, and sexuality as it could potentially out them to their parents/guardians (5.2.1). Beyond individual data visibility there is also population visibility to consider.

The biopower of survey questions does not only tie into what information participants are asked for and to what extent they can choose to provide it, but also how they are asked for it. Principles 4 and 5 based on this research are about how questions are designed. As stated previously, governmental data collection exercises are a mechanism through which people are organised and expectations of demographics communicated (Browne, 2010). Principle 4, that questions should make room for everyone, is based on this and the consistent demand from participants in this research for representation (5.2 and 6.3).

Chapters 2 and 4 touched on one of the clearest examples of survey design biopower in action as it discussed the binary sex/gender questions in the UK censuses as a reflection of a wider neglect of the needs of non-binary people (2.4 and 4.3). In other words, policies and practices based around the gender binary benefit from forcing people into a binary; hence, all census participants were forced to state that they were either female or male.

Figure 23: Illustration of data collection principle 5: Ask for information in the format in which you plan to analyse it. Do not make assumptions based on labels or behaviours.

The final principle branches both the concerns of quantitative researchers and queer theorists. Quantitative researchers want the data they are collecting to answer the question they are asking (measurement validity). Queer theorists are critical of the notion of a fixed subject. Neither benefit from questions that assume that sex, gender, or sexuality labels are a direct representation of specific behaviours, perception, or attractions. Figure 23 depicts the type of false assumption made when you assume that information such as relationship status can tell you someone’s sexuality. I used this example since relationship data has previously been a way for sexuality to me made visible, which inherently rendered bisexuality invisible (Baumle, 2013). Previously, I touched on how terms such as “men who have sex with men” (MSM) and “women who have sex with women” (WSW) has been used in sexual health research to ask about sexual behaviour without sexuality labels; however, they still assume a shared understanding of what it means to be a man or woman and to have sex (Young and Meyer, 2005) (2.2.3.1). This research did not aim to investigate more specific questions about sexual behaviours. Sex characteristics were explored briefly, but only in regard to the representation of people with VSC. However, some of the survey participants used the comment box to suggest a movement away from category-based sex questions to characteristic ones, focused on the relevant traits. For example, in research on period poverty, asking whether someone menstruates rather than their sex assigned at birth could be a more direct way that does not assume all cis women menstruate or exclude trans men and non-binary people who do. Considering what information is required and asking about it in the most direct fashion can help minimise measurement invalidity based on assumptions of what it means to be part of a certain sex, gender, or sexuality category. Asking about information directly rather than inferring it from other answers also respects participants' autonomy over what information they do and do not disclose.

The five principles discussed in this section provide overarching guidance for survey designers. They are based on the insights gained from Strand 2 and 3's participants when their perspectives are considered through a queer feminist lens. When applied, these principles could help address the power imbalance between researchers and survey participants, protect participants' privacy by respecting their autonomy over what information they disclose, and can address issues of measurement validity. The second part of this chapter compares these co-produced survey practices with the current survey practices in the UK identified by Strand 1. The aim is to make recommendations specific to the UK's current population survey context.

7.4. Integrated findings from Strands 2 and 3 compared to Strand 1's findings: Comparing the co-produced practices to current practices

7.4.1. Good practice currently in use

Survey designs may be less resistant to adopting questions already in use than trying completely new question designs. This is why identifying current survey practices that already correspond well to the co-produced survey practices discussed in the previous section is valuable. Frustratingly, none of the 27 UK populations reviewed in Strand 1 feature what could be considered good practice according to the participants' perspectives. However, some surveys come closer than others, and these are the elements this section will highlight.

The inclusion of text boxes and expansive question options has seen some progress in recent years. The two best examples of this are the gender identity questions in the Scottish Household Survey (Ipsos MORI, 2019) and the sexual orientation questions in the UK censuses from 2021/2022 (NISRA, 2021a;ONS, 2019b;NRS, 2020). The Scottish Household Survey gender identity question features the ability to state another identity alongside the options "Man/Boy" and "Woman/Girl" (Ipsos MORI, 2019). It was the only sex/gender question that allowed participants to identify outside the binary and specifically state a gender identity. There were two other sex/gender questions that allowed participants to state that they were outside the binary, but forced them into a generic third category due to their lack of text boxes. The gender modality questions in the English and Welsh (ONS, 2019a) and Scottish (NRS, 2020) censuses in 2021/2022 featured a text box allowing trans participants to state their gender identity, but as stated previously, this conflated gender and gender modality in a way that limited participants' control over their information, made intersectional analysis more difficult, and potentially promoted unhelpful narratives surrounding who does and does not have gender (4.2.1). The Scottish Household Survey's gender identity question was a skippable question, so the only way that it could be improved upon would be with the inclusion of more options and the ability to select more than one (Ipsos MORI, 2019). The sexual orientation question utilised in the 2021/2022 censuses has the same strengths and weaknesses as the gender identity question in the Scottish Household Survey thanks to its inclusion of a text box and the ability to skip the question (NISRA, 2021a;ONS, 2019b;NRS, 2020). This was an improvement upon previous surveys which either did not ask about sexual orientation or tended to lump anyone who was not bisexual, gay, lesbian, or straight into an “other” category.

Throughout this thesis, I have highlighted the debate over the sex/gender divide and how that has manifested in recent UK census debates. In terms of the co-produced survey practices from this research, this ties to three things:

1. Survey designers should be clear about what data they want and why.
2. Participants see sex characteristics and sex assigned at birth data as more sensitive and less relevant than gender data outside of medical situations.
3. Lack of clarity can lead to different demographics being conflated and asked about in one question, limiting participants’ control over their information and leading to confusion over what information is being provided.

Here lies another benefit of the Scottish Household Survey gender identity question: it was one of only four questions reviewed that utilised the term “gender”. It was apparent as early as the 2001 UK censuses that the way the term “sex” was being used was leading to confusion (Diversity Solutions, 2008). Despite this, most of the surveys reviewed either used the term “sex” or avoided using any terms whatsoever. As stated previously, question guidance in which sex is defined has been presented as a solution within the UK censuses, despite considerable conflict surrounding it and evidence suggesting that participants do not engage with guidance (ScotCen, 2019) (4.2.1). Given all of this, and the participants in this research’s wariness of sex-focused questions, the terminology of gender such as that used in the Scottish Household Survey could be useful.

The gender question in the Northern Irish Life and Times Survey has some of the strengths of the Scottish Household Survey gender question, but is held back by the way it combines gender and gender modality into one question (Ipsos MORI, 2020). The question set in the Life and Times Survey is similar to the two-step sex and gender question first created by The Transgender Health

Advocacy Coalition (Singer,Cochran and Adamec, 1997) (4.2.1). The two-step question set first asked about sex assigned at birth and then asked a secondary question about current gender identity. Figure 7 presents a two-step question set from The GenIUSS Group, which conflates gender and gender modality by presenting “Transgender” as a mutually exclusive category from “Male” and “Female” (Badgett et al., 2014). The Life and Times Survey also does this, but instead of one transgender category, it features the categories “Male to female transgender” and “Female to male transgender” (Ipsos MORI, 2020). This is a slight improvement as it identifies that trans men and trans women have different genders, but it still needlessly excludes trans men and women from the gender categories they share with cis men and women. One of the themes across both the focus groups and survey was issues with conflating different types of demographic data. When discussing focus group perspectives on question design formats, I shared a quote from “Jess”, who thought that gender questions that separate cis men and women from trans men and women was drawing a line between those seen as normal and not normal (5.3). This conflation is why the Scottish Household Survey gender identity question is a better example of good practice. However, due to the recommendations of the SGDWG, the next Scottish Household Survey will not feature the expansive gender identity question, instead employing the lived sex and trans status question set utilised in the 2022 Scottish census (Halliday, 2021) (4.2.1).

Participants’ ability to choose to disclose information tends to be respected when it comes to gender, gender modality, and sexuality questions. Although this research argues for “prefer not to say” options in all survey questions, it is important to acknowledge possible value judgements made over what information is demand-essential and what is demand-optional. In the focus group discussing the representation of people with VSC, the participants thought that if any questions were to be mandatory, it would be important that questions on VSC were as well to show that they were significant. Given this and the sex/gender divide discussed throughout this research, it is notable that all of the 27 surveys reviewed featured sex/gender questions and only four of them specifically stated that participants could skip them, while all of the gender modality questions were skippable and most of the sexuality ones (4). This conflicts with participants' perspectives that sex data is particularly sensitive and could be seen to enforce the notion that sex assigned at birth is more legitimate and important than gender, gender modality, or sexuality.

Clearly, the few examples of good practice apparent in the 27 surveys reviewed in this research all come with caveats. The following two sections will delve further into specific conflicts between the co-produced survey practices and current survey practices.

7.4.2. Preventative issues

The concept of preventative issues is used here to refer to survey design features which completely prevent certain populations from having the choice to be represented or not in the current survey practices in the UK. These manifest in four core ways:

1. Not asking for that type of information;
2. Limited options and no text boxes;
3. Mandatory questions;
4. Assuming categories are mutually exclusive.

The first issue is most severe in terms of representing whether people have a VSC/are intersex or not. None of the 27 surveys reviewed in this research asked about sex characteristics or identifying as intersex. Although this research featured a very limited sample of people with VSC, there were indications that being represented by surveys could be useful to them. There was an emphasis that representation in medical contexts would be useful for having their needs met. In terms of larger population surveys, the focus group participants emphasised that being recognised as worth counting in surveys could shine a light on issues facing people with VSC, such as "genital-normalising" surgeries on children and the exclusion or the policing of their bodies in sport (Nelson, 2018;ILGA-Europe, 2023a). The only mention of intersex people at all came in the form of guidance alongside the sex question in the Crime Survey for England and Wales (ONS, 2019b), which, as mentioned previously, confused the needs of people with VSC with those of non-binary people (4.2). In Chapter 2, this type of conflation between people with VSC and non-binary people came up with the Australian census's use of the "non-binary sex" option being the most recent example of the confusion this causes (ABS, 2022) (2.4.1).

This conflation is notable since, after people with VSC, non-binary people were the most overlooked populations due to the binary nature of the sex/gender questions employed in most of the surveys reviewed. The gender modality questions adopted in the English and Welsh and Scottish censuses could have addressed this thanks to their inclusion of text boxes for trans people's genders (NRS, 2020;ONS, 2021b). However, even if a non-binary person wrote the specific gender terms they use in that box, they were still required to select either "Male" or "Female" in the sex question. As discussed previously, the guidance differed in the English and Welsh census from the Scottish census. If the guidance was followed then in Northern Ireland, participants in England and Wales would respond based on their documented sex, whereas in Scotland, it was based on lived sex. However, as stated previously, there is no way of telling whether participants followed the guidance and evidence indicates that very few people even read online guidance, so it is unclear on what basis trans participants answered the sex question (ScotCen, 2019) (4.2.1). Given all of this, out of the 27 surveys reviewed, only the 2019 Scottish Household Survey allowed people outside the binary to indicate a specific gender identity and not also be forced to select a binary option (Ipsos MORI, 2019).

The final preventative issue manifested across all of the questions reviewed in Strand 1. They all required participants to select one option. Outside of the gender modality questions, this makes a false assumption that everyone fits within only one of these categories. Genderfluid people, for example, may identify as both men and women. In the sexual orientation questions with text boxes, someone may wish to select one of the options and write in another, such as queer, asexual, or aromantic. The analysis of multiple tick-box questions can be slightly more complicated, but is also not uncommon in population surveys. For example, the 2021 Scottish census featured a question on disability or long-term health conditions that prompted participants to select all options that applied to them (NRS, 2020). Adopting this type of question design when asking about gender and sexuality would allow for more detailed data collection that accurately reflects how people identify.

This section has summarised the four key preventative issues manifesting in the 27 surveys reviewed in Strand 1. The specific examples given here are just some of the ways that these issues manifested. For instance, although there were no questions on people with VSC, sex/gender questions were the only ones asked in all 27 surveys, meaning that the issue of information not being asked for also manifested in relation to gender modality and sexuality. The next section will move on to issues that do not completely block participants' choices to disclose information or not, but can make it more confusing to do so.

7.4.3. Procedural issues

Procedural issues are issues surrounding the communication of the questions. Unlike preventive issues, the small sample involved in this research could not come to conclusive decisions on what to do about these problems. For preventative issues, any mention of the issue from participants is evidence of a barrier that should be torn down. Procedural issues are much more contextual as they tend to relate to the clarity of questions. The procedural issues in the surveys reviewed here all relate to question wording.

Language issues have been discussed extensively regarding the use of the terms "sex" or "gender". The ontologies a question is based on can link to preventive issues when they are based around binary notions of sex/gender. However, as indicated in Strand 1's discussion of current survey practices, terms like "sex" and "gender" are used ambiguously without a clear ontological stance (4.2.1). The guidance debate can be seen as an attempt to address this. However, given that the question options do not differ between the lived sex or documented sex questions, I consider the sex question guidance debate to be a procedural issue as neither guidance was mandatory, so it does not limit participant responses, but it may inform them. I previously highlighted that although neither guidance was a solution to the issue of question ambiguity, the lived sex guidance was preferable due to respecting trans people's ability to know themselves and having the potential to provide more consistent data on comparable trans people (4.2.1). Beyond that, there are issues with representing populations in terms of documented sex, sex assigned at birth, or biological sex. Even if these questions were lawful and all participants were willing to answer them, understanding a population in terms of these concepts and no other elements of sex or gender limits the value of the survey data for understanding gender inequalities.[19] For example, Schilt and Wiswall's (2008) research found that gendered workplaces and pay inequalities impact trans men and women in similar ways to cis men and women, with cis and trans women alike being paid less, having less authority, and experiencing more workplace harassment. To be able to identify and understand issues such as this, we require gender and gender modality data. Although further research is needed on the application of gender questions, the reaction of the participants in this research to sex questions combined with the contention and confusion surrounding them in the UK censuses leads me to think that the language of gender is the way forward.

The other key procedural issue surrounded gender modality questions. There is a divide between "trans status" questions and "gender matching sex assigned/registered at birth" questions: both of these collect data on gender modality, but have different pros and cons. The divide centres largely on whether a descriptive approach using less familiar but potentially more inclusive language is better than using an identity label (trans) that is well known. The participants in this research were fairly divided on what worked best. As indicated by the co-produced gender modality questions, the focus group participants tended to favour a descriptive approach. This was due to the term "trans" not being used by everyone who does not identify with their sex assigned at birth, as in work by Darwin (2020). However, they also suggested that trans status questions such as that used in the 2021 Scottish census, which featured an inclusive definition of what being trans meant, could address this issue (NRS, 2020). The survey participants reacted positively to the co-produced gender modality questions, but some did use the comment box to write a preference for the use of the term "trans". One also stated that for people with more fluid

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[19] Sex assigned at birth or biological sex questions cannot be mandatory questions for all participants in data collection exercises such as the census due to being in breach of the GRA (2004). See Section 4.2.1 for more detail on this.

gender identities, identifying with their sex assigned at birth may be contextual and that a “Sometimes” option could be beneficial. The next subsection will show that this is likely to be an area of further investigation for survey designs in the future, although perhaps not for the right reasons.

When discussing the data production principles, I touched on the importance of negotiation between researchers and participants. A practical way this could be implemented in the current survey design process would be by adopting an element of co-production, like this research, in the early design stages. In Chapter 2, I touched on how cognitive, acceptability, and quantitative testing is utilised in the design of large-scale surveys such as the UK censuses (2.4.3). The issue with this type of question testing is that the question language and options are often selected by the researcher themselves and then shown to participants. What I am suggesting is that prior to all other testing, researchers engage with populations they normally struggle to represent or completely overlook and co-produce questions with them. I did not design this research with the intent of testing my own methodology for wider application, so I am not stating that researchers have to go about this the same way I did, but some attempt to allow overlooked populations to be actively involved in the design process could help minimise the impact that researcher assumptions and bias have on question design.

Thus far, I have highlighted key conflicts between the co-produced survey practices based on Strands 2 and 3 and the current survey practices identified by Strand 1. The next section will examine the impact some of these survey design choices have had on the data shared from the English and Welsh 2021 census.

7.5. Integrated data conclusion and summarising recommendations

This chapter outlined what I learnt from engaging with overlooked populations throughout this research. As emphasised throughout, following the co-produced survey practices based on their insights may not address all barriers to survey representation, but it will be a step towards data collection that respects autonomy over disclosure. Before concluding this thesis, I wish to summarise my core recommendations with particular emphasis on the current areas of weakness within UK survey design.

The core recommendations would be to follow the TEMPS question design and the five overarching data production principles. UK survey designers specifically need to explore the value of non-binary-inclusive gender questions. Moving beyond the sex guidance debate and exploring the potential of gender questions could help UK survey designers meet the data production principles since, rather than requiring extensive guidance on unintuitive definitions of sex, they can be direct about asking for gender data and why. Further exploration surrounding the data representation needs of people with VSC is required. However, in the meantime, adding optional yes/no questions on whether participants have a VSC/are intersex could provide an opportunity for those who want data representation to be visible (7.2).

Each survey designer should establish what data is required and only ask for it in the format that it will be used. However, based on this research, a four-question set could cover the majority of sex, gender, and sexuality needs. These questions are:

1. A gender question with expansive options, a text box, and a “prefer not to say” option.
2. A question counting the number of people with VSC and/or who identify as intersex with a “prefer not to say” option.
3. A gender modality question with a “prefer not to say” option.
4. A sexuality question with expansive options, a text box, and a “prefer not to say” option.

8. Conclusion

This research investigated how differences in terms of sex and gender should be represented by UK population surveys. It did this via an exploratory sequential mixed-methods research design which centred the perspectives of populations overlooked by current survey practices. To conclude this thesis, I provide an overview of the research process, explaining how it answered my research question and highlighting its key contributions.

The first strand of my exploratory sequential mixed-methods design reviewed 27 UK population surveys to produce a conceptualisation of current survey practices to compare against. Strand 1's findings highlighted what was asked and how. I used this to make explicit the ontological assumptions surrounding sex, gender, and, to a lesser extent, sexuality that UK population surveys make. This enabled the categorisation of populations in terms of whether they meet those assumptions or not. This led to the following four populations being conceptualised as overlooked:

- People with variations of sex characteristics (VSC)
- People whose gender did not match that assumed of their sex assigned at birth (trans people)
- People whose relationship to gender does not neatly fit within the man/woman binary (non-binary people)
- Anyone whose sexual orientation cannot be fully described using one of the following terms: bisexual, heterosexual/straight, homosexual/gay, or lesbian

These populations became the target groups for Strand 2's exploration of the perspectives of overlooked populations. Strand 2 engaged with 20 participants across four focus groups, each concerned with the representation of a different overlooked population. These groups provided a space for participants to discuss their views about survey representation and to co-produce survey questions to better represent them.

Strand 3 then engaged with a larger sample of 347 LGBTI+ people aged 16 and up from across the UK via an online survey. The purpose of the survey was to determine whether views about survey representation were shared between the focus group participants and this larger sample, and to test the questions designed by the focus group participants.

In Chapter 7, I integrated the data from the three strands to produce the final findings of this research. Strands 2 and 3 were combined to create co-produced survey design recommendations, which were then compared against the current survey practices identified by Strand 1’s review of UK population survey design. This was carried out with the aim of highlighting similarities and differences between the approaches to create specific recommendations as to how to better represent populations in terms of sex and gender. Before summarising the key benefits and outcomes of this approach, I am first going to discuss some of its limitations.

8.1. Evaluating this research: Limitations and future directions

Survey representation is a broad-ranging issue with relevance to many different fields. This research took an ambitious new approach to this topic but, like any single piece of research, could not cover everything. This section highlights some of the limitations of this work and provides suggestions on how they could be rectified in future research.

All of the data production in this research began after the start of the COVID-19 pandemic and during the implementation of lockdown restrictions in the UK. In the Methodology chapter, I highlight that, in many ways, the way in which I adapted to this proved to be of benefit to the research (3.6.1). Conducting Strand 2’s qualitative exploration online rather than in person meant that resources could be reallocated directly to participants, paying them for their time. However, the pandemic did place strain on the ability to recruit participants, which may have contributed to the limitations in Strand 2 and 3’s samples (3.6.2 and 3.7.2).

With LGBTI+ organisations already stretched for capacity, the avenues for recruitment were reduced. This, in addition to the online fatigue many people were experiencing at the time, likely had an impact on uptake. Undertaking this research emphasised the importance of early and extensive community engagement, since despite asking a large range of organisations to share the online survey, only a minority did so (Appendix 8). If I were to conduct this research again, I would prioritise earlier engagement with LGBTI+ groups to develop stronger working relationships ahead of undertaking the research. This is particularly true for organisations based outside of Scotland with whom I did not have as strong ties.

In the Methodology chapter's sections relating to the recruitment and samples of Strands 2 and 3, I illustrate the strengths and weaknesses of my approach with thesis samples (3.6.2 and 3.7.2). I was able to engage with participants based across the UK with a range of different relationships to sex, gender, and sexuality. However, the samples lack diversity in terms of ethnicity and, to a lesser extent, age. This, combined with the overall size of the samples, limited the extent to which an intersectional analysis was possible. In Chapter 6, I note that although statistically significant relationships surrounding perspectives on survey representation and different demographic factors were not found, this may be due to the small sample sizes of different demographic groups (6.3). However, as this research is exploratory in nature, my intention was not to represent all perspectives held by overlooked populations on survey representation. The sample limitations therefore did not prevent this research from producing important and useful findings, or answering its core questions. Further research with larger and/or different demographic samples would provide a fuller picture of perspectives surrounding survey representation.

Recognising these sample limitations is important as it helps readers understand the context of the data produced in this research and highlights where further research could be useful, which will be expanded upon later in this chapter. The following chapter summarises the key contributions of this work.

8.2. Contributions and setting the stage for further work

This research has a broad range of contributions to ontological and methodological debates. It makes explicit the assumptions within current survey practices and considers their ramifications with a focus on overlooked populations. The perspectives of overlooked populations highlighted ways to progress towards useful survey designs which meet the queer endeavour of "making space for what is" (Crosby et al., 2012, p.144). The contributions of this work are discussed in terms of the following:

1. Making ontological assumptions in surveys and their ramifications explicit.
2. Including participants in the knowledge production process.
3. Approaches to maximising participant autonomy.
4. The creation of specific practical recommendations for improving UK survey practices.

Before examining these specific contributions, I begin by highlighting the ways this research emphasised the importance of survey representation as a field of power and study. Recognising the power of surveys is required to address issues related to their application.

Utilising Browne's (2010) queer post-structuralist account of governmental statistics, this research understands population surveys as a form of biopower that sets the boundaries in which populations are known and controlled. Throughout this thesis, I highlighted methodological, social, and political mechanisms of this power and their ramifications. I drew upon Compton's (2018) work, which emphasised the importance of LGBTI+ population estimates for assessing the representativeness of research (2.3.2). A lack of LGBTI+ population estimates means we cannot determine how applicable research findings are on a larger scale, which delegitimises otherwise useful research on LGBTI+ people. What is more, if population estimates misrepresent or exclude elements of a population, we risk applying data in ways that fails to meet everyone's needs.

My engagement with overlooked populations evidenced the significance of population surveys and the power they can have. In Chapter 5's discussion of the exploratory qualitative strand, I highlight how participants saw survey representation as potentially validating and, when carried out with a clear purpose in mind, an indication that they matter (5.2). This mirrors sentiments shared throughout the literature, that being counted is an indication of being considered in decision making and legitimised (Beauchamp, 2019; Browne, 2010; Cahill and Makadon, 2017; D'Ignazio and Klein, 2020a) (2.3 and 5.2). The participants linked this to the political significance of survey representation, seeing the recognition of their existence as an important first step to addressing the inequalities they face. This was particularly important to the participants with VSC, who I identified as the most overlooked by UK survey practices (4.2 and 5.2.3). Recognising the biopower of surveys also means recognising them as a space where ontological claims can be enforced. The legal or lived sex debate surrounding the latest UK censuses is an explicit example of the political significance of surveys. Collier and Cowan (2021) argued that proponents of ontological stances which present sex assigned at birth (or at least affirmed by the government) as more important or legitimate than gender utilised the census guidance to lay claim on the definition of sex (4.3.2). They referred to this as a form of concept capture which would impact how sex and gender are understood broadly, not only within the census (Collier and Cowan, 2021).

The legitimising force of surveys also means that there is the risk of queer lives being designed out if questions are construed surrounding cisgender/heterosexual norms (Guyan, 2021). A core contribution of this work is how it identified the assumptions currently reinforced by UK survey practices. Strand 1’s conceptualisation of current practices provides a useful contribution to the discourse by making explicit the assumptions made in common survey formats, and identifying who these approaches overlook. The dataset I produced by systematically reviewing the design of 27 UK population surveys conducted since 2011 is a useful source of information for anyone looking for large-scale population data relating to sex, gender, or sexuality in the UK. The dataset indicates the information sought and how it was asked for, which can help data users identify the best sources for population estimates. By categorising populations in terms of propensity to be overlooked in various forms of data collection, I evidence the restrictive assumptions made in current survey designs. These insights can be used by researchers to more accurately identify those who are represented by, and absent from, their research. This, in turn, can help challenge taken-for-granted norms surrounding sex and gender by recognising that not everyone fits within said norms.

Throughout this research, I have evidenced the restrictive assumptions within survey designs, and the importance of participants having autonomy over their data. In the Literature Review, I highlighted a number of ways in which survey questions are tested by census bodies (2.4.3). I identified that all of the approaches started with questions designed by the researchers. The questions are then shown to participants to gauge their responses (quantitative testing), how acceptable they considered them to be (acceptability testing), and how they would answer the questions (cognitive testing) (2.4.3). Informed by feminism’s emphasis on the value of lived experience and participant insight, I considered alternative approaches that actively involve those traditionally overlooked in surveys in the knowledge production process as an approach to maximising participant autonomy and tackle restrictive assumptions (Collins, 2002; de Vries, 2015; Haraway, 2020). Utilising Strand 2’s focus groups as a space for participants from overlooked populations to co-produce questions that better represent their identities provides an example of this recommendation in action.

Thus far, I have highlighted how this research evidenced the power of population surveys to legitimise populations and meet their needs, thus warranting expansive and flexible survey questions. However, despite being largely in favour of survey representation, the participants in this research did not assume that representation was inherently beneficial. Rather, they placed emphasis on everyone having the ability to choose what information they disclose based on the purpose of the data. Previous work has recognised that data representation is not inherently helpful and could, in fact, put marginalised groups at risk by informing those who wish them harm (Beauchamp, 2019). This work speaks to that, since even participants in favour of data representation understood that it is not without risk and therefore prioritised understanding the purpose of a survey’s questions before answering them. In Section 7.3.3, I discuss survey design through the lens of consent. This links both to the risks of representation and the harm of not having the ability to be represented. This framing is a useful contribution to discussions surrounding data production as it recognises that if some participants are not considered in the design of questions and consequently cannot accurately represent themselves, then they do not have equal ability to consent (Kovacs and Jain, 2020). In other words, the participants of this research largely promoted expansive, flexible questions designs that give everyone the choice to be represented based on how they know themselves.

The engagement with overlooked populations informed the creation of the Principles for Data Production and TEMPS Question Design Standards. The Principles for Data Production, in many ways, mirror common data production principles (UK Government, 2018). In this sense, they are not original to this research. However, they can be differentiated on the basis that they are grounded in the researcher's engagement with overlooked populations. Furthermore, while the principles mirror elements of the UK GDPR (UK Government, 2018), my participants' responses seem to reflect a lack of consideration of those principles in existing survey design. Therefore, the value beyond the principles themselves is the demonstration of their importance to the overlooked populations engaged with in this research and the ways in which they are not currently considered.

The TEMPS Question Design Standards provide practical but flexible ways to maximise participant autonomy over how they are represented by surveys. They were designed based on the elements of survey design favoured by the participants in Strands 2 and 3. The in-depth insights provided by Strand 2's qualitative exploration was utilised here to pinpoint not only useful question designs, but the reasons why the participants from overlooked groups preferred them. This allowed me to identify specific elements of question designs and explain why they are useful, allowing a tool for survey designers (TEMPS) to be devised that can be flexibly applied to different situations. This provides a more useful tool than a question set, as it is adaptable to constraints in survey sizes, changes in language, or changes in the broader ontologies of sex and gender.

The final contributions of this work can be seen in the comparison of the practices promoted via the engagement with overlooked populations and the current survey practices identified by Strand 1. I noted in the introduction to this research that I took inspiration from Baumle's (2018) account of the potential for how, by bringing together contrasting perspectives, the demography of sexuality could produce more rigorous insights. My research did this by holding current survey practices to standards set by those most overlooked by them. This has the benefit of producing recommendations that centre overlooked populations' needs while also being informed by the perimeters of current survey practices. This enabled me to identify elements of survey design practices that meet the needs of overlooked populations already in circulation. Although, as indicated in Section 7.4.1, there are very few of these "good practices" already in place, it is still useful to highlight them as they indicate survey questions already tested at a large scale whose further promotion would better represent overlooked populations.

Categorising the issues with current survey practices by whether they have an exclusionary or diminishing impact has two core benefits. In the first instance, this approach draws attention to the impact that the different types of limitations have on the resulting data. Exclusionary issues completely prevent some populations from being represented in survey samples. Diminishing issues lead to inconsistency in how representative survey samples are and/or the authenticity of how certain populations are portrayed. This is often a difference of populations being overlooked (preventive) or misrepresented in some way (procedural). Both issues are important to address but require different approaches to mitigate.

The second benefit of this approach is its centring of the ways in which different populations engage with surveys. This is central to demonstrating a key argument of this research, being that survey questions are only useful if participants are willing and able to engage with them in a way that researchers understand. Put another way: questions must ask for data that participants are willing to provide, enable participants to provide answers which accurately represent themselves, and be designed in such a way that researchers understand the data they are collecting (measurement validity). Considering the ways in which participants engage with questions is essential.

In summary, this work provides practical recommendations on improving survey representation in terms of sex and gender. It also contributes to discussions surrounding the links between ontological assumptions of sex and gender and how we produce knowledge.

8.2.1. Further Research

This research represents the early exploratory stages of work that could be conducted in this area. Further research based on this work can be split into two categories: continuation of data collection, and research into the analysis and application of sex, gender, and sexuality population estimates. The first type of research would look further into how population estimates are produced, not only on sex and gender, but also sexuality. This research briefly touches on some elements of sexuality, but primarily in terms of how it links to sex/gender. Designing research that looks at specific elements of sex, gender, or sexuality could provide further depth into this area of investigation.

This research began with the ambitious endeavour of promoting better ways to represent UK populations in terms of sex, gender, and sexuality using surveys. However, as the research progressed, the focus narrowed to look more specifically at sex and gender. Given this, further research specifically examining representation in terms of sexuality could be beneficial. Areas underexplored in current survey representation discussions are the representation of those with little or no sexual (asexual) or romantic (aromantic) attraction, and different relationship formations outside of monogamy. Outside of work on sexuality, more focused research on the perspectives and needs of people with VSC could also be beneficial. Utilising this research as a starting point, a large-scale study that actively centres the perspectives of people with VSC and the intersex community is essential for establishing whether and when they want/need to be represented in data and the best ways to do so. Not all further research on data collection related to this would have to focus specifically on different elements of sex, gender, and sexuality.

When discussing the methodology of Strand 1, I noted that the accessibility of survey engagement was not a focus of this work (3.5). However, this is an important area of investigation to ensure everyone has the same ability to choose how they are represented in data. It could also have relevance to understanding why the Scottish 2022 census had a much lower response rate than the other recent UK censuses and previous Scottish censuses (Office of Statistics Regulation, 2023). As indicated previously, data collection research could look less at question designs and more at the design process itself. This could establish how elements of co-production could be implemented by large-scale survey producers such NISRA, NRS, and the ONS.

Research moving beyond the matter of data production could explore matters of both analysis and application. One of the less commonly used elements of question design promoted in this research is the “tick all that apply”-style question. Further research could investigate how this data could be analysed and what it may uncover about the complexity of sex and gender. The same could be said about research into the analysis of text-based data in large-scale surveys. In terms of research into the application of population estimates, I would like to investigate the social and political significance of these estimates. I have argued that data itself is neither positive nor negative, so research into application can help ensure it is used for the benefit of marginalised populations.

When this research began, the question sets of the 2021/2022 UK censuses were still being deliberated upon. It was apparent in discussions at that time that some populations were being overlooked (in the case of people with VSC) and others were increasingly debated (in the case of trans people). It was these perceived limitations combined with the lack of guidance surrounding survey design on sex, gender, and sexuality that prompted this research. As this research ends, the 2021/2022 census data is starting to be released. For the first time, the UK has census estimates on gender modality and sexual orientation. However, despite this being a significant step forward in terms of data representation, there remain major shortcomings. I hope that this research can promote not only more inclusive research questions in the future, but also engagement with the new census data that considers those who continue to be overlooked and/or misrepresented by it.

9. Epilogue: The 2021 census data from England and Wales

At the time of writing, census data from the Northern Irish and English and Welsh censuses from 2021 has started to be released. Due to the English and Welsh census featuring both a sexual orientation and a gender modality question, this subsection will focus on that. The estimates of the trans population in England and Wales are the first of such scale in the UK, and despite the gender modality question being relatively uncontroversial, the same cannot be said for the data it produced. There will be three elements to this section: population estimates, text data application, and the reaction to the size of the trans population.

Both the gender modality and sexual orientation questions in the English and Welsh 2021 census were optional and aimed at people aged 16 and over (ONS, 2021b). Here, 94% of the 16+ population responded to the gender modality question and 92.5% the sexual orientation question (ONS, 2023b;ONS, 2023e). The gender modality question asked whether the participant’s gender was the same as their sex registered at birth. The ONS refers to people who responded “No” to this question as “trans” and, for clarity, I will do the same (ONS, 2023b). Data from the gender modality question indicated that 0.5% of the participants were trans (ONS, 2023b). Forty-five percent of the trans participants did not use the write-in box to indicate their specific gender (ONS, 2023b). This reinforced my choice not to count gender modality questions as gender identity questions in Strand 1, as a large proportion of the people who should use it as such do not and were still required to select from a binary sex question. Of the participants who used the provided text box, 0.10% of the entire census sample were trans men, 0.10% were trans women, 0.06% specifically stated that they were non-binary, and 0.04% stated another gender (ONS, 2023b). When discussing the way the ONS interpreted the text data, I will touch on how the distinction between non-binary and the other gender groups may have been made.

One of the main “gender identity” census data updates from the ONS breaks down the gender modality responses on the basis of age and sex (ONS, 2023c). This indicates that despite having some data on gender identity, the sex question data remains a key basis for disaggregation. However, it also shines a light on just how unsuccessful the use of sex question guidance is in terms of it allowing researchers to know on what basis participants answered the question. Following the sex question guidance for the English and Welsh census would mean that only trans people with a GRC would select a sex that relates to how they live. Despite this, 66.16% of trans women selected “Female” and 67.50% of trans men selected “Male” in response to the sex question (ONS, 2023c). In total, this means at least 64,000 trans men and women responded to the sex question based on how they live, even though many trans people do not even pursue obtaining a GRC. There is no way of telling on what basis the non-binary and other gender identity participants answered the sex question, or any of the 2.9 million people who did not respond to the gender modality question (ONS, 2023b). I have already established that documented or legal sex guidance is unfit for the purpose of informing participants and promoting measurements’ validity (4.2). If the purpose of the guidance was to police how trans people represent themselves, then the census data indicates it fails at that as well. This is yet another reason why survey designers should be working with overlooked populations to represent them on their terms rather than attempting to force them into boxes into which they will not fit. The approach adopted in this research is one example of how overlooked populations could have a more active role in knowledge production.

The sexual orientation question found that 89.4% of participants were straight/heterosexual, 1.5% were gay or lesbian, and 1.28% were bisexual (ONS, 2023d). They also included specific percentages for the three most common text box responses, which were pansexual (0.23%), asexual (0.06%), and queer (0.03%) (ONS, 2023c). Around 0.2% of participants specified another sexuality (ONS, 2023c). As discussed previously, this research promotes questions that develop over time to fit current needs (7.3.2). The most common text box responses to the 2021 sexual orientation question could be adopted as more expansive options for future sexual orientation questions.

Younger people were more likely to select categories that did not meet cis/het assumptions. The 16- to 24-year-old age bracket had the highest proportion of trans people (1%) and of those who indicated sexual orientations other than straight (6.91) (ONS, 2023e;ONS, 2023c). One of the great potentials of the census adopting gender modality and sexual orientation questions is seeing if/how the overall demographics of the UK shift with each generation. Although there is not space here for a full analysis of the census data where I disaggregate the LGBTI+ population based on other demographics, this is another value of this census data. It allows for a more nuanced look at populations across different intersections of experience.

Throughout this research, I have emphasised the need for text boxes in which participants can list options not listed that apply to them. However, this census data shows that collecting the data is not enough. So far, the ONS has not shared the raw text data and/or an extensive list of the identity labels written in by participants. In correspondence with them, I asked whether the text data for the gender modality question would be released, and their reply was:

> "At this stage, we are not going to publish the raw write-in responses, or numbers of responses other than the published estimates, as we plan to provide more information on these in future. At present we are focussing on the publication of analysis and multivariate datasets."[20]

Due to potential anonymity concerns, it would be untestable if they never share the raw write-in responses, but an extensive list of responses and an updated gender modality variable with all those written responses included would be beneficial for a more accurate insight into how the participants identified. This could be achieved in a similar way to the inclusion of the common written-in sexual orientations: pansexual, asexual, and queer. Beyond needing more insights into the range of options written in the text boxes, it is unclear how the text box data was interpreted. I asked how that would be handled if participants wrote more than one identity label in the gender text box, and they stated that:

> "The "non-binary" figure only includes participants who wrote-in "non-binary" or variations, such as "nb" or "enby"."

This indicates a possible undercounting of not just the non-binary population estimate, but also that of the trans men and women. In this research,

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[20] This was derived from correspondence with the ONS directly via the following email address: census.customerservices@ons.gov.uk.

participants state genders such as “Trans man, demiboy” and “Non Binary Queer Femme”, which, in the English and Welsh 2021 census, may have just been placed under the “different gender identity category” with no way to know the participants’ specific gender. Given the lack of documentation on this matter, it is fair to assume a similar approach has been taken with the handling of the sexual orientation data. Given what this research has found about participants identifying with more than one identity label, it could be the case that some of the census participants responded to the gender modality and sexual orientation text boxes with more than one label. However, due to the rigid confinement of participants to one category, data may be lost.

The final element of the new census data I wish to discuss is the reaction to the estimate of the trans population, particularly amongst those holding TERF, gender-critical, or otherwise trans-antagonistic perspectives. I want to start this discussion with an expectation I had since first becoming aware of the census as a trans rights battlefield. I expected that, regardless of what size the UK censuses estimated the trans population to be, transphobic individuals and groups would claim that there are both too many and too few trans people. By this, I mean they would present being trans as a social contagion impacting populations they perceive as vulnerable such as young people, people assigned female at birth, and neurodiverse people (Ashley, 2020;Dunkerson, 2023). At the same time, they would claim that either there cannot be that many trans people or that there are too few to matter or dedicate resources to. I’m sad to say I was right in this expectation. In articles by Sullivan (2023) and Briggs (2023), the size of the trans population is both problematised and questioned. Rather than engaging with their arguments surrounding the data, here I will focus on their criticisms of the census design itself. These criticisms emphasise a key importance of this research.

Throughout this research, I have argued for the continual development and scrutiny of survey questions. We should not take data for granted and need a flexible approach to survey design that fits the world around us. I also listed the wording of the gender modality question as a procedural issue which requires further research (7.3). However, the recent calls for further investigation into the English and Welsh gender modality census question are based on narrow assumptions of who can and cannot be trans. Sullivan (2023) and Biggs (2023) both suggested that due to the wording of the gender modality question, people with fewer qualifications or with English as a second language may have mistakenly recorded themselves as trans. The statistics that Biggs calls upon are that:

> “one in every 67 Muslims is transgender? That adults with no educational qualifications are almost twice as likely to identify as transgender as university graduates? That the London boroughs of Brent and Newham are home to higher proportions of transgender people than Brighton and Oxford… Black people are four times more likely than white people to identify as transgender.” (Biggs, 2023)

Biggs (2023) goes on to note differences in the distribution of trans people in the census to that of signatures on a pro-GRA reform petition and referrals to the Tavistock’s Gender Identity Development Service, which is a gender identity clinic working with children and young people. Neither of these can be seen as a reliable reflection of the size or demographics of the trans community. Signing a GRA reform petition requires internet access, information about the GRA, and the desire for GRA reform. This is not something all trans people possess. By the same token, referral to Tavistock will not be evenly distributed amongst trans youth as factors such as access to information, parental support, and GP support could have an impact. The way education is brought up also infers a causal relationship in which those with less education are more likely to misunderstand the question and state they are trans when they are not. It could also be the case that the barriers trans people face within education could be hindering their attainment. For example, 9% of the trans participants featured in Stonewall’s School Report had experienced death threats at school (Bradlow et al., 2017). Given that young people are more likely to be trans, there will also be a proportion of the trans population without qualifications simply because they are in the process of getting them. Until the ONS provides datasets that allow for the disaggregation of gender modality data across more than location and one other variable at a time, then the true relationship between other demographics and gender modality cannot be known.

The gender modality census questions are new, and with any new survey question, there may be errors that need to be worked on. I have emphasised throughout this thesis that I think that survey designers should conduct more engagement work to develop their questions. This question may have been misunderstood by some people and could be improved upon. However, this is a new question which has never been asked at such a scale in the UK and with the anonymity of the census. Given this, it may uncover populations that are overlooked by more targeted surveys, which, if anything, is the core value of the census. Almost everyone responds to it, so people are far less likely to be missed out.

The extent to which the statistics shared by Biggs (2023) are surprising is also overstated and steeped in the image of trans people being white, educated atheists who live in queer hubs such as Brighton. This goes back to a point emphasised in my engagement with sexuality literature, which is that assumptions about population demographics can be recreated in an exclusionary way in how we collect and interpret data (2.2.3). An example of how the unexpected nature of the data is overstated can be seen in Biggs's presentation of the disaggregation of the trans population by ethnicity. One in 67 Muslims being trans sounds like quite a lot, but the census data also indicates that Muslims only make up 15.13% of the trans population; meanwhile, Christians make up 36.17% and people without religions 35.65% (ONS, 2023a). Furthermore, although some people may have misinterpreted the gender modality question, that does not mean that there is an overestimation of the trans population overall. There were 11 times as many people who did not answer the gender modality question in the 2021 census than there were participants who indicated they were trans (ONS, 2023b). It is impossible to tell the gender modalities of these people, but given the transphobic context of the UK, it is reasonable to suspect some of them will have been trans people unwilling to out themselves in the census. There also may have been trans people who stated that their gender was that of their sex registered at birth to avoid outing themselves.

In April 2023, the Office for Statistics Regulation published a letter stating that alongside further analysis from the ONS, they would be reviewing the gender modality data from the census (Humpherson, 2023). As stated, I welcome more in-depth analysis and transparency surrounding census data production, and further review and consideration of data quality can hopefully ensure reliability in the future. That being said, it is important to be aware of narratives surrounding how big the trans population is expected to be or who is expected to be a part of it to prevent these narratives having a biasing influence on how data on the trans population is produced and understood. The context in which these narratives surrounding the demographics of the trans population have been allowed to grow was enabled by the questionable survey design choices. This emphasises another reason for extensive survey design co-development and testing: it helps minimise the questioning of marginalised populations. No matter what, there will always be those who question trans people's legitimacy, and using realisable population estimation tools means not adding fuel to the fire.

In this epilogue, I have provided a brief overview of some of the census data based on the new questions that motivated this research. I also engaged with more critical perspectives on the trans population estimates and the questions that produced them. The purpose of this epilogue was to further contextualise this work and indicate three key aspects. First, by discussing how the ONS has been sharing the census data, particularly text responses to the sexual orientation and gender modality questions, I highlighted that simply producing useful data is not enough if it is not shared in usable ways.

I engaged with more critical perspectives on the trans population in the census to make a key point clear: survey data is neither inherently positive nor negative for marginalised groups. This research does not provide ways to create "good" data that will inherently help the populations who are at most risk when visible. Rather, this research should be seen as part of the first step toward creating data that can be utilised for progress, but only if applied in useful ways. Knowledge regarding the size and characteristics of a population can be useful. However, the size of a group should not be the basis for dictating their rights.

Finally, in highlighting how criticisms of question design tie to undermining population estimates and questioning who does and does not count, the importance of this research is clear. Research such as this, that seeks to improve upon question designs with clear and transparent reasoning, based on engagement with relevant populations, leads to questions that are less easily picked apart. This produces data that is harder to undermine and therefore more impactful for the populations it represents.

10. Appendices

Appendix 1: List of surveys reviewed in Strand 1

Survey name	Location	Source of information
Scottish Census 2011	Scotland	Scotland's census 2011 (NRS) Website listed on census form and the Wayback Machine to see what it was like in 2011
English and Welsh Census 2011	England and Wales	2011 Census Household Questionnaire (ONS) Website listed on census form and the Wayback Machine to see what it was like in 2011
Northern Irish Census 2011	Northern Ireland	Household Questionnaire Northern Ireland 2011 (NISRA) Website listed on census form and the Wayback Machine to see what it was like in 2011
Scottish Census 2022	Scotland	Scotland's Census 2022 Question set
English and Welsh Census 2021	England and Wales	2021 English and Welsh Individual Census Questions Source of guidance: ONS census help page Note: The version of the guidance in the data set is the final version. There was a previous version in the early days of the census being live.
Northern Irish Census 2021	Northern Ireland	2021 Northern Irish Census Questionnaire Source of guidance: NISRA census help page

		Note: The version of the guidance in the data set is the final version. There was a previous version in the early days of the census being live.
Annual Population Survey	UK	LFS Questionnaire 2020
British Social Attitudes Survey	England, Scotland and Wales	British Social Attitudes 2019 Documentation of the Blaise Questionnaire
Citizenship Survey	England and Wales	Communities Study 2010/11 Questionnaire
Community Life Survey	England	Community Life Survey Technical Report 2019/20
Continuous Household Survey	Northern Ireland	Continuous Household Survey 2019/20 Questionnaire
Crime Survey for England and Wales	England and Wales	2019-20 Crime Survey for England and Wales Questionnaire
English Household Survey	England	English Housing Survey Questionnaire Documentation Year 11 (2018-19)
Family Resources Survey	UK	Family Resources Survey Question Instructions 2018-19
General Lifestyle Survey	England, Scotland and Wales	General Lifestyle Survey: 2011: Appendix E
Health Survey for England	England	Health Survey for England 2019 Questionnaires, field documents and measurement protocols
Living Costs and Food Survey	UK	Living Costs and Food Survey Volume B: The Household Questionnaire User Guide
Northern Irish Life and Times Survey	Northern Ireland	Questionnaire

National Survey for Wales	Wales	National Survey for Wales 2019-20 questionnaire
National Travel Survey	England	National Travel Survey 2019 Technical Report
Opinions and Lifestyle Survey	England, Scotland and Wales	Opinions and Lifestyle Survey Classificatory Questions January 2019
Scottish Crime and Justice Survey	Scotland	SCJS 2018/2019 Questionnaire and User Notes
Scottish Health survey	Scotland	The Scottish Health Survey 2020 edition telephone survey
Scottish Household Survey	Scotland	Scottish Household Survey: 2019 Questionnaire
Time Use Survey	UK	Lockdown Time Use Screener and Diary Survey (UK, May 2020)
Welsh Health Survey	Wales	Welsh Health Survey 2015 Interview documentation
Workplace Employment Relations Survey	England, Scotland and Wales	Workplace Employment Relations Study 2011

Appendix 2: List of organisations contacted to share call for participants

Name of organisation	Location of organisation	Who the organisation engages with	Shared it
LGBT Foundation	UK	LGBTI+ people	
LGBT Switchboard	UK	LGBTI+ people	x
Pride Sports	UK	LGBTI+ people	x
Albert Kennedy Trust	UK	LGBTI+ homeless youth	
The Proud Trust	UK	LGBTI+ people	
Mermaids	UK	Trans and gender diverse young people	
UK Black Pride	UK	LGBTI+ people of African, Asian, Caribbean, Latin American and Middle Eastern descent	
OIIUK	UK	People with VSC	
Intersex UK	UK	People with VSC	
The BAME LGBT Charity	UK	Black, Asian and minority ethnic LGBTI+ people	
Black Out UK	UK	Black gay, bisexual and trans men	x
Stonewall UK	UK	LGBTI+ people	
Imaan	UK	LGBTI+ Muslims	
Gal-Dem	UK	People of colour with marginalised genders	
Glitter Cymru	Wales	Black, Asian and minority ethnic LGBTI+ people	
LGBT Youth Scotland	Scotland	LGBTI+ young people	x
The Equality Network/Trans Alliance Scotland	Scotland	LGBTI+ people	x
Rainbow Project	Northern Ireland	LGBTI+ people	
Cara Friend	Northern Ireland	LGBTI+ people	
Gender Jam NI	Northern Ireland	Trans young people	
Transgender NI	Northern Ireland	Trans people	x
Portal bookshop	England	LGBTI+ people	x
Sayit	England	LGBTI+ people	x
Gays the word	England	LGBTI+ people	

Note: The organisations with an x in the “Shared it” column either emailed me directly to confirm they were sharing the call for participants directly or retweeted the call on Twitter. More of these organisations may have shared the call and not told me. There were also a number of organisations, particularly in Scotland, who shared without me contacting them.

Appendix 3: Call for participants

3.1. General call and accompanying text

☐ Call

☐ For

☑ Participants

Representing sex, gender and sexuality in the UK

I am looking for online interview and focus group participants to discuss survey questions on sex, gender and sexuality. All participants must be 16 or over, live in the UK and meet one or more of the following criteria:

- You're not a man or woman
- You don't identify with how you were assigned at birth
- You have a variation of sex characteristics
- You don't identify as straight, gay, lesbian or bisexual.

Everyone who completes an interview or focus group will receive a £15 gift voucher with opportunity to earn a further £5 voucher.

If you meet the participant criteria and would be willing to participate in an online interview or focus group contact me at: k.english.1@research.gla.ac.uk

University of Glasgow

College of Social Sciences

Social media text:

1: 15/6/2020: Twitter, Instagram, and Facebook: Call for paid research participants! #LGBTIResearch #PrideMonth2020 #CallForParticipants #nonbinary #genderqueer #genderfluid #agender #trans #transgender #intersex #VSC #queer #LGBTQI #FocusGroup #Interview #Survey #Census

2: 23/6/2020: Twitter: A common issue with LGBTI+ research is lack of engagement with people of colour. Due to this and the overwhelmingly white response so far I will be prioritising engaging with POC when selecting

participants for focus groups #LGBTIResearch #PrideMonth2020
#CallForParticipants

3: 23/6/2020: Twitter: So far had lots of interest from Scotland and England but little from the rest of the UK. If you meet the criteria, would like to participate in a paid focus group and live in Northern Ireland or Wales get in touch!
#LGBTWales #LGBTNorthernIreland #Intersex #Trnas #NonBinary

4: 7/7/2020: Twitter : Still need participants from Northern Ireland. If your intersex, trans, non-binary or your sexuality is overlooked and would like to talk about how your represented in surveys please get in touch. #NorthernIreland
#LGBTI #CallForParticipants #FocusGroup

Email:

Hello,

I'm a researcher from the University of Glasgow currently conducting research on how surveys should represent differences of sex, gender and sexuality in the UK. As an agender queer person, I have first-hand experience of not being accurately represented by surveys. I want to include others like me in the production of data about our communities. To do this I am conducting focus groups and interviews with people who are overlooked by population surveys in the UK. I was wondering if your organisation would help share
my call for participants via your social media accounts. I have attached
the call for participants here and also left a link to my tweet about the research.

Best,

Kirstie (they/them)

(accompanied with link to the call for participants tweet and the image)

3.2. VSC specific call and accompanying text

☐ Call

☐ For

☑ Participants

I am looking for people with variations of sex characteristics to participate in an online focus group on how you're represented by surveys. The focus group will last an hour and a half at most and be conducted over zoom. All participants must be 16 or over and currently live in Wales, Scotland, Northern Ireland or England.

Everyone who completes a focus group will receive a £15 gift voucher with opportunity to earn a further £5 voucher.

If you meet the participant criteria and would be willing to participate in an online focus group contact me at: k.english.1@research.gla.ac.uk

Representing sex, gender and sexuality in the UK

University of Glasgow

College of Social Sciences

Social media text:

1: 16/7/2020: Twitter, Instagram, and Facebook: People with variations of sex characteristics, also referred to as intersex people, are overlooked in UK surveys. I'm looking for paid focus group participants to discuss their perspectives on this.

#VSC #Intersex #DSD #FocusGroup #CallForParticipants #Research

Appendix 4: Participant information sheet, consent form and questionnaire for Strand 2

Participant information sheet

Name of Researcher: Kirstie English
Title of research: How should survey measurements represent differences of sex, gender and sexuality in the UK?

* Required

1. Email address *

Introduction

I am a postgraduate researcher, conducting research on survey measurements of sex, gender and sexuality in the UK. This research is funded by the University of Glasgow's College of Social Sciences scholarship. The following information sheet outlines what my research is and what your possible involvement in it would be.

What is the purpose of this research?

This research aims to produce recommendations on how survey measurements should best represent the diversity of sex, gender and sexuality in the UK. It aims to do this by working with those most overlooked by current survey measurements to identify issues with current measurements and potential ways to improve them. I want to help create inclusive and respectful surveys that accurately represent our lived experiences of sex, gender and sexuality.

The information provided in this research will be used in my doctoral thesis and potentially future publications. All information shared with the public will be completely anonymised unless you have stated otherwise.

Do you have to take part?

No you do not. Your participation is completely voluntary. If you choose to take part in this research, you will be free to stop at any time, including during or after the interview or focus group you are selected for. After the interview or focus group, you can ask that your information is withdrawn from the study by emailing k.english.1@research.gla.ac.uk. It should be noted though that this research has multiple stages each informing the next. The final stage of this research is an online survey which your contributions would help shape if you take part. If you withdraw from this research after December 1st 2020 you won't be quoted directly or featured in summaries of the participants involved but your contributions may have informed the questions in the online survey.

Why have you been invited to take part?

You have been invited to take part in this research due to having one or more of the following characteristics which were found to be overlooked by current UK surveys:

- You're not a man or woman
- You don't identify with how you were assigned at birth
- You have a variation of sex characteristics
- You don't identify as straight, gay, lesbian or bisexual

All participants must be 16 or over and live in the UK.

What will happen if you choose to take part?

If you choose to take part, you will be asked to sign a consent form and fill in a short questionnaire about yourself. You will then be asked to take part in an online focus group or interview via Zoom. You will be provided with a link to the Zoom chat, which you can access via smartphone, tablet or computer.

All interviews and focus groups will last around 1 and a half hours and touch on your thoughts and experiences of the measurement of sex. gender and sexuality. Focus groups will feature around 4-8 participants while interviews will just be the two of us talking about the measurement of sex, gender and sexuality.

All interview and focus group participants will have the option of further involvement in this research. If you consent to further engagement, I would retain your contact details and send you a summary of the interview or focus group you were involved in and then the final recommendations of this research. You would be prompted to provide feedback on both.

Who will have access to the information you provide?

Your contact details will only be accessible by me. The interview and focus group audio recordings will be heard by myself and a transcriber. Once they have been transcribed, they will be completely anonymised and the audio files destroyed. Myself and my supervisors will have access to the transcriptions but no one else. In the final write up of this research, I may take direct quotes from the transcriptions. Only I will have access to your questionnaire responses and feedback if you choose to have further involvement in this research, both of these will be summarised in any write up of this research and your feedback may be quoted anonymously. The only reason your information will be shared out of these circumstances is if you share something that causes concern for your safety or the safety of others.

Where will information be stored and how long will it be kept?

All information provided during this research will be kept on my secure University of Glasgow provided OneDrive and only accessed via password-protected devices. Your contact details will be retained until the interview or focus group is completed. If you consent to further engagement with this research they will be retained until I have provided you with the research’s final recommendations. Once your contact details have been deleted all correspondence with you will be as well. The audio recordings as mentioned previously will be destroyed after they have been transcribed.

Any remaining identifying information will be destroyed after the submission of my doctoral thesis. Anonymised transcripts, questionnaire responses and feedback will be retained for to ten years on the University of Glasgow's data repository. Only I will have access to these files, for potential use in further publications.

Compensation

All interview and focus group participants will receive a £15 gift vouchers. If you consent to further involvement in this research and provide feedback on the summary of your focus group or interview and the recommendations of this research you will receive a further £5 gift vouchers.

Researcher contact details:

If you have any issues with how this research is being conducted please contact the College of Social Sciences Ethics Officer, Dr Muir Houston, email: Muir.Houston@glasgow.ac.uk . For any questions or comments contact me at the details provided below. Thank you for taking the time to read this information sheet.

Researcher contact details:

Kirstie English
Sociology, College of Social & Political Sciences
28 Bute Gardens,
Glasgow
G12 8RS
k.english.1@research.gla.ac.uk

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nema.dean@glasgow.ac.uk

Consent form

Your answer to the following question will be taken as a deceleration of your consent

2. Do you wish to participate in this research? *

Mark only one oval.

○ I do not wish to participate in this research

○ I want to participate in just an interview or focus group with no further engagement *Skip to question 3*

○ I want to participate in an interview or focus group and to provide feedback on later elements of this research *Skip to question 4*

Focus group or interview participants

3. Please indicate which of the following are true for you *

Check all that apply.

☐ I confirm that I have read and understood the Participant Information Sheet provided to me

☐ I understand that my participation is voluntary and I am free to withdraw

☐ I understand that my contact information will be deleted after I have participated in an interview or focus group

☐ I understand that no one other than the researcher will have access to my contact information

☐ I consent to the focus group or interview I participate in being audio recorded

☐ I understand that any audio recordings will only be accessible to the researcher and their transcriber

☐ I understand that all information provided will be anonymised and that I will be referred to using a pseudonym

☐ I understand that after I have completed an interview or focus group I will be sent a £15 gift voucher

☐ I consent to the anonymised information I provide being used for the researcher's doctoral thesis and any further publications they pursue

Skip to question 5

Further engagement participants

4. Please indicate which of the following are true for you *

Check all that apply.

☐ I confirm that I have read and understood the Participant Information Sheet provided to me
☐ I understand that my participation is voluntary and I am free to withdraw
☐ I understand that my contact information will be retained until the end of this reserach
☐ I understand that after the interview or focus group I participate in I will be contacted twice more
☐ I understand that no one other than the researcher will have access to my contact information
☐ I consent to the focus group or interview I participate in being audio recorded
☐ I understand that any audio recordings will only be accessible to the researcher and their transcriber
☐ I understand that all information provided will be anonymised and that I will be referred to using a pseudonym
☐ I understand that after I have completed an interview or focus group I will be sent a £15 gift voucher
☐ I understand that after I have provided feedback on a summary of the interview or focus group I participated in and the recommendations of this research I will receive a further £5 gift voucher
☐ I understand that any feedback I provide to the summary or recommendations will be anonymised and potentially quoted in this research
☐ I consent to the anonymised information I provide being used for the researcher's doctoral thesis and any further publications they peruse

Skip to question 5

Participant questionnaire

The following questions will be used to provide context to what you say in the focus group or interview you participate in. Please feel free to skip any questions you do not wish to answer.

5. What is your name?

____

6. What pronouns do you use? (select however many apply)

Check all that apply.

☐ she/her
☐ he/him
☐ they/them
Other: ☐ ____________________

7. What age are you?

Mark only one oval.

○ 16-17
○ 18-24
○ 25-34
○ 35-44
○ 45-54
○ 55-64
○ 65-74
○ 75 or older

8. Where in the UK do you live?

Mark only one oval.

○ Wales
○ Scotland
○ Northern Ireland
○ England

9. How would you describe the area you live?

   Mark only one oval.

   ○ Urban
   ○ Rural

10. What identity labels (if any) would you use to describe your relationship to gender? (e.g. man, woman, non-binary etc...)

11. Do you identify with the sex you were assigned at birth?

    Mark only one oval.

    ○ Yes
    ○ No

12. Do you have a variation of sex characteristic?

    Mark only one oval.

    ○ Yes
    ○ No

13. What identity labels (if any) would you use to describe your relationship to sexuality? (e.g. straight, gay, asexual etc...)

14. Do you consider yourself to have any disabilities?

    Mark only one oval.

    ○ Yes
    ○ No

15. If you indicated yes to the previous question and wish to specify your disability please do so here:

16. Do you have any accessibility or additional support needs that must be met so you can participate in this research?

17. How would you describe your ethnicity?

18. Do you have a faith or religion?

Mark only one oval.

○ Yes
○ No

19. If you indicated yes to the previous question and wish to specify your faith or religion please do so here:

20. How would you describe your class background? (e.g. working or middle class)

Closing Statment

Thank you for taking the time to read over the participant information sheet and the consent form. I hope this research causes you no distress but if you do find yourself in need of support the following resources might be useful to you:

Helpline for LGBTQ+ people: Switchboard: LGBT+ helpline:
https://switchboard.lgbt/
0300 330 0630

Mental health support:Samaritans:
https://www.samaritans.org/
116 123

Appendix 5: Example questions shown in focus groups

5.1. VSC Focus Group

Question from Strand 1: The Crime Survey for England and Wales (2019-2020)

What is your sex?

If you’re not sure how to answer, for example you are intersex, you could use the sex registered on your official documents, such as passport or driving licence, or whichever answer you prefer.

A question about gender identity will follow.

Female

Male

Prefer not to say

Do not wish to answer

(ONS, 2019b)

Expansive questions: Equality Network: The Variation of Sex Charatertics and Intersex Survey

(Everyone in the survey has VSC, this question is asked after a question on if participants have a specific name for their variation)

If no, is your variation to do with: (please tick all that apply)

Chromosomes

Internal Reproductive organs

Externa genitalia

Secondary sex charactertics

Hormones

I don’t know

(Equality Network, 2019b)

5.2. Trans and Non-binary Focus Groups

Common question: Binary sex question

What is your sex?

Female

Male

(Also noted that in some cases this question based on an interviewers response, so may be based on assumption.)

Expansive question: Scottish Health Survey (2018)

How would you describe your gender identity? (tick ONE box)

Man/Boy

Woman/Girl

In another way

If you would like to, please write in the other words you would use below: [provided text box]

(ScotCen, 2018)

Gender modality question: Scottish census 2022

Do you consider yourself to be trans, or have a trans history?

- This question is voluntary
- Answer only if you are aged 16 or over
- Trans is a term used to describe people whose gender is not the same as the sex they were registered at birth
- Tick one box only

No

Yes, please describe your trans status (for example, non-binary, trans man, trans woman): [provided text box]

(NRS, 2020)

5.3. Overlooked Sexualities Focus Group

Common Question: Sexual orientation question with no text box

Which of the following best describe how you think of yourself?

Heterosexual/straight

Gay/lesbian

Bisexual

Other

(Mentioned to participants that these questions tended to be for people 16 and up and were optional)

Expansive question: Sexual orientation question with text box: Example provided from UK 2021/2022 census

Which of the following best describes your sexual orientation?

- This question is voluntary
- Answer only if you are 16 years or over
- Tick one box only

Straight/Heterosexual

Gay or Lesbian

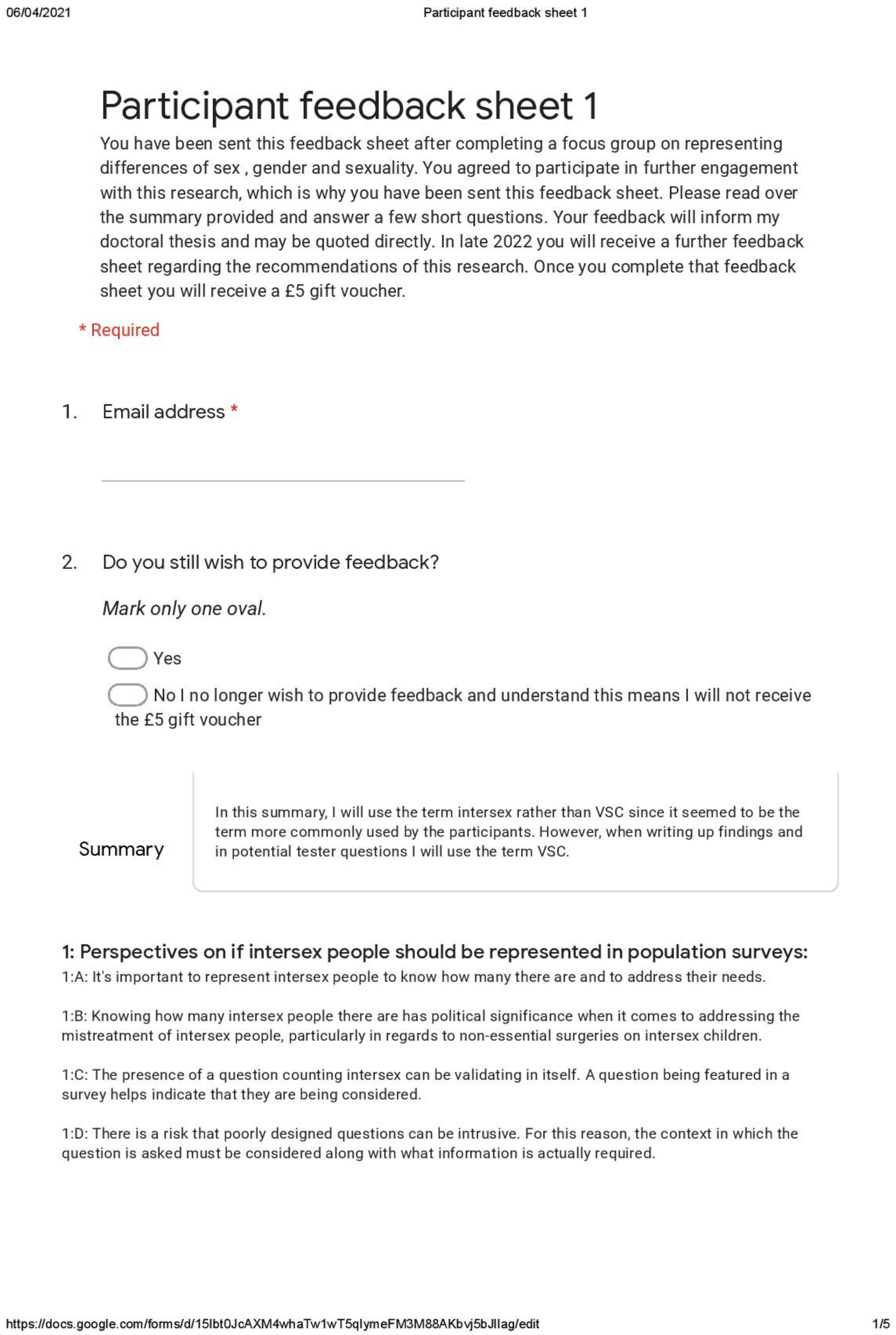
Bisexual

Other sexual orientation, please write in: [text box provided]

(NRS, 2020)

Appendix 6: Feedback sheets

6.1. Feedback sheet for people with VSC



06/04/2021 Participant feedback sheet 1

Participant feedback sheet 1

You have been sent this feedback sheet after completing a focus group on representing differences of sex , gender and sexuality. You agreed to participate in further engagement with this research, which is why you have been sent this feedback sheet. Please read over the summary provided and answer a few short questions. Your feedback will inform my doctoral thesis and may be quoted directly. In late 2022 you will receive a further feedback sheet regarding the recommendations of this research. Once you complete that feedback sheet you will receive a £5 gift voucher.

* Required

1. Email address *

____

2. Do you still wish to provide feedback?

Mark only one oval.

○ Yes

○ No I no longer wish to provide feedback and understand this means I will not receive the £5 gift voucher

Summary

In this summary, I will use the term intersex rather than VSC since it seemed to be the term more commonly used by the participants. However, when writing up findings and in potential tester questions I will use the term VSC.

1: Perspectives on if intersex people should be represented in population surveys:

1:A: It's important to represent intersex people to know how many there are and to address their needs.

1:B: Knowing how many intersex people there are has political significance when it comes to addressing the mistreatment of intersex people, particularly in regards to non-essential surgeries on intersex children.

1:C: The presence of a question counting intersex can be validating in itself. A question being featured in a survey helps indicate that they are being considered.

1:D: There is a risk that poorly designed questions can be intrusive. For this reason, the context in which the question is asked must be considered along with what information is actually required.

https://docs.google.com/forms/d/15lbt0JcAXM4whaTw1wT5qIymeFM3M88AKbvj5bJIlag/edit 1/5

2: Perspectives on how intersex people should be represented in population surveys:

2:A: Emphasis was placed on questions being mandatory since the data is so significant.

2:B: If being intersex is asked about it should be its own question, not another option added onto a sex or gender question. This is because intersex people can be any gender and can cis or trans.

2:C: Indicated that two questions would be useful. The first simply asking if someone is intersex and the second asking if they have "born or chromosomal differences". I assumed this was asking if the fact their intersex was apparent at birth or not. Please correct me if I have misinterpreted this.

3: Other key points

3:A: Conflating intersex and trans people is never helpful since people can be intersex and cis or trans.

3. Does this summary accurately portray what was said during your focus group?

Mark only one oval.

○ Yes it is completely accurate
○ It is somewhat accurate
○ No it is not accurate at all

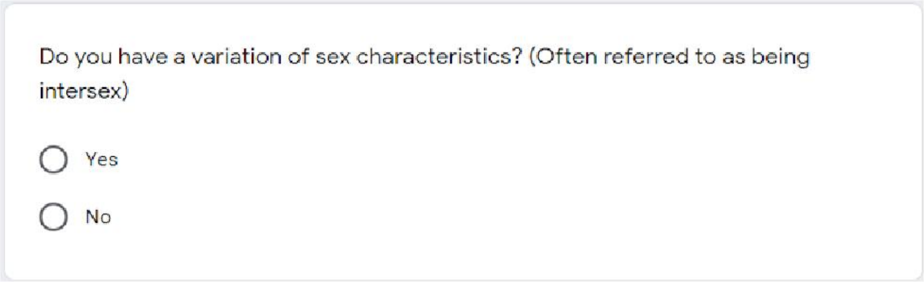
4. If you thought the summary was not completely accurate could you please elaborate?

5. Other participants argued in favour of questions being optional. I was wondering if you could provide further elaboration on why you think mandatory questions may be more appropriate?

Tester question

The following questions have been designed using your input in the focus group. If you wish to answer the tester questions you may but it is not required. They are included simply to show you how they would appear to survey respondents.

6. Tester Question 1: The following question would only be asked when relevant to the research. Does this meet the question standards you set in the focus group?



Do you have a variation of sex characteristics? (Often referred to as being intersex)

○ Yes

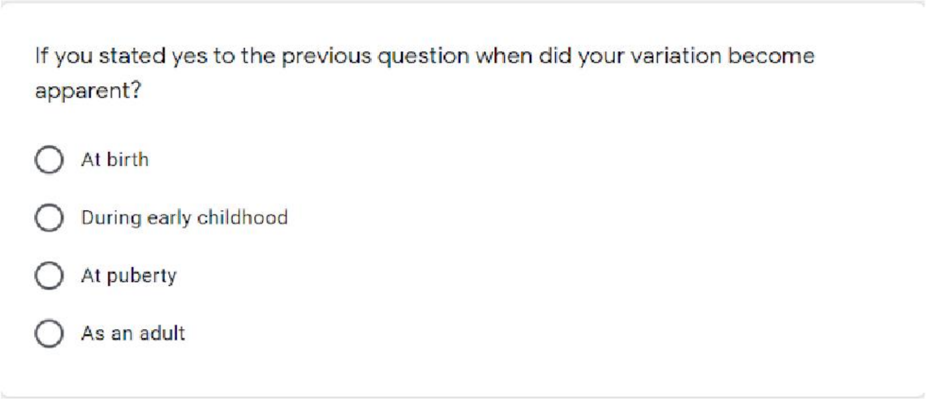
○ No

Mark only one oval.

○ Yes, this is an ideal question
○ This question should we changed slightly
○ No, this isn't a suitable question at all

7. If you thought Tester Question 1 was not an ideal question could you please explain why?

8. Tester Question 2: The following question would only be asked when relevant to the research. Does this meet the question standards you set in the focus group?



If you stated yes to the previous question when did your variation become apparent?

○ At birth

○ During early childhood

○ At puberty

○ As an adult

Mark only one oval.

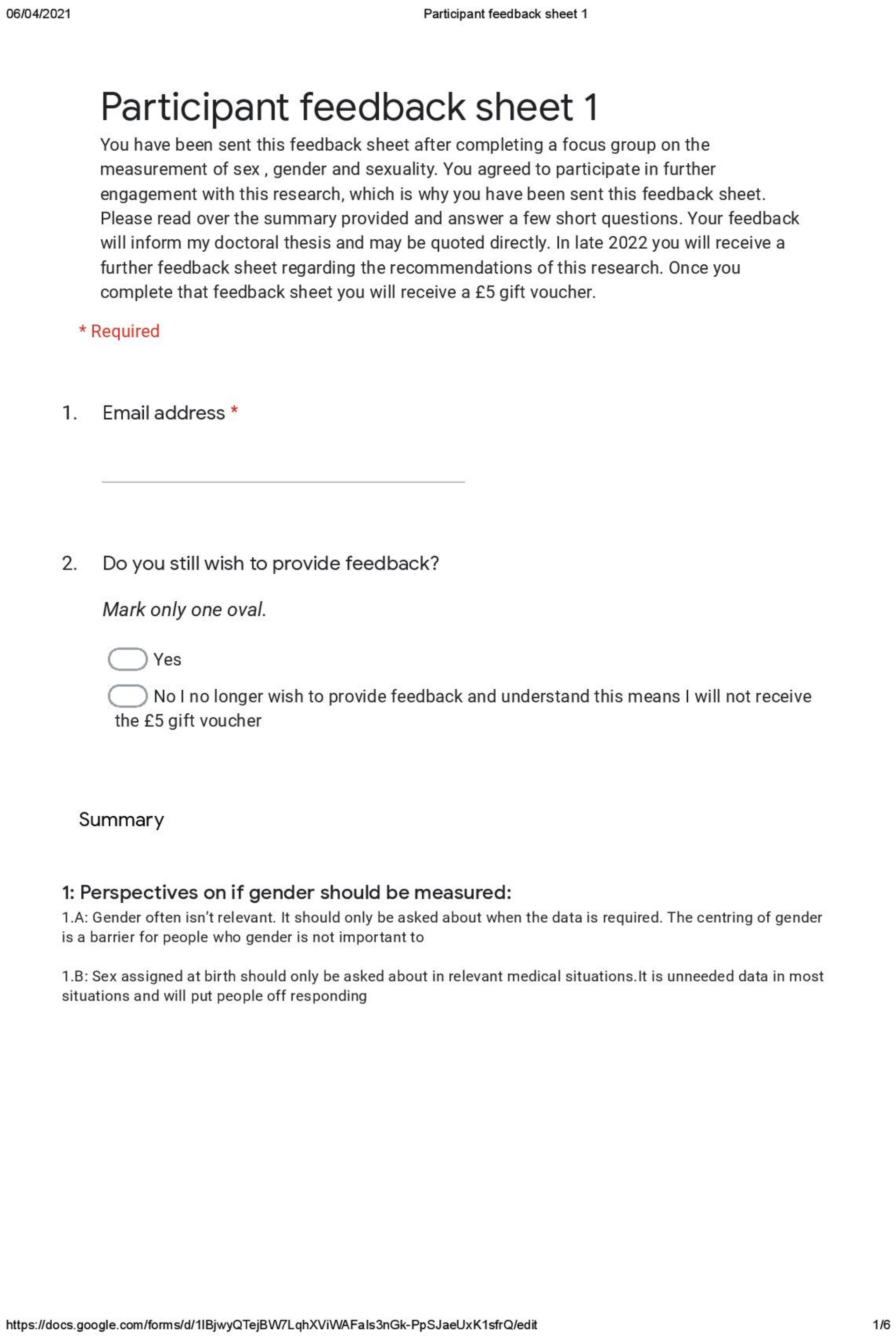
○ Yes, this is an ideal question
○ This question should we changed slightly
○ No, this isn't a suitable question at all

9. If you thought Tester Question 2 was not an ideal question could you please explain why?

Final comments

10. Are there any other comments you have on representing differences of sex, gender or sexuality? This could include thoughts you had after the focus group.

6.2. Feedback sheet for people who are not men or women



06/04/2021 Participant feedback sheet 1

Participant feedback sheet 1

You have been sent this feedback sheet after completing a focus group on the measurement of sex , gender and sexuality. You agreed to participate in further engagement with this research, which is why you have been sent this feedback sheet. Please read over the summary provided and answer a few short questions. Your feedback will inform my doctoral thesis and may be quoted directly. In late 2022 you will receive a further feedback sheet regarding the recommendations of this research. Once you complete that feedback sheet you will receive a £5 gift voucher.

* Required

1. Email address *

____

2. Do you still wish to provide feedback?

Mark only one oval.

○ Yes

○ No I no longer wish to provide feedback and understand this means I will not receive the £5 gift voucher

Summary

1: Perspectives on if gender should be measured:

1.A: Gender often isn't relevant. It should only be asked about when the data is required. The centring of gender is a barrier for people who gender is not important to

1.B: Sex assigned at birth should only be asked about in relevant medical situations.It is unneeded data in most situations and will put people off responding

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2: Perspectives on how gender should be measured

2.A: Open questions are best. They allow respondents to represent themselves accurately as they can use their own words

2.B: Wording to avoid
-"Preferred pronouns and/or titles" : This implies that it's an optional preference rather than an important requirement for respecting respondents
-"Other" or "in another way" options: They are "othering" and imply that people that would select these options are less important
-"Identify": Often an unneeded word and when only used for some groups it infers genders are less legitimate

2.C: Interviewer inputted questions should not be used. You can't guess someone's gender due to the sound of their voice, their name, pronouns, title or appearance

2.D: Single choice questions are an issue.This is due to the fact that options are not always mutually exclusive

2.E: Required questions are a problem. It should be up to individuals if they want to out themselves or not

2.F: Definitions of terms like "trans" are helpful.They help respondents know exactly what information is required.

2.G: Binary gender questions are unacceptable. They leave no room for non-binary people and if they are required they then force non-binary people to misgender themselves.

3: Other key points

3.A: Including questions isn't enough, they have to be well designed to make a meaningful difference. Poorly designed questions and inaccurate data can be more harmful than no data at all

3.B: Overall unhappy with gender questions. People are often made uncomfortable by them and potentially put off participating because of them

3.C: Pronoun questions and titles (if they are being used) are important for representing people respectfully. These questions should be open.

3.D: Questions need to develop over time. How we think about gender and the language we use to describe it changes and questions have to shift with these changes to stay relevant.

3. Does this summary accurately portray what was said during your focus group?

Mark only one oval.

○ Yes it is completely accurate
○ It is somewhat accurate
○ No it is not accurate at all

4. If you thought the summary was not completely accurate could you please elaborate?

Tester question

The following questions have been designed using your input in the focus group. If you wish to answer the tester questions you may but it is not required. They are included simply to show you how they would appear to survey respondents.

5. Tester Question 1: The following question would only be asked when gender is relevant to the research. It would also be an optional question that respondents could skip if they wish. Does this meet the question standards you set in the focus group?

How would you describe your gender? (e.g. non-binary, man, woman...)

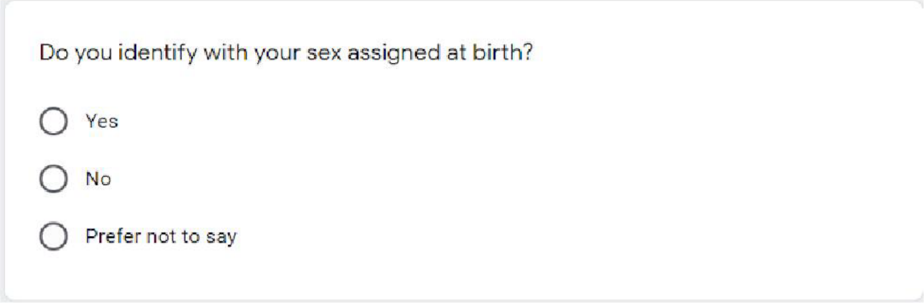
Your answer

Mark only one oval.

○ Yes, this is an ideal question
○ This question should we changed slightly
○ No, this isn't a suitable question at all

6. If you thought Tester Question 1 was not an ideal question could you please explain why?

7. Tester Question 2: The following question would only be asked when relevant to the research. It would also be an optional question that respondents could skip if they wish. Does this meet the question standards you set in the focus group?



Do you identify with your sex assigned at birth?

○ Yes

○ No

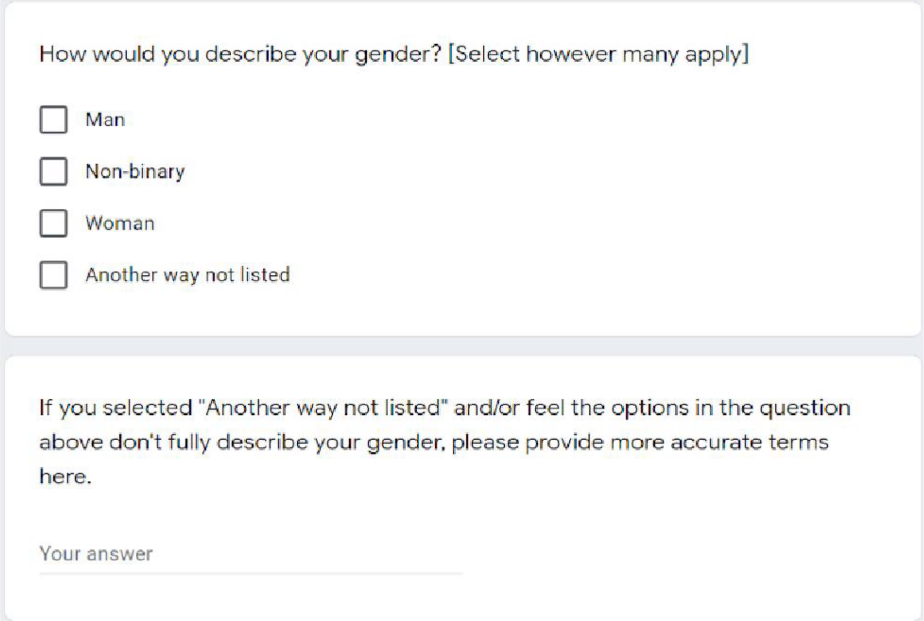
○ Prefer not to say

Mark only one oval.

○ Yes, this is an ideal question
○ This question should we changed slightly
○ No, this isn't a suitable question at all

8. If you thought Tester Question 2 was not an ideal question could you please explain why?

9. Tester Question 3: Open questions are not suitable for large-scale population surveys. For this reason, I am asking your view on this tick box question designed by one of the other focus groups. This question would only be asked when relevant to the research. It would also be an optional question that respondents could skip if they wish. Does this seem like a suitable question to you?



How would you describe your gender? [Select however many apply]

☐ Man
☐ Non-binary
☐ Woman
☐ Another way not listed

If you selected "Another way not listed" and/or feel the options in the question above don't fully describe your gender, please provide more accurate terms here.

Your answer

Check all that apply.

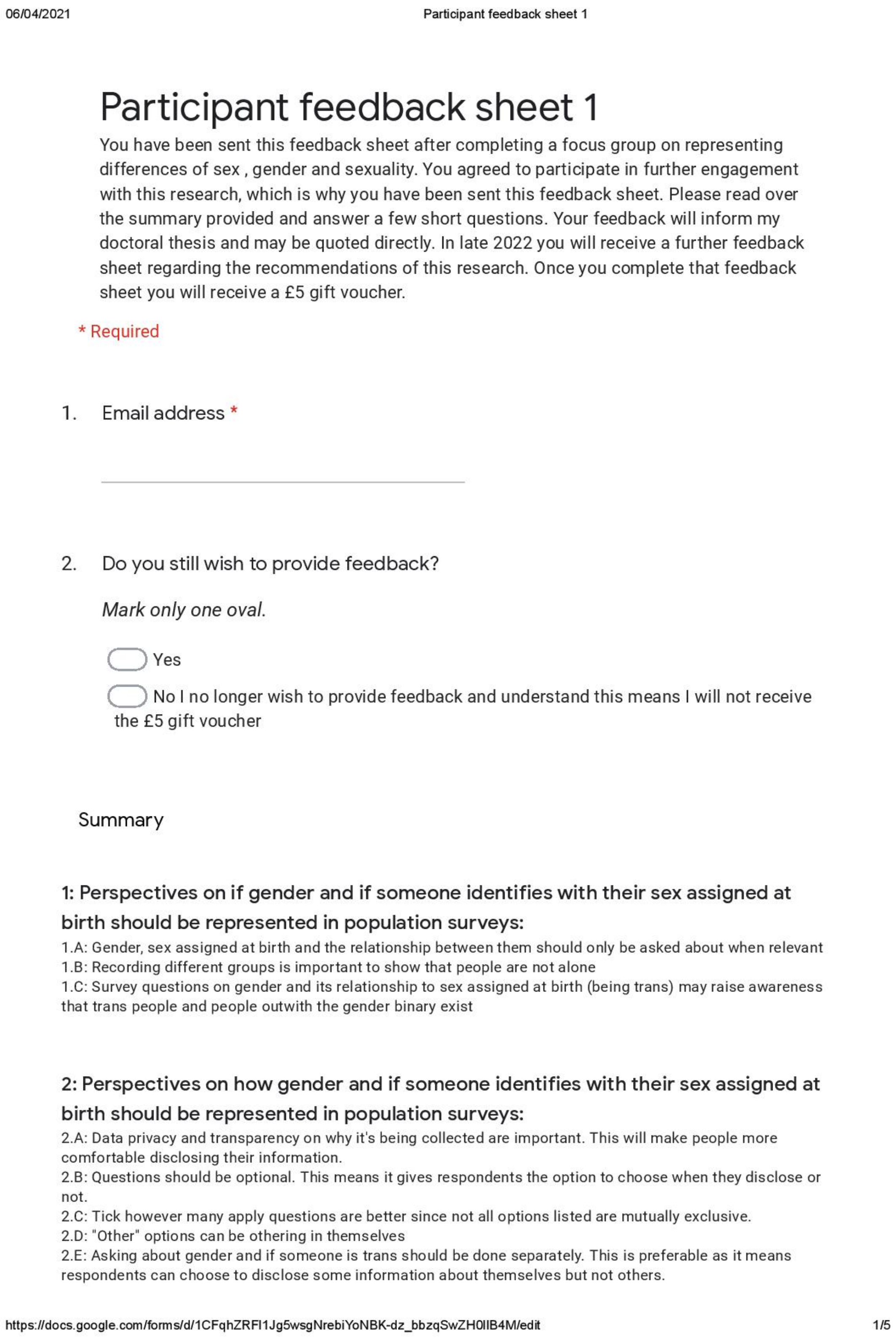
☐ Yes, this is an ideal question
☐ This question should we changed slightly
☐ No, this isn't a suitable question at all

10. If you thought Tester Question 3 was not an ideal question could you please explain why?

Final comments

11. Are there any other comments you have on measuring sex, gender or sexuality? This could include thoughts you had after the focus group.

6.3. Feedback sheet for people who do not identify with their sex assigned at birth



06/04/2021 Participant feedback sheet 1

Participant feedback sheet 1

You have been sent this feedback sheet after completing a focus group on representing differences of sex , gender and sexuality. You agreed to participate in further engagement with this research, which is why you have been sent this feedback sheet. Please read over the summary provided and answer a few short questions. Your feedback will inform my doctoral thesis and may be quoted directly. In late 2022 you will receive a further feedback sheet regarding the recommendations of this research. Once you complete that feedback sheet you will receive a £5 gift voucher.

* Required

1. Email address *

2. Do you still wish to provide feedback?

Mark only one oval.

○ Yes

○ No I no longer wish to provide feedback and understand this means I will not receive the £5 gift voucher

Summary

1: Perspectives on if gender and if someone identifies with their sex assigned at birth should be represented in population surveys:

1.A: Gender, sex assigned at birth and the relationship between them should only be asked about when relevant
1.B: Recording different groups is important to show that people are not alone
1.C: Survey questions on gender and its relationship to sex assigned at birth (being trans) may raise awareness that trans people and people outwith the gender binary exist

2: Perspectives on how gender and if someone identifies with their sex assigned at birth should be represented in population surveys:

2.A: Data privacy and transparency on why it's being collected are important. This will make people more comfortable disclosing their information.
2.B: Questions should be optional. This means it gives respondents the option to choose when they disclose or not.
2.C: Tick however many apply questions are better since not all options listed are mutually exclusive.
2.D: "Other" options can be othering in themselves
2.E: Asking about gender and if someone is trans should be done separately. This is preferable as it means respondents can choose to disclose some information about themselves but not others.

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3: Other key points

3.A: No one has a right to data about you meaning that questions should be asked in a respectful manner.
3.B: Language used in survey questions can be a tad jarring and make them harder to engage with

3. Does this summary accurately portray what was said during your focus group?

Mark only one oval.

○ Yes it is completely accurate
○ It is somewhat accurate
○ No it is not accurate at all

4. If you thought the summary was not completely accurate could you please elaborate?

____
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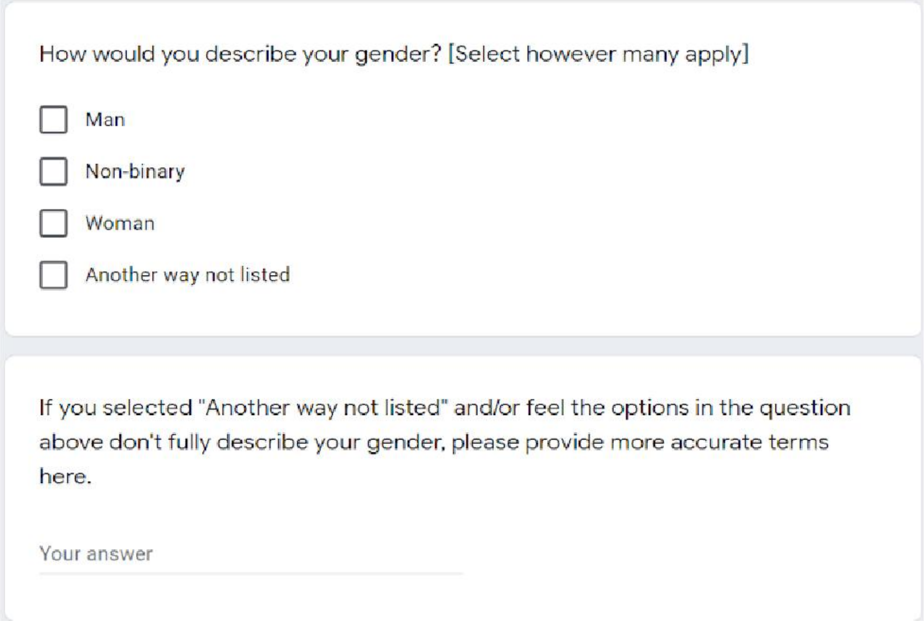
____
____
____

Tester question

The following questions have been designed using your input in the focus group. If you wish to answer the tester questions you may but it is not required. They are included simply to show you how they would appear to survey respondents.

5. Tester Question 1: The following question would only be asked when relevant to the research. It would also be accompanied by an explanation of why it is being asked and how the data will be handled. The question would be optional meaning respondents could leave it blank if they wish. Does this meet the question standards you set in the focus group?



How would you describe your gender? [Select however many apply]

☐ Man
☐ Non-binary
☐ Woman
☐ Another way not listed

If you selected "Another way not listed" and/or feel the options in the question above don't fully describe your gender, please provide more accurate terms here.

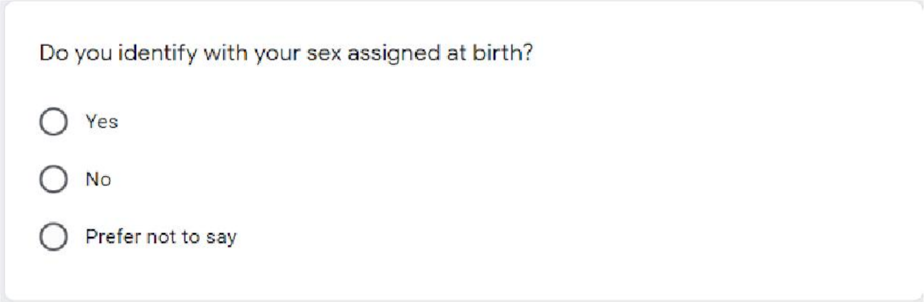
Your answer

Mark only one oval.

○ Yes, this is an ideal question
○ This question should we changed slightly
○ No, this isn't a suitable question at all

6. If you thought Tester Question 1 was not an ideal question could you please explain why?

7. Tester Question 2: The following question would only be asked when relevant to the research. It would also be accompanied by an explanation of why it is being asked and how the data will be handled. The question would be optional meaning respondents could leave it blank if they wish. Does this meet the question standards you set in the focus group?



Do you identify with your sex assigned at birth?

○ Yes

○ No

○ Prefer not to say

Mark only one oval.

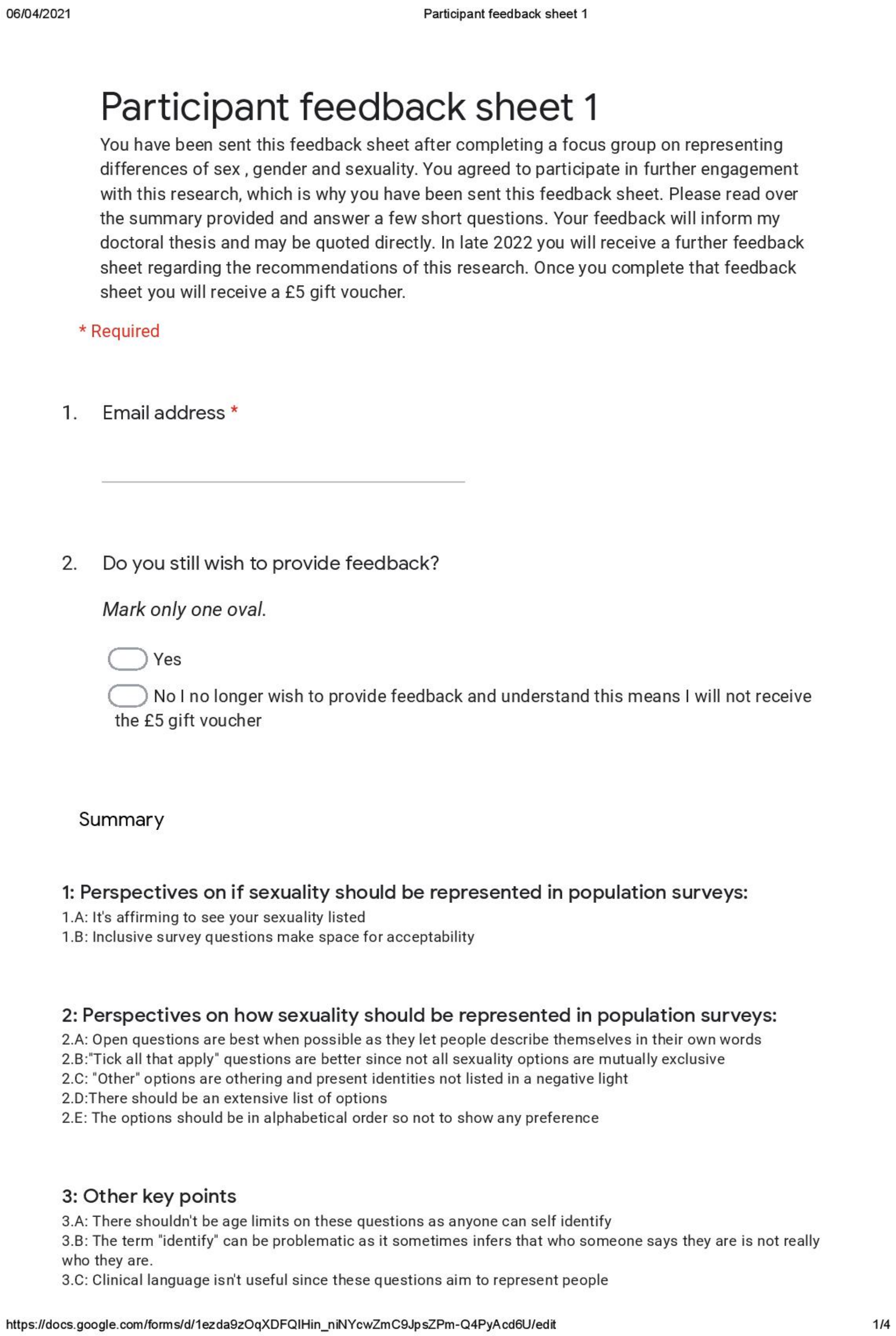
○ Yes, this is an ideal question
○ This question should we changed slightly
○ No, this isn't a suitable question at all

8. If you thought Tester Question 2 was not an ideal question could you please explain why?

Final comments

9. Are there any other comments you have on representing differences of sex, gender or sexuality? This could include thoughts you had after the focus group.

6.4. Feedback sheet for people with overlooked sexualities



06/04/2021 Participant feedback sheet 1

Participant feedback sheet 1

You have been sent this feedback sheet after completing a focus group on representing differences of sex , gender and sexuality. You agreed to participate in further engagement with this research, which is why you have been sent this feedback sheet. Please read over the summary provided and answer a few short questions. Your feedback will inform my doctoral thesis and may be quoted directly. In late 2022 you will receive a further feedback sheet regarding the recommendations of this research. Once you complete that feedback sheet you will receive a £5 gift voucher.

* Required

1. Email address *

____

2. Do you still wish to provide feedback?

Mark only one oval.

○ Yes

○ No I no longer wish to provide feedback and understand this means I will not receive the £5 gift voucher

Summary

1: Perspectives on if sexuality should be represented in population surveys:

1.A: It's affirming to see your sexuality listed
1.B: Inclusive survey questions make space for acceptability

2: Perspectives on how sexuality should be represented in population surveys:

2.A: Open questions are best when possible as they let people describe themselves in their own words
2.B:"Tick all that apply" questions are better since not all sexuality options are mutually exclusive
2.C: "Other" options are othering and present identities not listed in a negative light
2.D:There should be an extensive list of options
2.E: The options should be in alphabetical order so not to show any preference

3: Other key points

3.A: There shouldn't be age limits on these questions as anyone can self identify
3.B: The term "identify" can be problematic as it sometimes infers that who someone says they are is not really who they are.
3.C: Clinical language isn't useful since these questions aim to represent people

https://docs.google.com/forms/d/1ezda9zOqXDFQIHin_niNYcwZmC9JpsZPm-Q4PyAcd6U/edit 1/4

3. Does this summary accurately portray what was said during your focus group?

Mark only one oval.

○ Yes it is completely accurate
○ It is somewhat accurate
○ No it is not accurate at all

4. If you thought the summary was not completely accurate could you please elaborate?

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____
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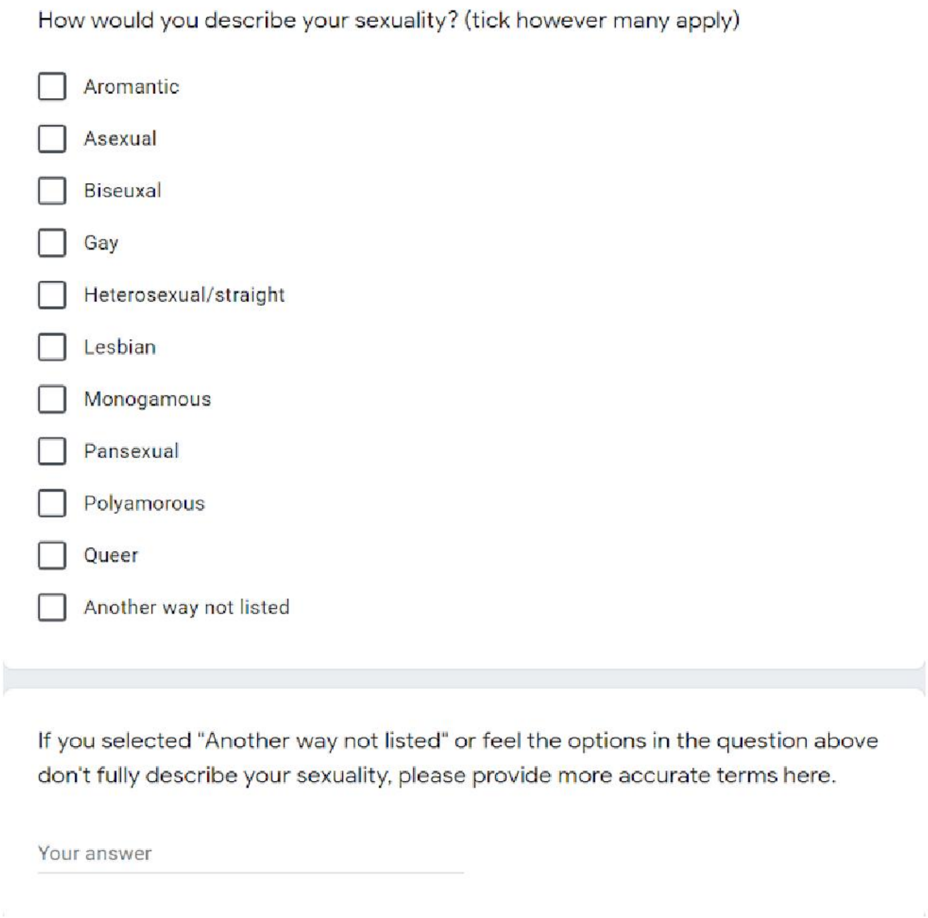
Tester question

The following questions have been designed using your input in the focus group. If you wish to answer the tester questions you may but it is not required. They are included simply to show you how they would appear to survey respondents.

5. Tester Question 1: The following question would only be asked when relevant to the research. It would be an optional question. Does this meet the question standards you set in the focus group?



How would you describe your sexuality? (tick however many apply)

- ☐ Aromantic
- ☐ Asexual
- ☐ Biseuxal
- ☐ Gay
- ☐ Heterosexual/straight
- ☐ Lesbian
- ☐ Monogamous
- ☐ Pansexual
- ☐ Polyamorous
- ☐ Queer
- ☐ Another way not listed

If you selected "Another way not listed" or feel the options in the question above don't fully describe your sexuality, please provide more accurate terms here.

Your answer

Mark only one oval.

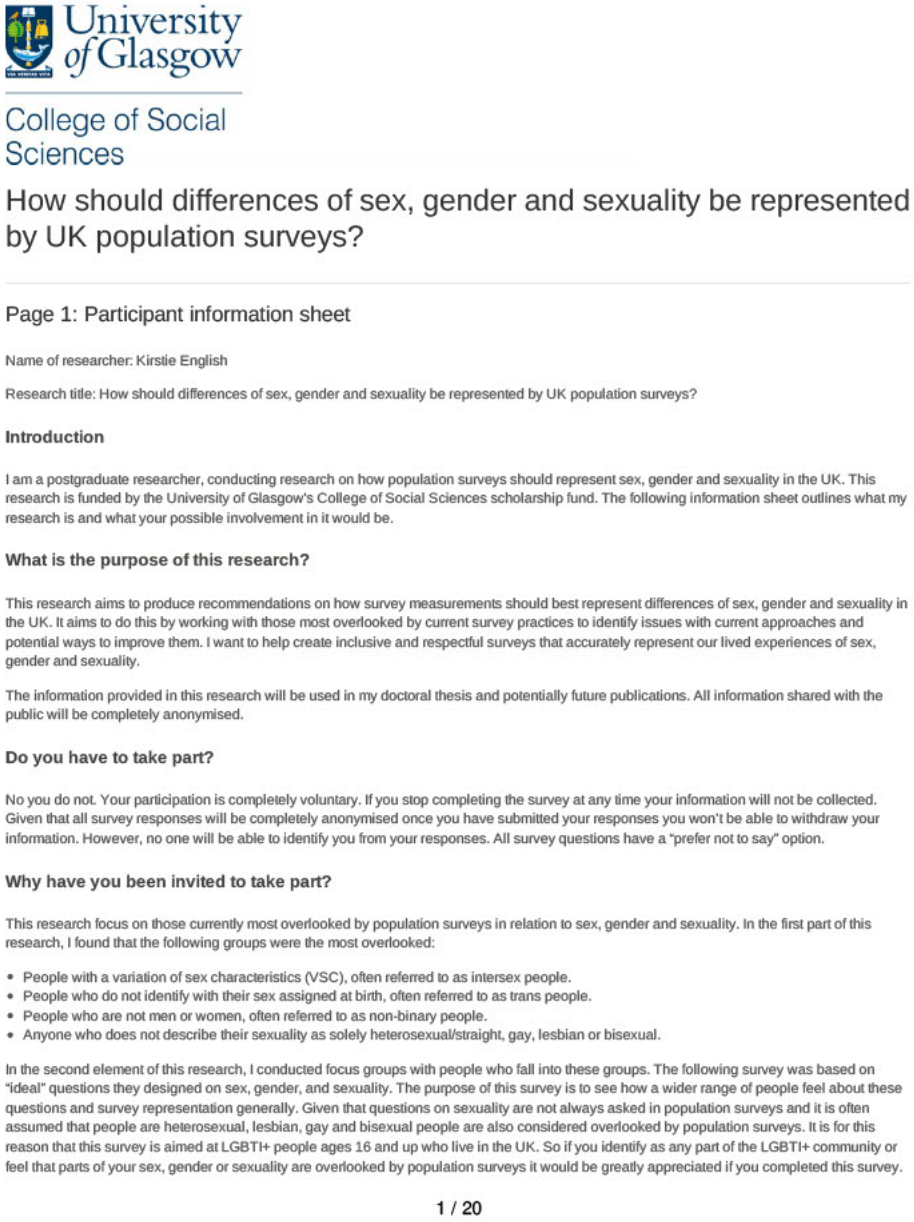
- ○ Yes, this is an ideal question
- ○ This question should we changed slightly
- ○ No, this isn't a suitable question at all

6. If you thought Tester Question 1 was not an ideal question could you please explain why?

Final comments

7. Are there any other comments you have on representing differences of sex, gender or sexuality? This could include thoughts you had after the focus group.

Appendix 7: Online survey for Strand 3



University of Glasgow

College of Social Sciences

How should differences of sex, gender and sexuality be represented by UK population surveys?

Page 1: Participant information sheet

Name of researcher: Kirstie English

Research title: How should differences of sex, gender and sexuality be represented by UK population surveys?

Introduction

I am a postgraduate researcher, conducting research on how population surveys should represent sex, gender and sexuality in the UK. This research is funded by the University of Glasgow's College of Social Sciences scholarship fund. The following information sheet outlines what my research is and what your possible involvement in it would be.

What is the purpose of this research?

This research aims to produce recommendations on how survey measurements should best represent differences of sex, gender and sexuality in the UK. It aims to do this by working with those most overlooked by current survey practices to identify issues with current approaches and potential ways to improve them. I want to help create inclusive and respectful surveys that accurately represent our lived experiences of sex, gender and sexuality.

The information provided in this research will be used in my doctoral thesis and potentially future publications. All information shared with the public will be completely anonymised.

Do you have to take part?

No you do not. Your participation is completely voluntary. If you stop completing the survey at any time your information will not be collected. Given that all survey responses will be completely anonymised once you have submitted your responses you won't be able to withdraw your information. However, no one will be able to identify you from your responses. All survey questions have a "prefer not to say" option.

Why have you been invited to take part?

This research focus on those currently most overlooked by population surveys in relation to sex, gender and sexuality. In the first part of this research, I found that the following groups were the most overlooked:

- People with a variation of sex characteristics (VSC), often referred to as intersex people.
- People who do not identify with their sex assigned at birth, often referred to as trans people.
- People who are not men or women, often referred to as non-binary people.
- Anyone who does not describe their sexuality as solely heterosexual/straight, gay, lesbian or bisexual.

In the second element of this research, I conducted focus groups with people who fall into these groups. The following survey was based on "ideal" questions they designed on sex, gender, and sexuality. The purpose of this survey is to see how a wider range of people feel about these questions and survey representation generally. Given that questions on sexuality are not always asked in population surveys and it is often assumed that people are heterosexual, lesbian, gay and bisexual people are also considered overlooked by population surveys. It is for this reason that this survey is aimed at LGBTI+ people ages 16 and up who live in the UK. So if you identify as any part of the LGBTI+ community or feel that parts of your sex, gender or sexuality are overlooked by population surveys it would be greatly appreciated if you completed this survey.

1 / 20

What will happen if you choose to take part?

You will be asked a series of questions. There are 4 core types of questions. The first questions are on what elements of sex, gender and sexuality you think should be represented by surveys. The second set of questions is about where you would be comfortable disclosing this information. The third section of the survey will provide you examples of questions designed by people from the four most overlooked groups. You will be asked what you think about each of these questions. The final type of question will be about who you are. This information will be used to compare your response to other participants and see if people with different identities or from different backgrounds have different perspectives on this issue. There will also be a text box at the end for you to leave any comments relating to the representation of sex, gender and sexuality in population surveys.

Who will have access to the information you provide?

During this research only I and my supervisors will have access to the information you provide. Once, my thesis is submitted the anonymous survey responses will be publicly available.

Where will information be stored and how long will it be kept?

During this research your information will be stored on a password protected University of Glasgow provided One Drive. After the submission of my thesis in late 2022 the information will then be stored on the university's repository where it will be stored indefinitely.

Researcher contact details:

If you have any issues with how this research is being conducted please contact the College of Social Sciences Ethics Officer, Dr Muir Houston, email: Muir.Houston@glasgow.ac.uk . For any questions or comments contact me at the details provided below. Thank you for taking the time to read this information sheet.

Kirstie English

Sociology, College of Social & Political Sciences

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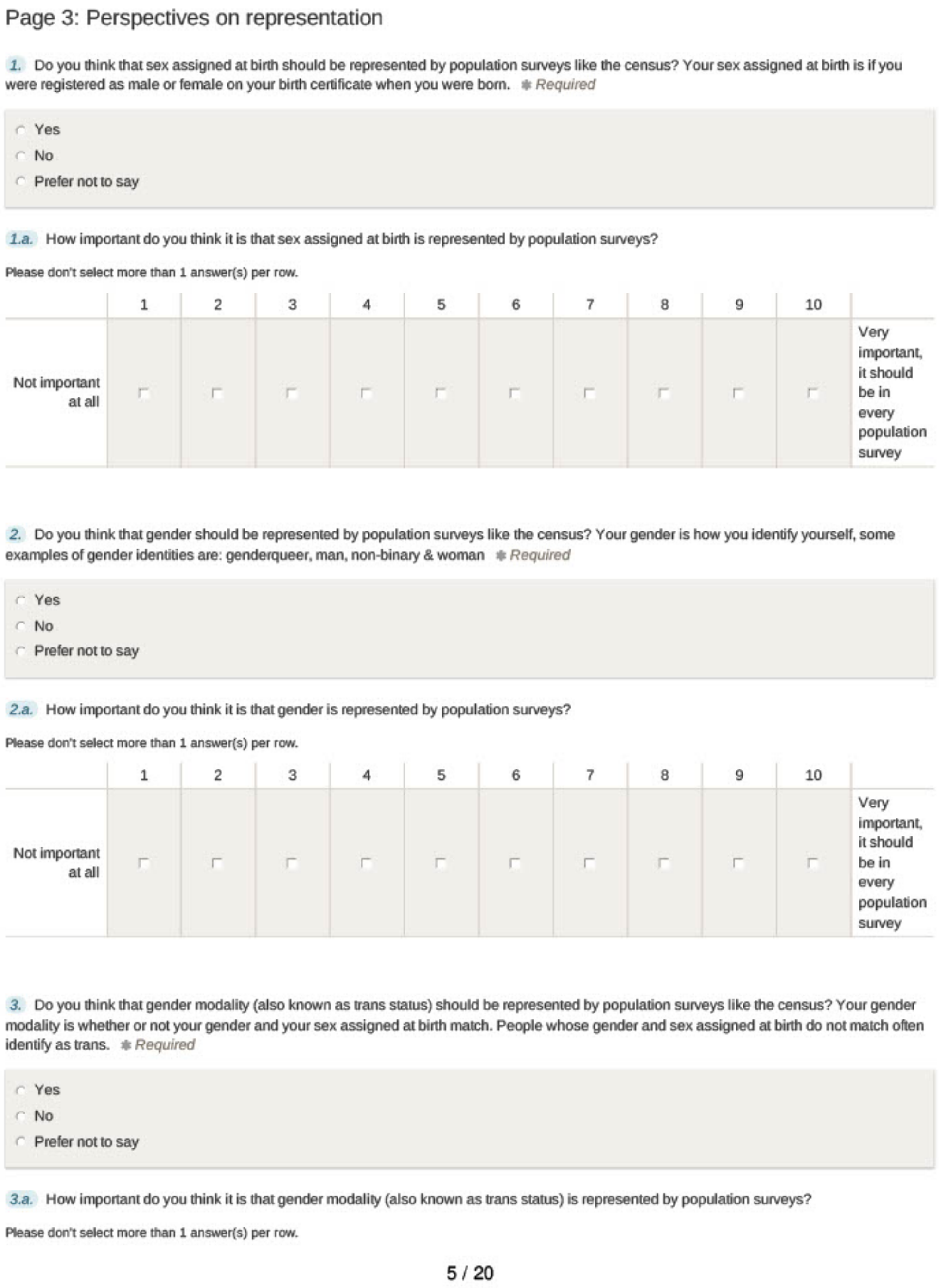
Page 2: Page 1

Participant consent

By completing this survey you are stating that you understand and consent to the following:

1. I confirm that I have read and understood the Participant Information Sheet provided to me
2. I understand that my participation is voluntary
3. I understand I can state prefer not to say to any question I do not wish to answer
4. I understand that after the submission of the researcher's thesis the information I will provide will be publicly available on the Enlighten repository.
5. I consent to the information I provide being used as part of the researcher's doctoral thesis and potential publications



Page 3: Perspectives on representation

1. Do you think that sex assigned at birth should be represented by population surveys like the census? Your sex assigned at birth is if you were registered as male or female on your birth certificate when you were born. ✱ *Required*

○ Yes
○ No
○ Prefer not to say

1.a. How important do you think it is that sex assigned at birth is represented by population surveys?

Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	6	7	8	9	10	
Not important at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very important, it should be in every population survey

2. Do you think that gender should be represented by population surveys like the census? Your gender is how you identify yourself, some examples of gender identities are: genderqueer, man, non-binary & woman ✱ *Required*

○ Yes
○ No
○ Prefer not to say

2.a. How important do you think it is that gender is represented by population surveys?

Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	6	7	8	9	10	
Not important at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very important, it should be in every population survey

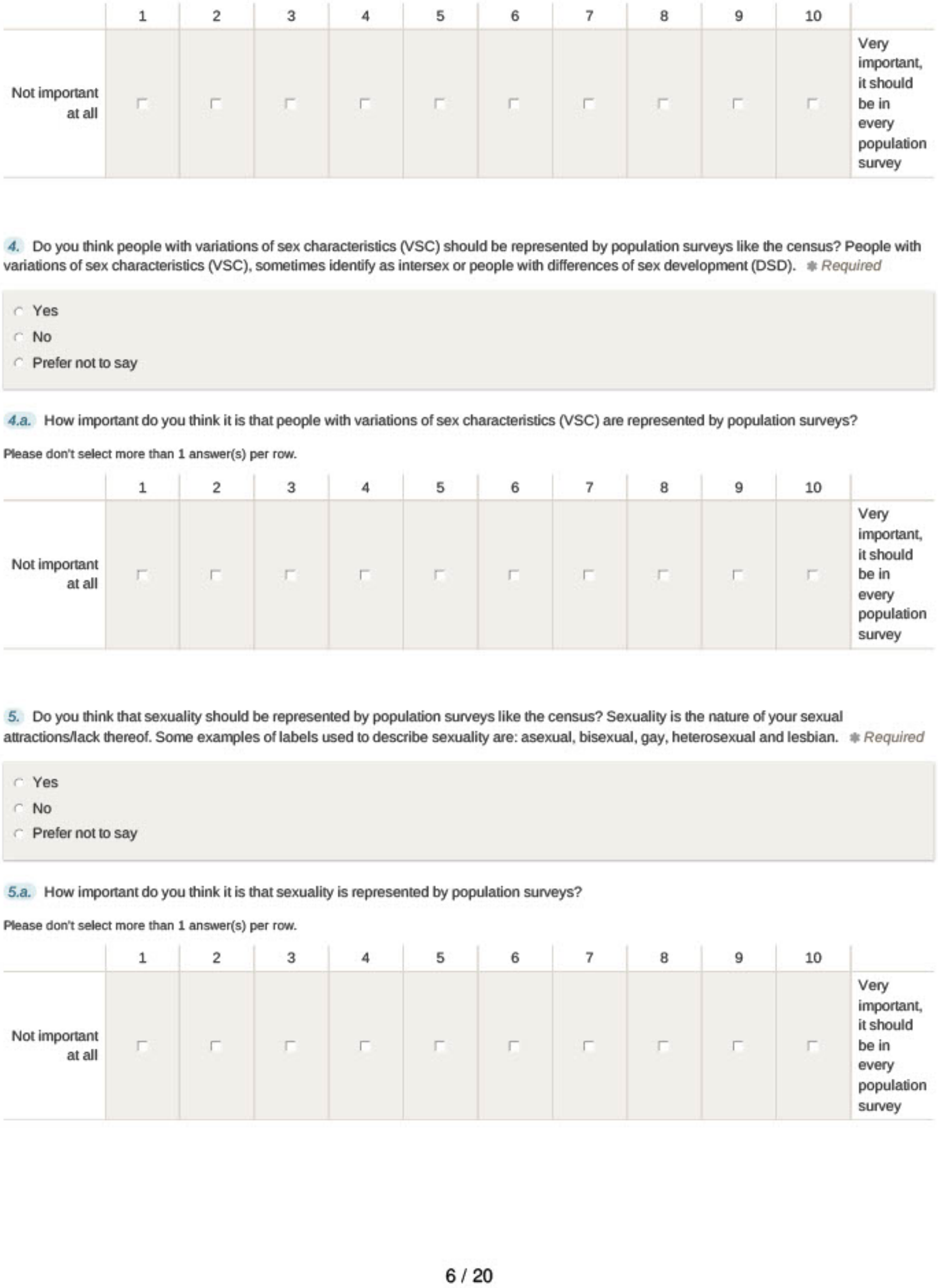
3. Do you think that gender modality (also known as trans status) should be represented by population surveys like the census? Your gender modality is whether or not your gender and your sex assigned at birth match. People whose gender and sex assigned at birth do not match often identify as trans. ✱ *Required*

○ Yes
○ No
○ Prefer not to say

3.a. How important do you think it is that gender modality (also known as trans status) is represented by population surveys?

Please don't select more than 1 answer(s) per row.

5 / 20



	1	2	3	4	5	6	7	8	9	10	
Not important at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very important, it should be in every population survey

4. Do you think people with variations of sex characteristics (VSC) should be represented by population surveys like the census? People with variations of sex characteristics (VSC), sometimes identify as intersex or people with differences of sex development (DSD). * Required

○ Yes
○ No
○ Prefer not to say

4.a. How important do you think it is that people with variations of sex characteristics (VSC) are represented by population surveys?

Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	6	7	8	9	10	
Not important at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very important, it should be in every population survey

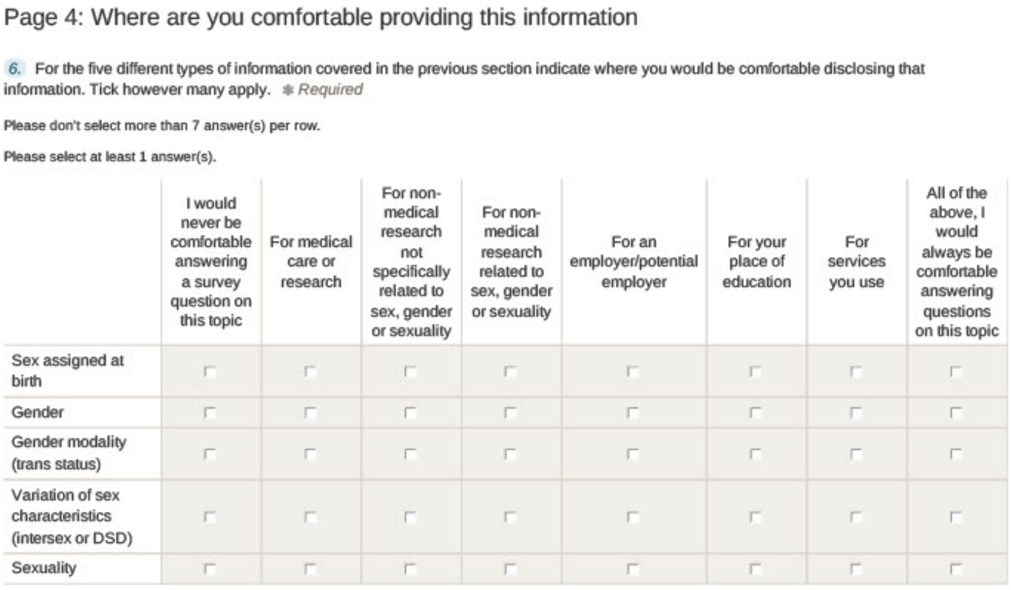
5. Do you think that sexuality should be represented by population surveys like the census? Sexuality is the nature of your sexual attractions/lack thereof. Some examples of labels used to describe sexuality are: asexual, bisexual, gay, heterosexual and lesbian. * Required

○ Yes
○ No
○ Prefer not to say

5.a. How important do you think it is that sexuality is represented by population surveys?

Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	6	7	8	9	10	
Not important at all	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Very important, it should be in every population survey



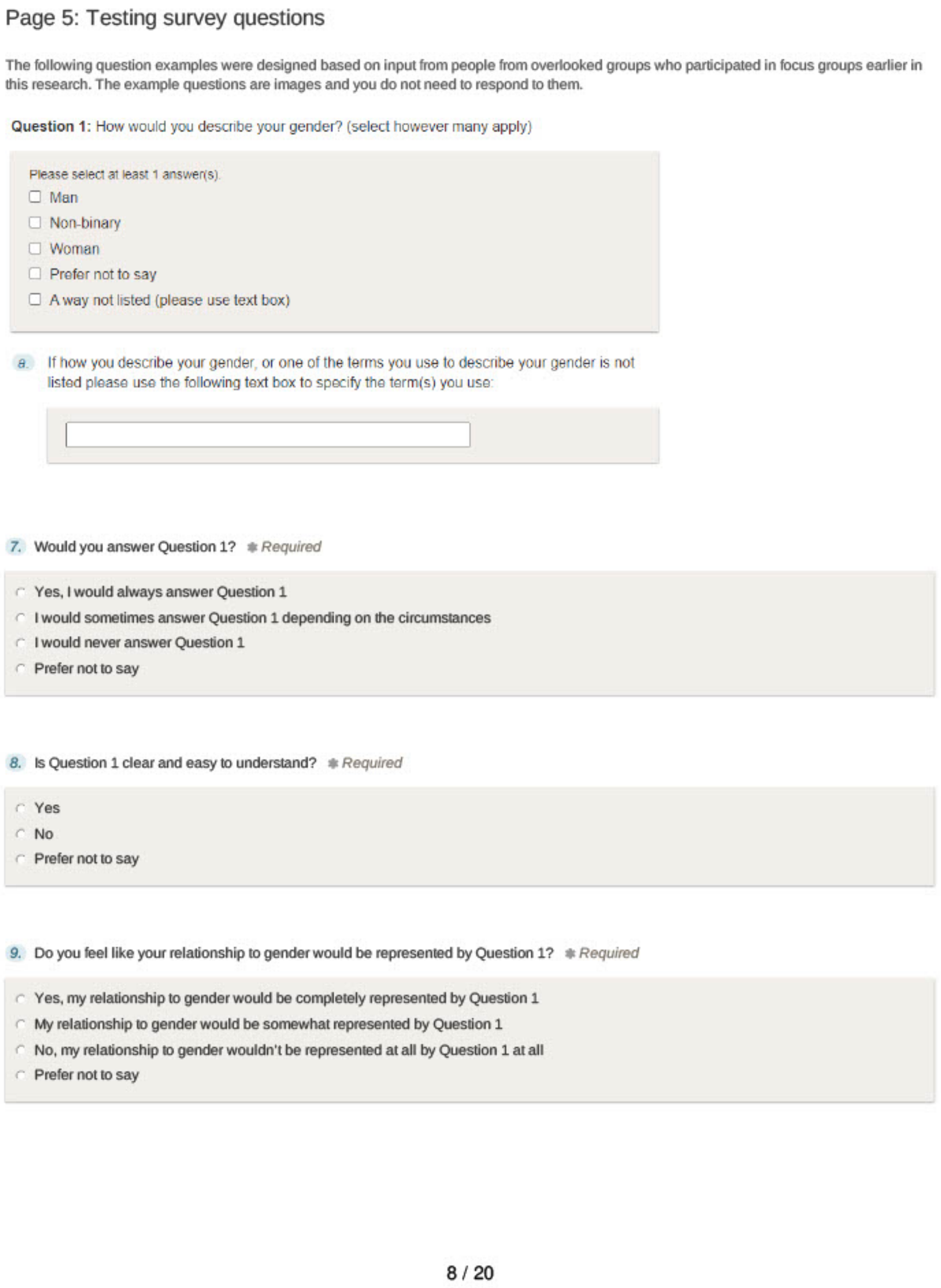
Page 4: Where are you comfortable providing this information

6. For the five different types of information covered in the previous section indicate where you would be comfortable disclosing that information. Tick however many apply. ✱ *Required*

Please don't select more than 7 answer(s) per row.

Please select at least 1 answer(s).

	I would never be comfortable answering a survey question on this topic	For medical care or research	For non-medical research not specifically related to sex, gender or sexuality	For non-medical research related to sex, gender or sexuality	For an employer/potential employer	For your place of education	For services you use	All of the above, I would always be comfortable answering questions on this topic
Sex assigned at birth	☐	☐	☐	☐	☐	☐	☐	☐
Gender	☐	☐	☐	☐	☐	☐	☐	☐
Gender modality (trans status)	☐	☐	☐	☐	☐	☐	☐	☐
Variation of sex characteristics (intersex or DSD)	☐	☐	☐	☐	☐	☐	☐	☐
Sexuality	☐	☐	☐	☐	☐	☐	☐	☐



Page 5: Testing survey questions

The following question examples were designed based on input from people from overlooked groups who participated in focus groups earlier in this research. The example questions are images and you do not need to respond to them.

Question 1: How would you describe your gender? (select however many apply)

Please select at least 1 answer(s).

- ☐ Man
- ☐ Non-binary
- ☐ Woman
- ☐ Prefer not to say
- ☐ A way not listed (please use text box)

a. If how you describe your gender, or one of the terms you use to describe your gender is not listed please use the following text box to specify the term(s) you use:

7. Would you answer Question 1? *Required*

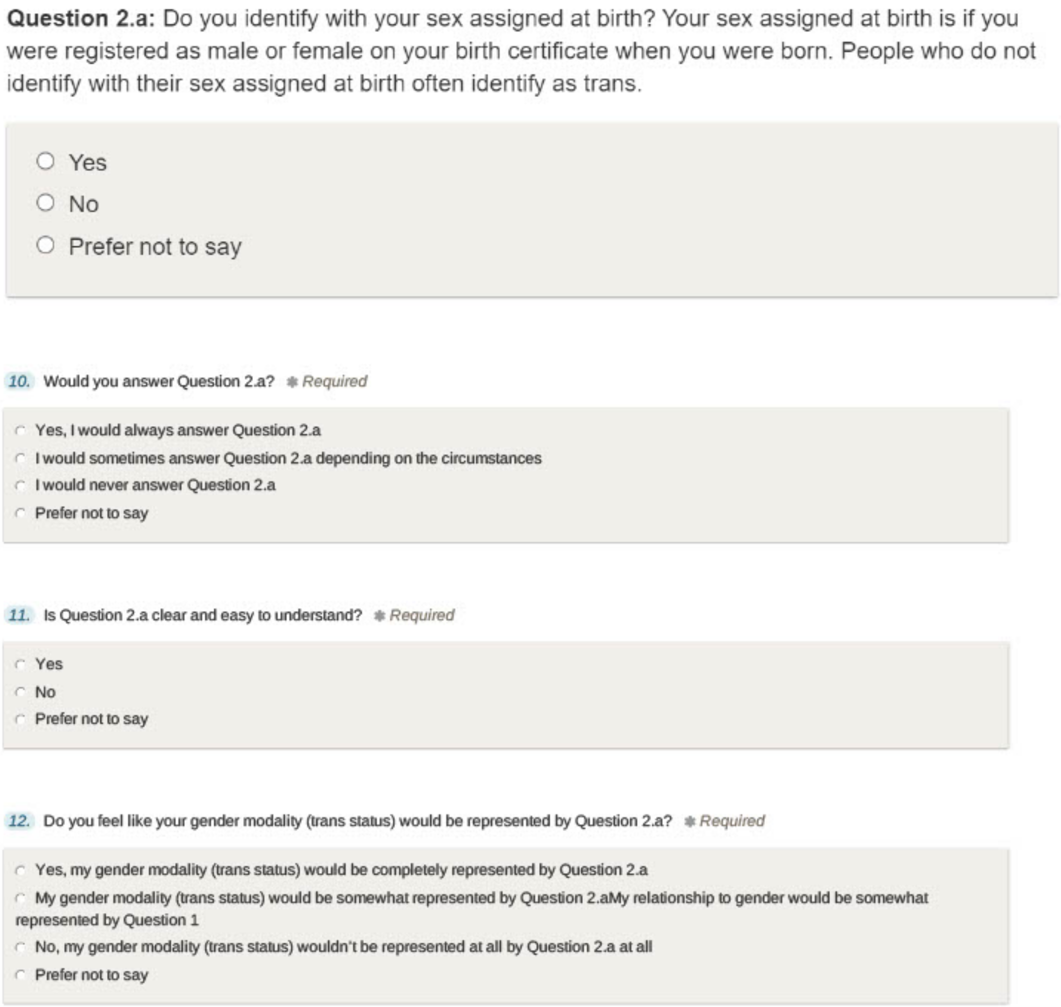
- ○ Yes, I would always answer Question 1
- ○ I would sometimes answer Question 1 depending on the circumstances
- ○ I would never answer Question 1
- ○ Prefer not to say

8. Is Question 1 clear and easy to understand? *Required*

- ○ Yes
- ○ No
- ○ Prefer not to say

9. Do you feel like your relationship to gender would be represented by Question 1? *Required*

- ○ Yes, my relationship to gender would be completely represented by Question 1
- ○ My relationship to gender would be somewhat represented by Question 1
- ○ No, my relationship to gender wouldn't be represented at all by Question 1 at all
- ○ Prefer not to say



Question 2.a: Do you identify with your sex assigned at birth? Your sex assigned at birth is if you were registered as male or female on your birth certificate when you were born. People who do not identify with their sex assigned at birth often identify as trans.

○ Yes
○ No
○ Prefer not to say

10. Would you answer Question 2.a? * Required

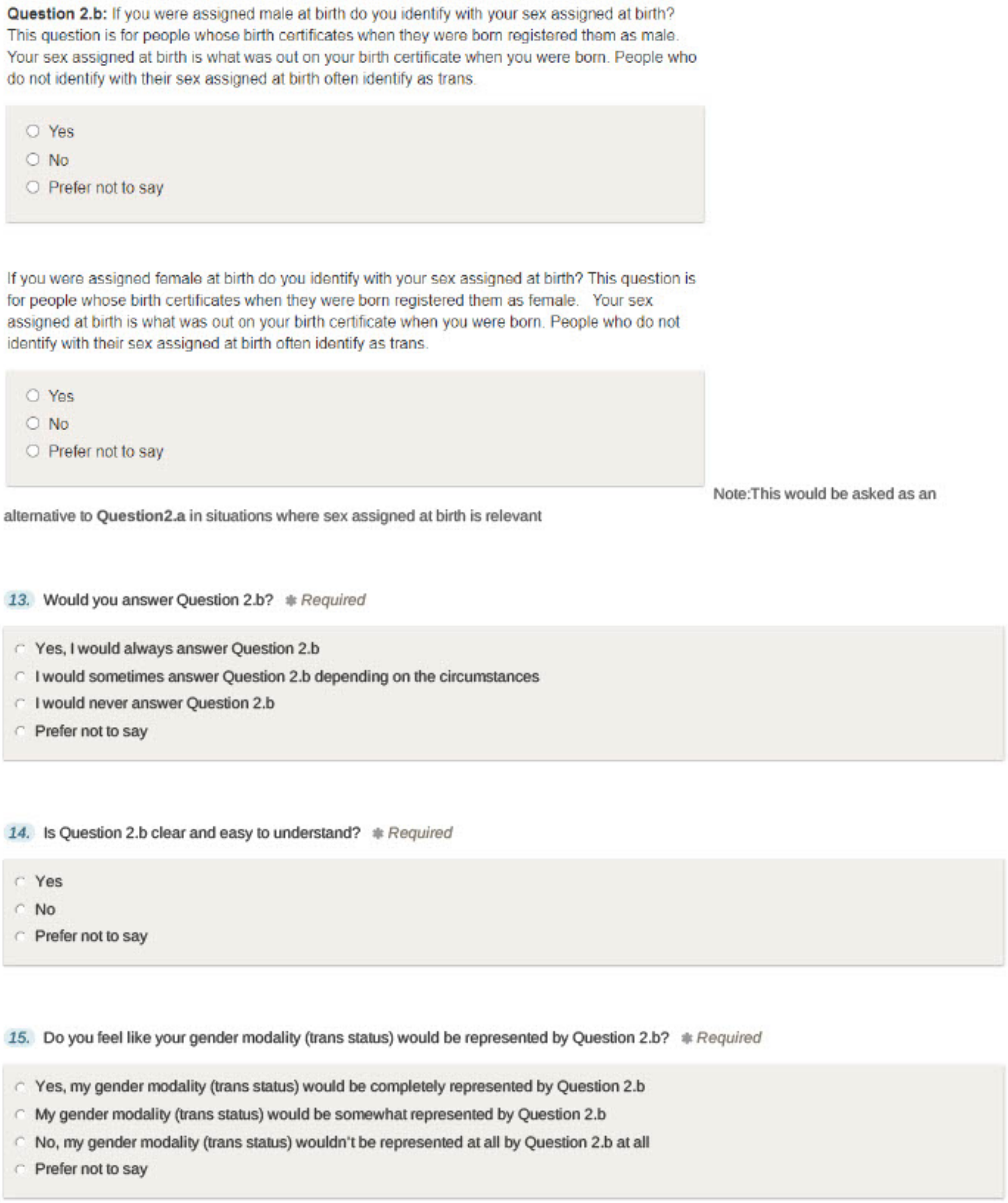
○ Yes, I would always answer Question 2.a
○ I would sometimes answer Question 2.a depending on the circumstances
○ I would never answer Question 2.a
○ Prefer not to say

11. Is Question 2.a clear and easy to understand? * Required

○ Yes
○ No
○ Prefer not to say

12. Do you feel like your gender modality (trans status) would be represented by Question 2.a? * Required

○ Yes, my gender modality (trans status) would be completely represented by Question 2.a
○ My gender modality (trans status) would be somewhat represented by Question 2.aMy relationship to gender would be somewhat represented by Question 1
○ No, my gender modality (trans status) wouldn't be represented at all by Question 2.a at all
○ Prefer not to say



Question 2.b: If you were assigned male at birth do you identify with your sex assigned at birth? This question is for people whose birth certificates when they were born registered them as male. Your sex assigned at birth is what was out on your birth certificate when you were born. People who do not identify with their sex assigned at birth often identify as trans.

○ Yes
○ No
○ Prefer not to say

If you were assigned female at birth do you identify with your sex assigned at birth? This question is for people whose birth certificates when they were born registered them as female. Your sex assigned at birth is what was out on your birth certificate when you were born. People who do not identify with their sex assigned at birth often identify as trans.

○ Yes
○ No
○ Prefer not to say

Note:This would be asked as an alternative to **Question2.a** in situations where sex assigned at birth is relevant

13. Would you answer Question 2.b? *Required*

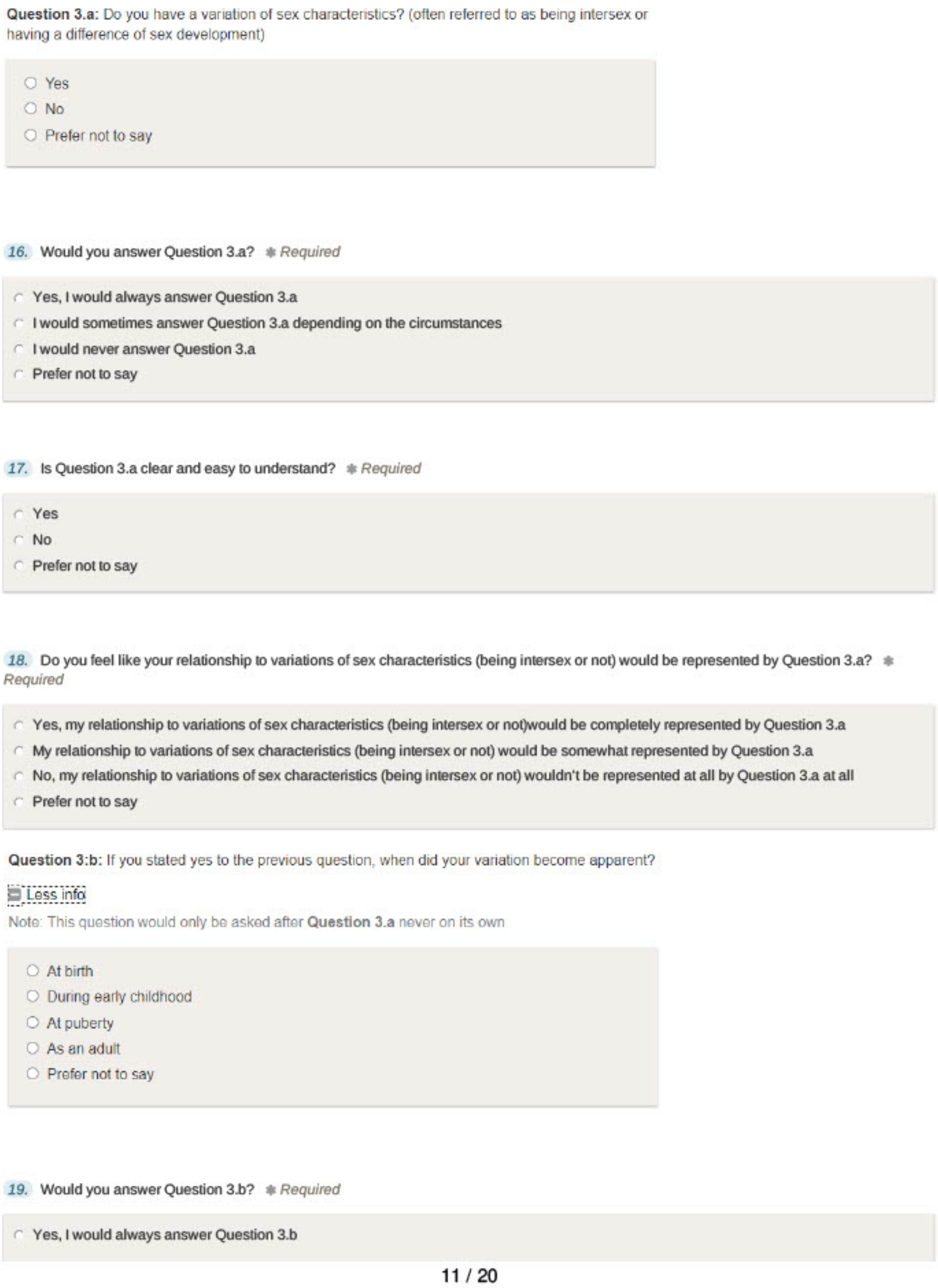
○ Yes, I would always answer Question 2.b
○ I would sometimes answer Question 2.b depending on the circumstances
○ I would never answer Question 2.b
○ Prefer not to say

14. Is Question 2.b clear and easy to understand? *Required*

○ Yes
○ No
○ Prefer not to say

15. Do you feel like your gender modality (trans status) would be represented by Question 2.b? *Required*

○ Yes, my gender modality (trans status) would be completely represented by Question 2.b
○ My gender modality (trans status) would be somewhat represented by Question 2.b
○ No, my gender modality (trans status) wouldn't be represented at all by Question 2.b at all
○ Prefer not to say



Question 3.a: Do you have a variation of sex characteristics? (often referred to as being intersex or having a difference of sex development)

○ Yes
○ No
○ Prefer not to say

16. Would you answer Question 3.a? ✱ *Required*

○ Yes, I would always answer Question 3.a
○ I would sometimes answer Question 3.a depending on the circumstances
○ I would never answer Question 3.a
○ Prefer not to say

17. Is Question 3.a clear and easy to understand? ✱ *Required*

○ Yes
○ No
○ Prefer not to say

18. Do you feel like your relationship to variations of sex characteristics (being intersex or not) would be represented by Question 3.a? ✱ *Required*

○ Yes, my relationship to variations of sex characteristics (being intersex or not)would be completely represented by Question 3.a
○ My relationship to variations of sex characteristics (being intersex or not) would be somewhat represented by Question 3.a
○ No, my relationship to variations of sex characteristics (being intersex or not) wouldn't be represented at all by Question 3.a at all
○ Prefer not to say

Question 3:b: If you stated yes to the previous question, when did your variation become apparent?

⊟ Less info

Note: This question would only be asked after **Question 3.a** never on its own

○ At birth
○ During early childhood
○ At puberty
○ As an adult
○ Prefer not to say

19. Would you answer Question 3.b? ✱ *Required*

○ Yes, I would always answer Question 3.b

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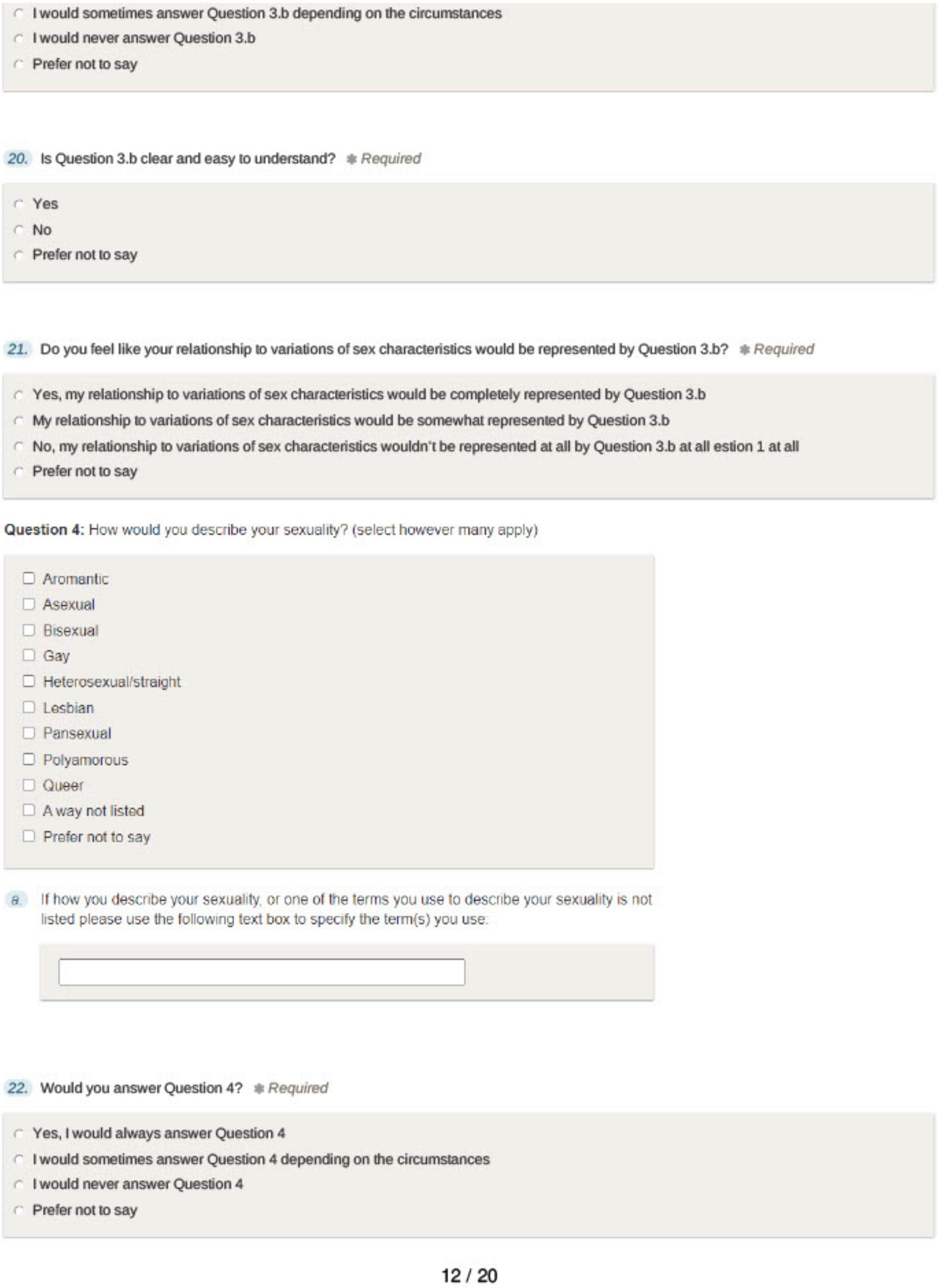

○ I would sometimes answer Question 3.b depending on the circumstances
○ I would never answer Question 3.b
○ Prefer not to say

20. Is Question 3.b clear and easy to understand? * Required

○ Yes
○ No
○ Prefer not to say

21. Do you feel like your relationship to variations of sex characteristics would be represented by Question 3.b? * Required

○ Yes, my relationship to variations of sex characteristics would be completely represented by Question 3.b
○ My relationship to variations of sex characteristics would be somewhat represented by Question 3.b
○ No, my relationship to variations of sex characteristics wouldn't be represented at all by Question 3.b at all estion 1 at all
○ Prefer not to say

Question 4: How would you describe your sexuality? (select however many apply)

☐ Aromantic
☐ Asexual
☐ Bisexual
☐ Gay
☐ Heterosexual/straight
☐ Lesbian
☐ Pansexual
☐ Polyamorous
☐ Queer
☐ A way not listed
☐ Prefer not to say

a. If how you describe your sexuality, or one of the terms you use to describe your sexuality is not listed please use the following text box to specify the term(s) you use:

22. Would you answer Question 4? * Required

○ Yes, I would always answer Question 4
○ I would sometimes answer Question 4 depending on the circumstances
○ I would never answer Question 4
○ Prefer not to say

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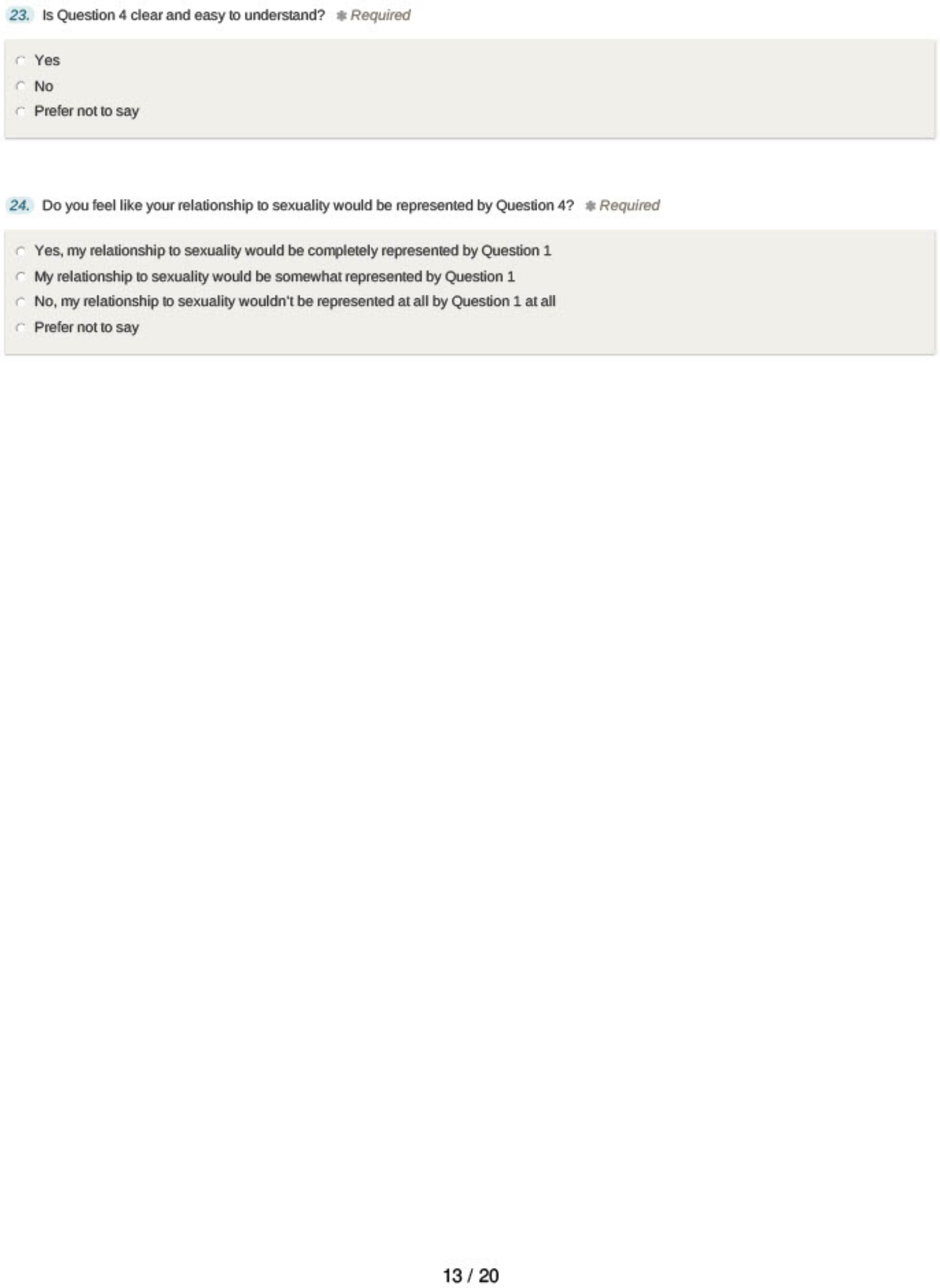
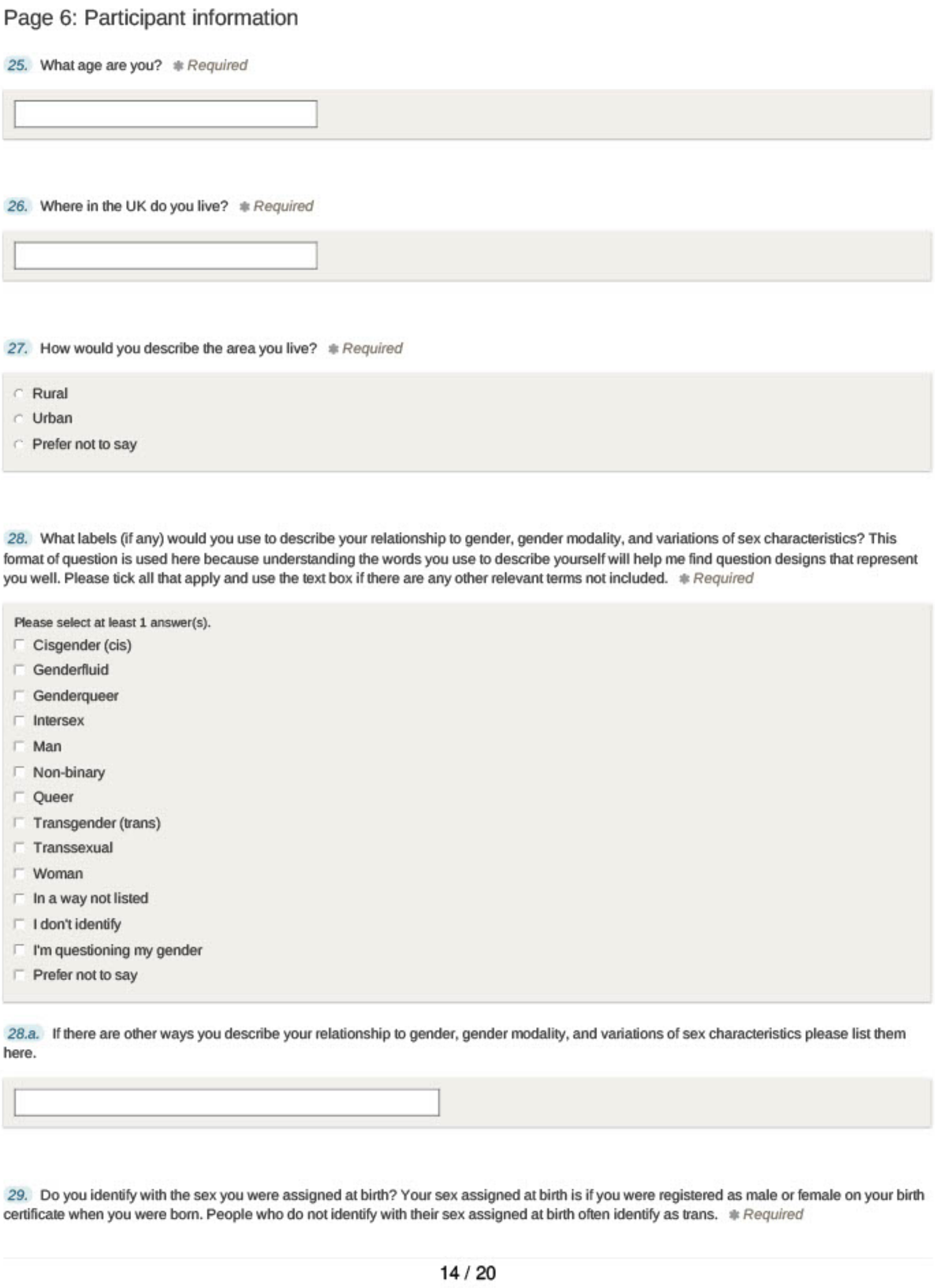


23. Is Question 4 clear and easy to understand? ✱ *Required*

○ Yes
○ No
○ Prefer not to say

24. Do you feel like your relationship to sexuality would be represented by Question 4? ✱ *Required*

○ Yes, my relationship to sexuality would be completely represented by Question 1
○ My relationship to sexuality would be somewhat represented by Question 1
○ No, my relationship to sexuality wouldn't be represented at all by Question 1 at all
○ Prefer not to say



Page 6: Participant information

25. What age are you? * Required

26. Where in the UK do you live? * Required

27. How would you describe the area you live? * Required

○ Rural
○ Urban
○ Prefer not to say

28. What labels (if any) would you use to describe your relationship to gender, gender modality, and variations of sex characteristics? This format of question is used here because understanding the words you use to describe yourself will help me find question designs that represent you well. Please tick all that apply and use the text box if there are any other relevant terms not included. * Required

Please select at least 1 answer(s).

☐ Cisgender (cis)
☐ Genderfluid
☐ Genderqueer
☐ Intersex
☐ Man
☐ Non-binary
☐ Queer
☐ Transgender (trans)
☐ Transsexual
☐ Woman
☐ In a way not listed
☐ I don't identify
☐ I'm questioning my gender
☐ Prefer not to say

28.a. If there are other ways you describe your relationship to gender, gender modality, and variations of sex characteristics please list them here.

29. Do you identify with the sex you were assigned at birth? Your sex assigned at birth is if you were registered as male or female on your birth certificate when you were born. People who do not identify with their sex assigned at birth often identify as trans. * Required

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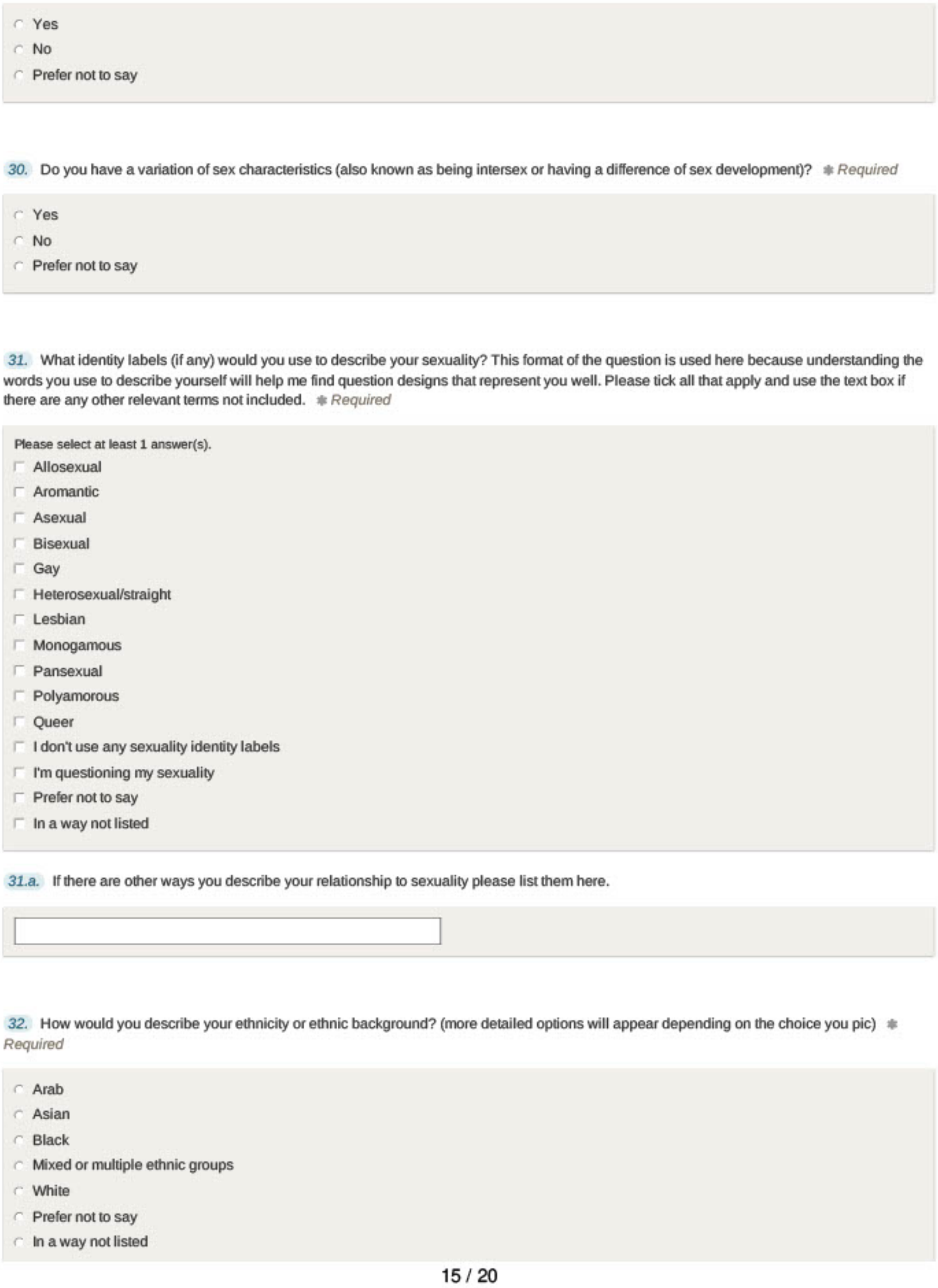


○ Yes
○ No
○ Prefer not to say

30. Do you have a variation of sex characteristics (also known as being intersex or having a difference of sex development)? * *Required*

○ Yes
○ No
○ Prefer not to say

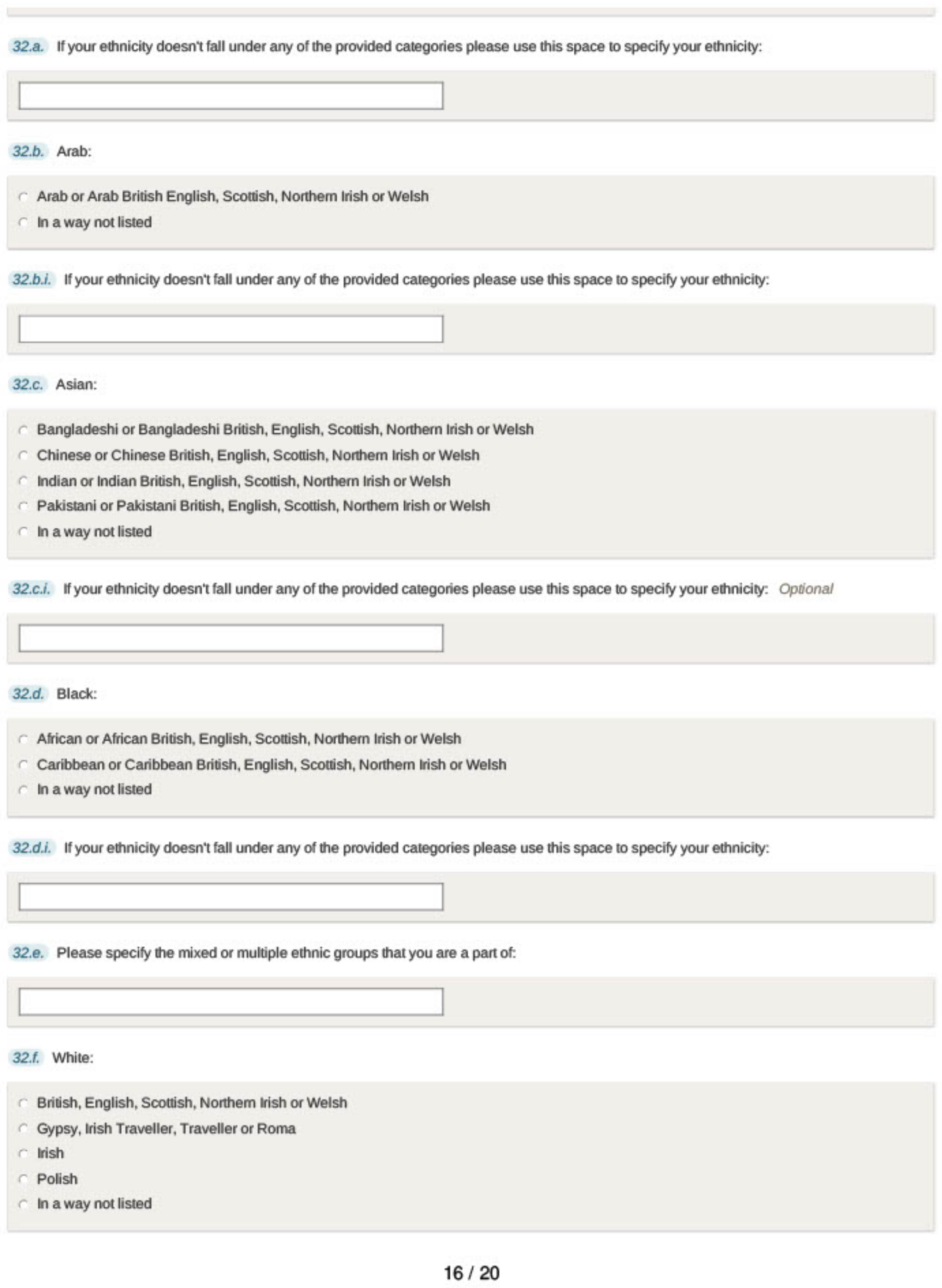
31. What identity labels (if any) would you use to describe your sexuality? This format of the question is used here because understanding the words you use to describe yourself will help me find question designs that represent you well. Please tick all that apply and use the text box if there are any other relevant terms not included. * *Required*

Please select at least 1 answer(s).
☐ Allosexual
☐ Aromantic
☐ Asexual
☐ Bisexual
☐ Gay
☐ Heterosexual/straight
☐ Lesbian
☐ Monogamous
☐ Pansexual
☐ Polyamorous
☐ Queer
☐ I don't use any sexuality identity labels
☐ I'm questioning my sexuality
☐ Prefer not to say
☐ In a way not listed

31.a. If there are other ways you describe your relationship to sexuality please list them here.

32. How would you describe your ethnicity or ethnic background? (more detailed options will appear depending on the choice you pic) * *Required*

○ Arab
○ Asian
○ Black
○ Mixed or multiple ethnic groups
○ White
○ Prefer not to say
○ In a way not listed



32.a. If your ethnicity doesn't fall under any of the provided categories please use this space to specify your ethnicity:

32.b. Arab:

○ Arab or Arab British English, Scottish, Northern Irish or Welsh
○ In a way not listed

32.b.i. If your ethnicity doesn't fall under any of the provided categories please use this space to specify your ethnicity:

32.c. Asian:

○ Bangladeshi or Bangladeshi British, English, Scottish, Northern Irish or Welsh
○ Chinese or Chinese British, English, Scottish, Northern Irish or Welsh
○ Indian or Indian British, English, Scottish, Northern Irish or Welsh
○ Pakistani or Pakistani British, English, Scottish, Northern Irish or Welsh
○ In a way not listed

32.c.i. If your ethnicity doesn't fall under any of the provided categories please use this space to specify your ethnicity: *Optional*

32.d. Black:

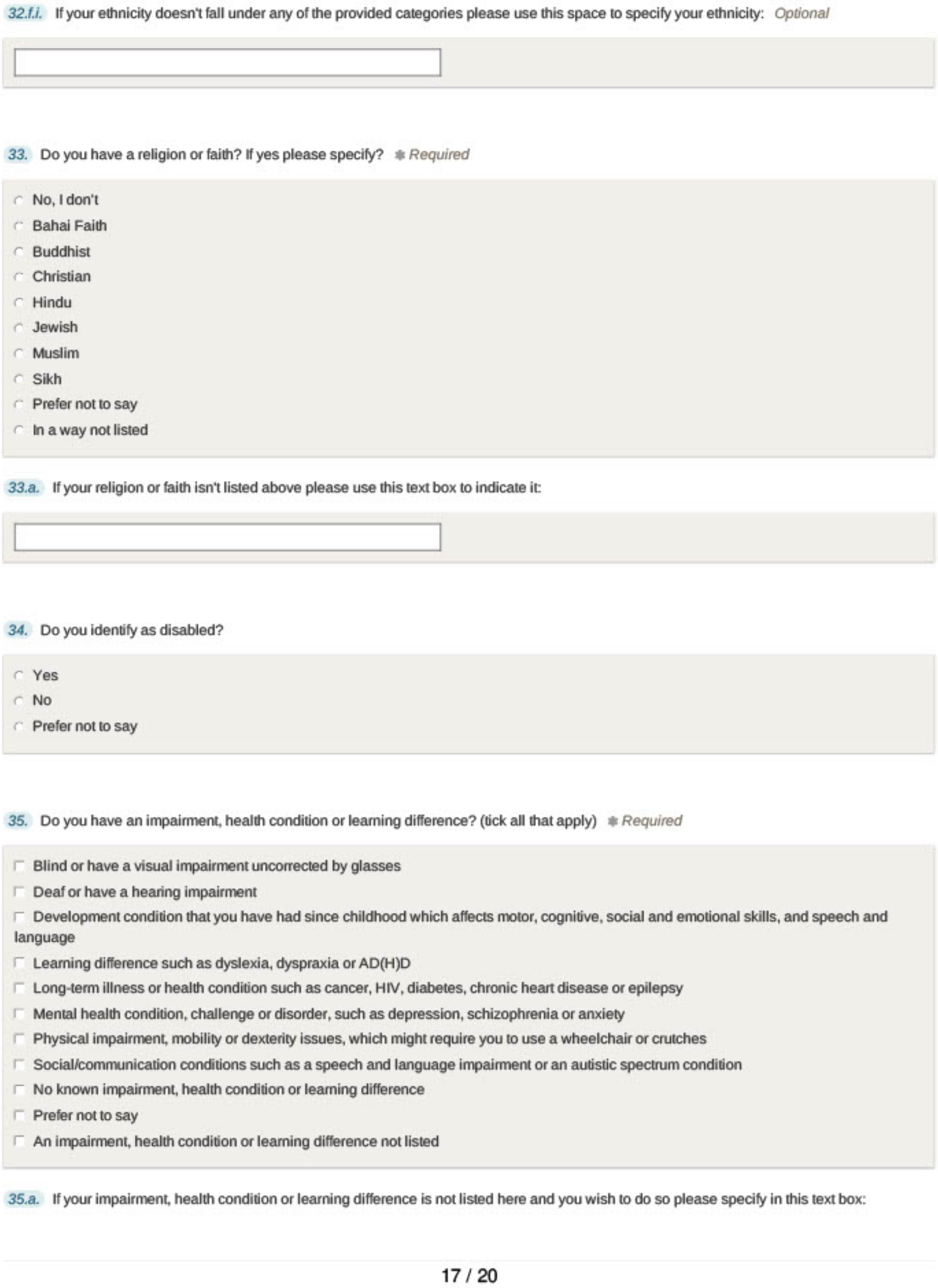
○ African or African British, English, Scottish, Northern Irish or Welsh
○ Caribbean or Caribbean British, English, Scottish, Northern Irish or Welsh
○ In a way not listed

32.d.i. If your ethnicity doesn't fall under any of the provided categories please use this space to specify your ethnicity:

32.e. Please specify the mixed or multiple ethnic groups that you are a part of:

32.f. White:

○ British, English, Scottish, Northern Irish or Welsh
○ Gypsy, Irish Traveller, Traveller or Roma
○ Irish
○ Polish
○ In a way not listed



32.f.i. If your ethnicity doesn't fall under any of the provided categories please use this space to specify your ethnicity: *Optional*

33. Do you have a religion or faith? If yes please specify? ✱ *Required*

- ○ No, I don't
- ○ Bahai Faith
- ○ Buddhist
- ○ Christian
- ○ Hindu
- ○ Jewish
- ○ Muslim
- ○ Sikh
- ○ Prefer not to say
- ○ In a way not listed

33.a. If your religion or faith isn't listed above please use this text box to indicate it:

34. Do you identify as disabled?

- ○ Yes
- ○ No
- ○ Prefer not to say

35. Do you have an impairment, health condition or learning difference? (tick all that apply) ✱ *Required*

- ☐ Blind or have a visual impairment uncorrected by glasses
- ☐ Deaf or have a hearing impairment
- ☐ Development condition that you have had since childhood which affects motor, cognitive, social and emotional skills, and speech and language
- ☐ Learning difference such as dyslexia, dyspraxia or AD(H)D
- ☐ Long-term illness or health condition such as cancer, HIV, diabetes, chronic heart disease or epilepsy
- ☐ Mental health condition, challenge or disorder, such as depression, schizophrenia or anxiety
- ☐ Physical impairment, mobility or dexterity issues, which might require you to use a wheelchair or crutches
- ☐ Social/communication conditions such as a speech and language impairment or an autistic spectrum condition
- ☐ No known impairment, health condition or learning difference
- ☐ Prefer not to say
- ☐ An impairment, health condition or learning difference not listed

35.a. If your impairment, health condition or learning difference is not listed here and you wish to do so please specify in this text box:

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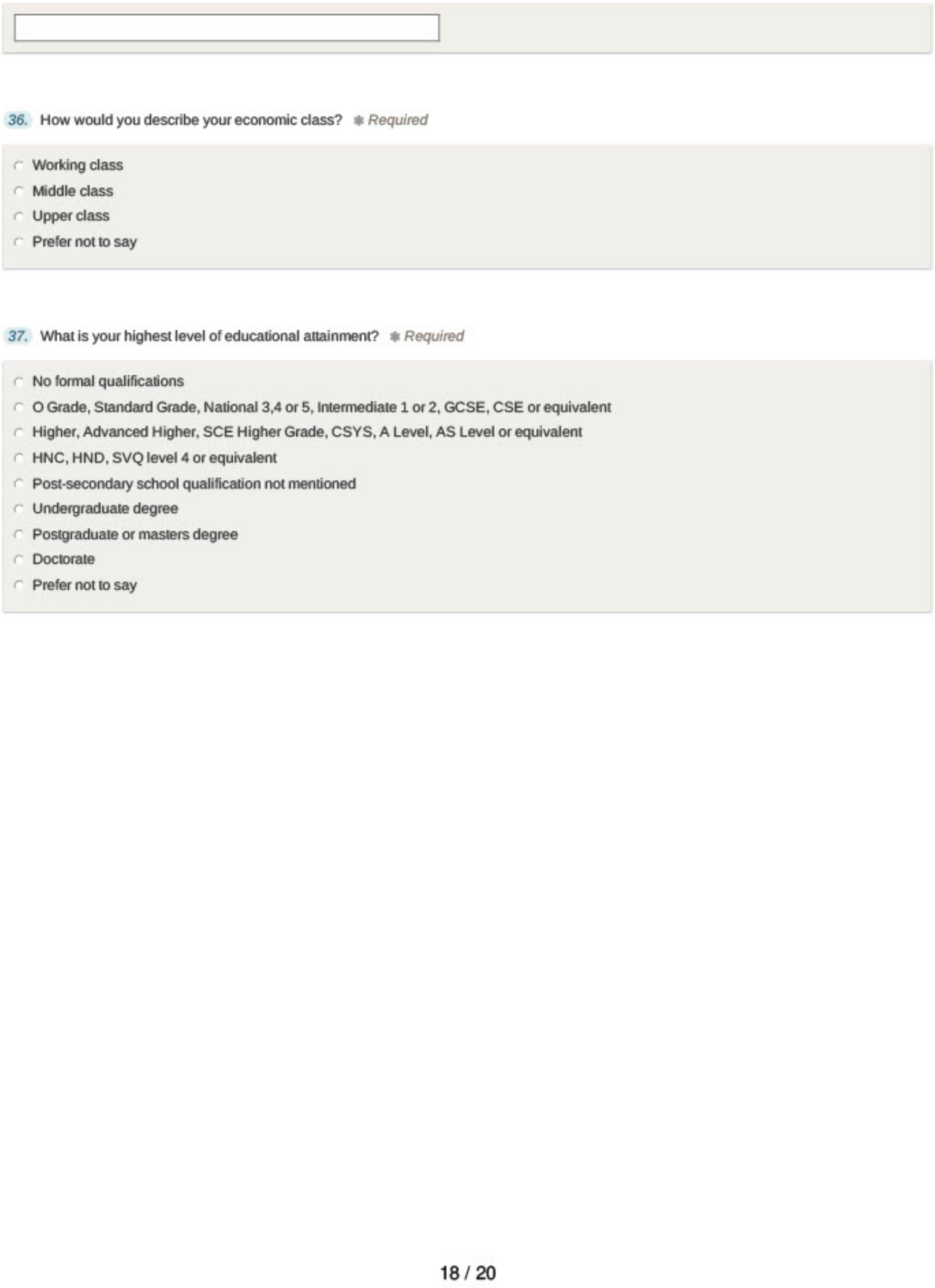

36. How would you describe your economic class? * Required

○ Working class
○ Middle class
○ Upper class
○ Prefer not to say

37. What is your highest level of educational attainment? * Required

○ No formal qualifications
○ O Grade, Standard Grade, National 3,4 or 5, Intermediate 1 or 2, GCSE, CSE or equivalent
○ Higher, Advanced Higher, SCE Higher Grade, CSYS, A Level, AS Level or equivalent
○ HNC, HND, SVQ level 4 or equivalent
○ Post-secondary school qualification not mentioned
○ Undergraduate degree
○ Postgraduate or masters degree
○ Doctorate
○ Prefer not to say

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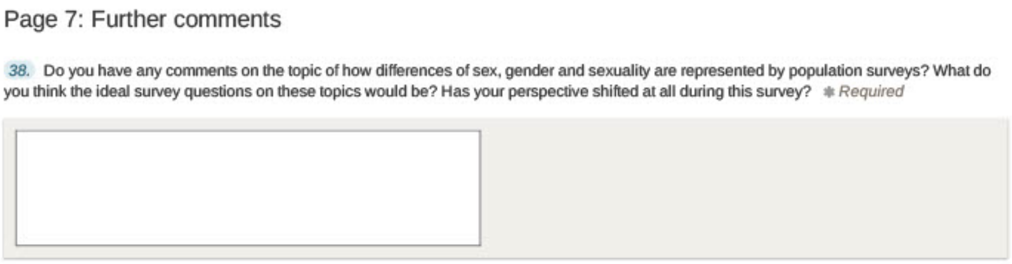
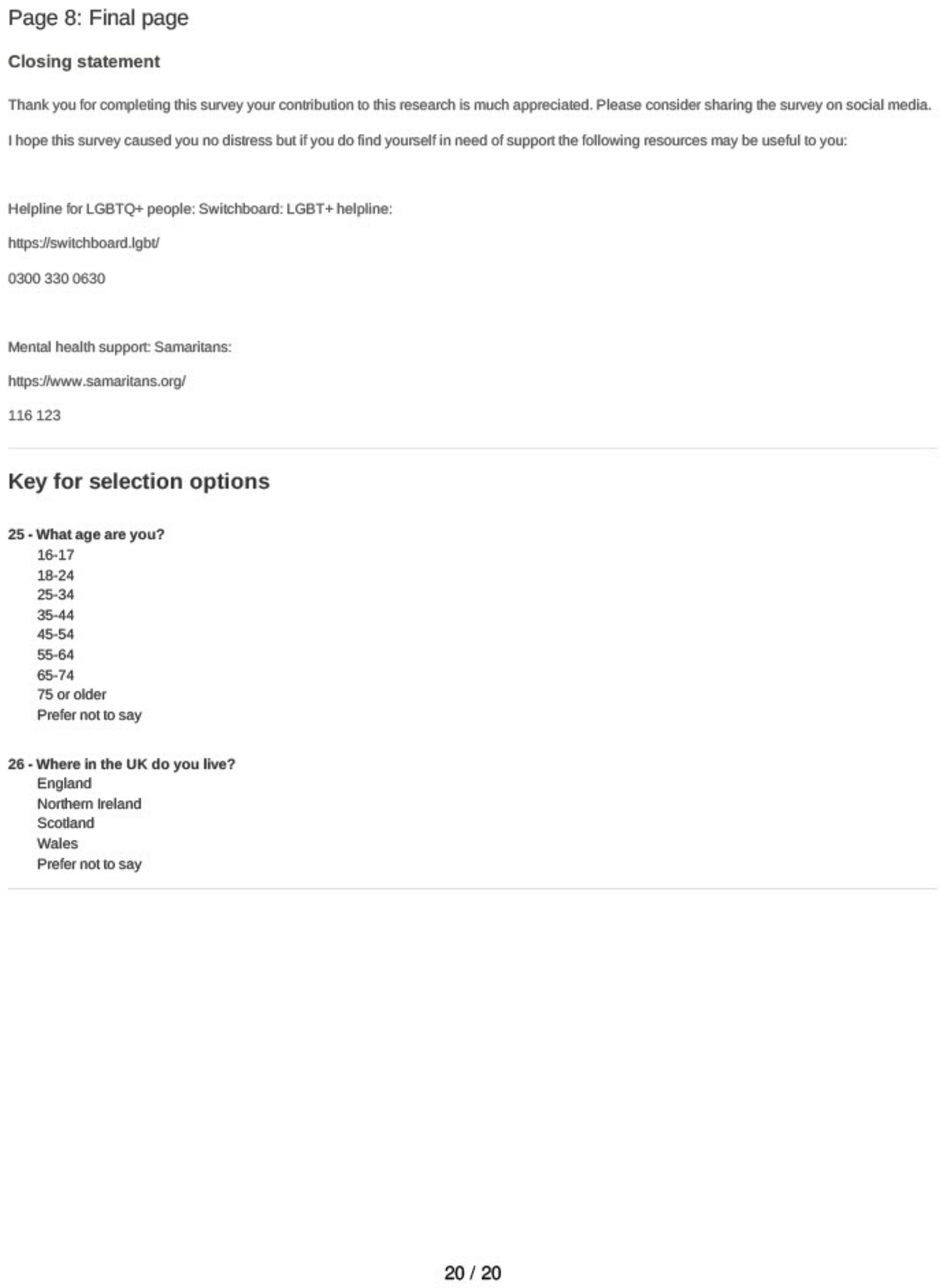


Page 7: Further comments

38. Do you have any comments on the topic of how differences of sex, gender and sexuality are represented by population surveys? What do you think the ideal survey questions on these topics would be? Has your perspective shifted at all during this survey? * Required



Page 8: Final page

Closing statement

Thank you for completing this survey your contribution to this research is much appreciated. Please consider sharing the survey on social media.

I hope this survey caused you no distress but if you do find yourself in need of support the following resources may be useful to you:

Helpline for LGBTQ+ people: Switchboard: LGBT+ helpline:

https://switchboard.lgbt/

0300 330 0630

Mental health support: Samaritans:

https://www.samaritans.org/

116 123

Key for selection options

25 - What age are you?
- 16-17
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65-74
- 75 or older
- Prefer not to say

26 - Where in the UK do you live?
- England
- Northern Ireland
- Scotland
- Wales
- Prefer not to say

Appendix 8: List of organisations contacted to share Strand 3's survey

Note: Cells are left blank for organisations that never responded since it is unknown whether they shared it or not. The "Who the organisation engages with" column is influenced by how the organisation describes themselves in their own words.

Name of organisation	Location of organisation	Who the organisation engages with	Shared it
LGBT Foundation	UK	LGBTI+ people	x
LGBT Switchboard	UK	LGBTI+ people	x
Pride Sports	UK	LGBTI+ people	x
Albert Kennedy Trust	UK	LGBTI+ homeless youth	
The Proud Trust	UK	LGBTI+ people	
Mermaids	UK	Trans and gender diverse young people	No
UK Black Pride	UK	LGBTI+ people of African, Asian, Caribbean, Latin American and Middle Eastern descent	
OIIUK	UK	People with VSC	
Intersex UK	UK	People with VSC	
Black Out UK	UK	Black gay, bisexual and trans men	
Stonewall UK	UK	LGBTI+ people	
Imaan	UK	LGBTI+ Muslims	
Gal-Dem	UK	People of colour with marginalised genders	
Glitter Cymru	Wales	Black, Asian and minority ethnic LGBTI+ people	
LGBT Youth Scotland	Scotland	LGBTI+ young people	x
The Equality Network/Trans Alliance Scotland	Scotland	LGBTI+ people	
Rainbow Project	Northern Ireland	LGBTI+ people	

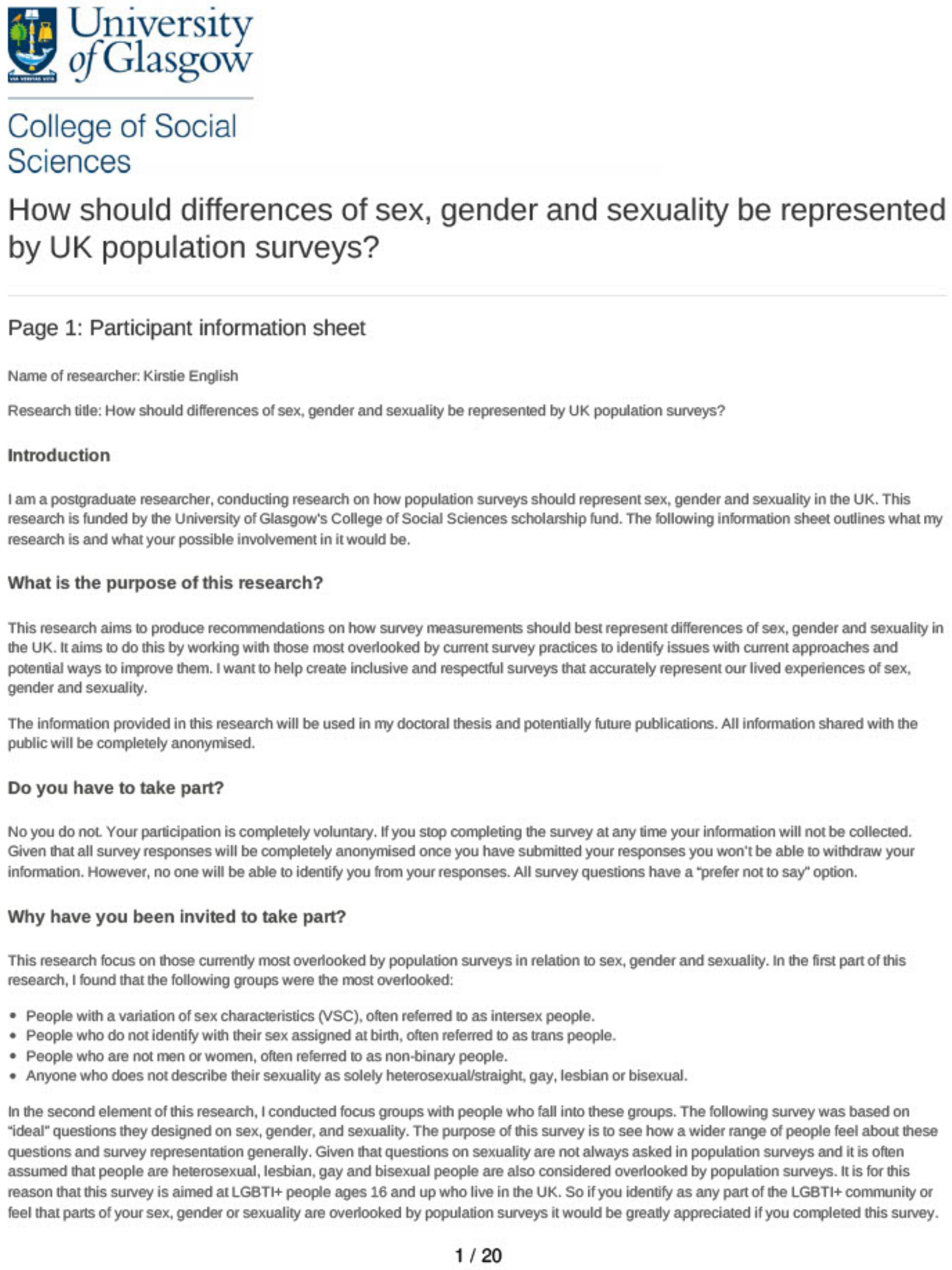
Cara Friend	Northern Ireland	LGBTI+ people	
Gender Jam NI	Northern Ireland	Trans young people	
Transgender NI	Northern Ireland	Trans people	
Portal bookshop	England	LGBTI+ people	
Sayit	England	LGBTI+ people	
Gays the word	England	LGBTI+ people	
Action for Trans Health	UK	Trans people	
Bent Bars Project	UK	LGBTI+	
Books Beyond Bars	UK	LGBTI+	x
GALOP	UK	LGBTI+	
Gender Intelligence	UK	LGBTI+	
LGBT History Month Schools Out	UK	LGBTI+	
Persian LGBT Organisation	UK	LGBTI+ asylum seekers and refugees	
Queer Youth Network	UK	LGBTI+ young people	
Sibyls	UK	Trans Christians	
Trans Media Watch	UK	Trans people	
UKLGIG	UK	LGBTI+ asylum seekers	
LGBT Cymru Helpline	Wales	LGBTI+	x
Umbrella Cymru	Wales	LGBTI+	
LGBT Age	Scotland	LGBTI+ people ages 50+	
Age UK (Opening Doors London))	UK	Older people with some LGBTI+-specific groups	
Brighton and Hove LGBT Switchboard	England	LGBTI+	
QTI Coalition of Colour	England	QTIPOC	
Dosti Leicester	England	South Asian LGBTI+ people	
QTIPOC Notts	England	QTIPOC	
QueerLit(Manchester)	England	LGBTI+	

The Bookish Type (Leeds)	England	LGBTI+	
Panedoge	Wales	LGBTI+	
Bis of Colour	England	Bi people of colour	
Bisi Almi Foundation	England	LGBTI+ Nigerians	
DesiQ	England	South Asian LGBTI+ people	
Hidayah	England	LGBTI+ Muslims	
House of Rainbow	UK	QTIPOC Faith Community	x
Purple Rain Collective	UK	QTIPOC	
Sarabat LGBT Sikhs	UK	LGBTI+ Sikhs	x
Rainbow Noir	England	QTIPOC	
Proud Swans	Wales	LGBTI+ fans of Swansea City	x
Bi Pride UK	UK	Bi people	
Living Free UK	UK	LGBTI+ Africans refugees and asylum seekers	
The Queer Health podcast	UK	LGBTI+	
LGBT History NI	Northern Ireland	LGBTI+	
Queer Britain	UK	LGBTI+	
National LGBT Partnership	England	LGBTI+	
Trans Pride NI	Northern Ireland	Trans people	x
LGBTQ@JISCMAIL	UK	LGBTI people	x
Ban Conversion Therapy	England and Wale	LGBTI people	
Non-binary NI	Northern Ireland	Non-binary people	
Colour Youth Network	UK	QTIPOC young people	
Queer Recollections	UK	LGBTI+	
Proud Geek	Enlangd	LGBTI+	
Spectra	UK	LGBTI+	x
Opening doors London	England	LGBTI+ people over 50	x

Rainbow Migration	UK	LGBTI+ refugee and asylum seekers	
Intertech LGBT+ Diversity Forum	UK	LGBTI+	
SQUIFF	Scotland	LGBTI+	x
The Clare project	England	Trans, non-binary and intersex	
Consortium	UK	LGBTI+	No
Unique Transgender Network	Wales	Trans people	
British Asian LGBTI	UK	LGBTI+ Asians	
Across Rainbows	UK	LGBTI+	
African Rainbow Family	UK and international	LGBTI+ African people	
Black Beetle Health	UK	QTIPOC	
Black Trans Alliance	England	Black trans people	
Black Trans Foundation	UK	Black trans people	
Focus: The Idenity Trust	Northern Ireland	Trans people and people with VSC	
Gender Essence Support Services	Northern Ireland	Trans people and people with VSC	
Juice1038	Northern Ireland	LGBTI+	
Romeo and Julian Publications Ltd	Northern Ireland	LGBTI+	
JKP Gender Diversity	UK	Trans mostly but some broader LGBTI+	
ILGA Europe	UK and international	LGBTI+	
Intersex Equality Rights UK	UK	People with VSC	x
Panedo Ge	Wales	LGBTI+	x
The Outside Project	England	LGBTI+	
Lambeth Links	England	LGBTI+	
Impact Cardiff	Wales	LGBTI+ young people	

Cardiff LGBTQ Law Clinic	Wales	LGBTI+	x
LGBT Rights NI	Northern Ireland	LGBTI+	
Lambeth Links	England	LGBTI+	
LGBT Northern Ireland	Northern Ireland	LGBTI+	
Persian LGBT Organisation	UK and international	LGBTI+ Persians	
Belfast Pride	Northern Ireland	LGBTI+	
Here NI	Northern Ireland	Lesbian and bisexual women	x
The QPOC Project	UK	Queer people of colour	x
Gaysians	UK	Asian LGBTI+ people	x

Appendix 9: Strand 3 online survey information sheet



University of Glasgow

College of Social Sciences

How should differences of sex, gender and sexuality be represented by UK population surveys?

Page 1: Participant information sheet

Name of researcher: Kirstie English

Research title: How should differences of sex, gender and sexuality be represented by UK population surveys?

Introduction

I am a postgraduate researcher, conducting research on how population surveys should represent sex, gender and sexuality in the UK. This research is funded by the University of Glasgow's College of Social Sciences scholarship fund. The following information sheet outlines what my research is and what your possible involvement in it would be.

What is the purpose of this research?

This research aims to produce recommendations on how survey measurements should best represent differences of sex, gender and sexuality in the UK. It aims to do this by working with those most overlooked by current survey practices to identify issues with current approaches and potential ways to improve them. I want to help create inclusive and respectful surveys that accurately represent our lived experiences of sex, gender and sexuality.

The information provided in this research will be used in my doctoral thesis and potentially future publications. All information shared with the public will be completely anonymised.

Do you have to take part?

No you do not. Your participation is completely voluntary. If you stop completing the survey at any time your information will not be collected. Given that all survey responses will be completely anonymised once you have submitted your responses you won't be able to withdraw your information. However, no one will be able to identify you from your responses. All survey questions have a "prefer not to say" option.

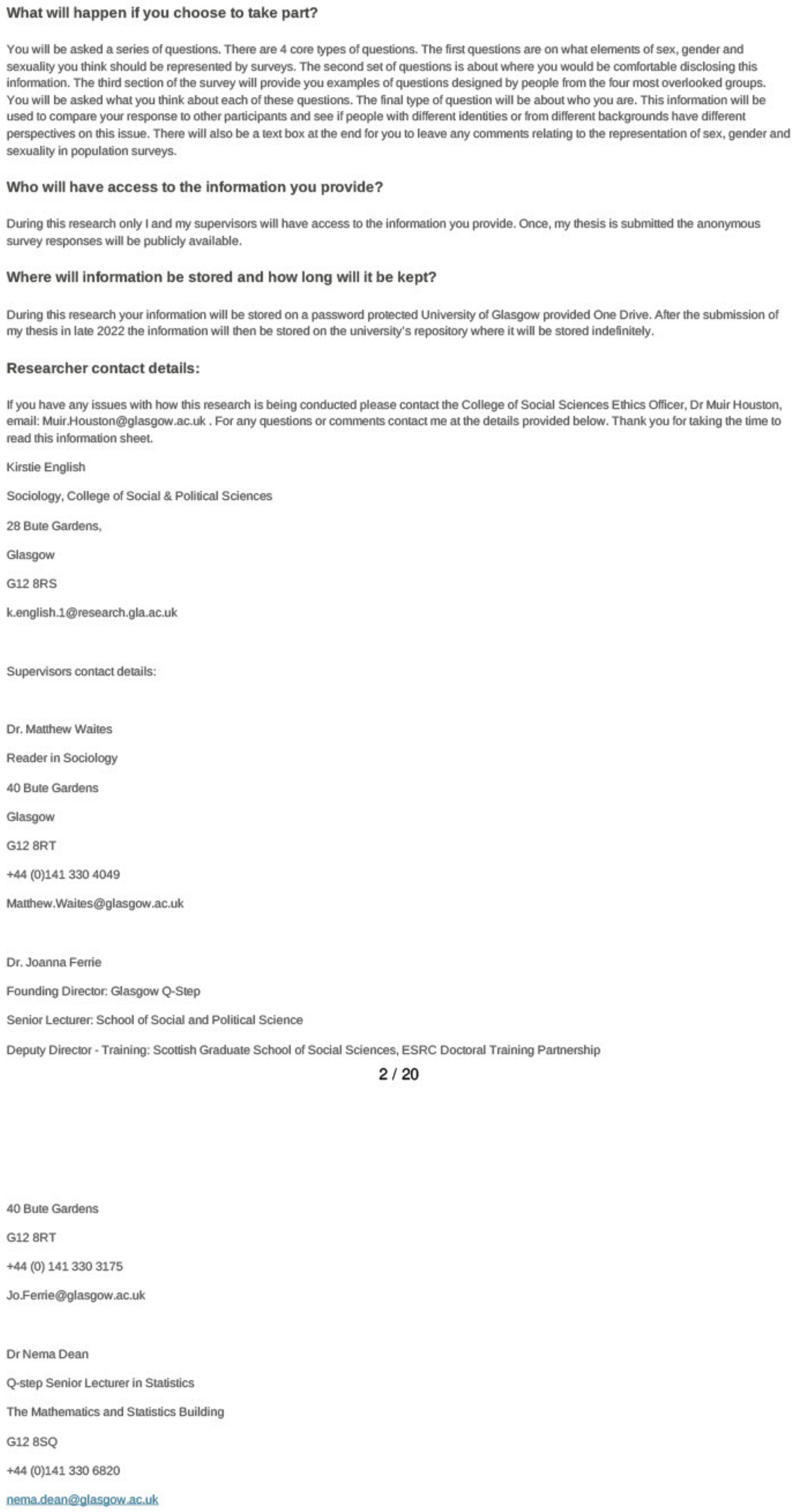
Why have you been invited to take part?

This research focus on those currently most overlooked by population surveys in relation to sex, gender and sexuality. In the first part of this research, I found that the following groups were the most overlooked:

- People with a variation of sex characteristics (VSC), often referred to as intersex people.
- People who do not identify with their sex assigned at birth, often referred to as trans people.
- People who are not men or women, often referred to as non-binary people.
- Anyone who does not describe their sexuality as solely heterosexual/straight, gay, lesbian or bisexual.

In the second element of this research, I conducted focus groups with people who fall into these groups. The following survey was based on "ideal" questions they designed on sex, gender, and sexuality. The purpose of this survey is to see how a wider range of people feel about these questions and survey representation generally. Given that questions on sexuality are not always asked in population surveys and it is often assumed that people are heterosexual, lesbian, gay and bisexual people are also considered overlooked by population surveys. It is for this reason that this survey is aimed at LGBTI+ people ages 16 and up who live in the UK. So if you identify as any part of the LGBTI+ community or feel that parts of your sex, gender or sexuality are overlooked by population surveys it would be greatly appreciated if you completed this survey.

1 / 20



What will happen if you choose to take part?

You will be asked a series of questions. There are 4 core types of questions. The first questions are on what elements of sex, gender and sexuality you think should be represented by surveys. The second set of questions is about where you would be comfortable disclosing this information. The third section of the survey will provide you examples of questions designed by people from the four most overlooked groups. You will be asked what you think about each of these questions. The final type of question will be about who you are. This information will be used to compare your response to other participants and see if people with different identities or from different backgrounds have different perspectives on this issue. There will also be a text box at the end for you to leave any comments relating to the representation of sex, gender and sexuality in population surveys.

Who will have access to the information you provide?

During this research only I and my supervisors will have access to the information you provide. Once, my thesis is submitted the anonymous survey responses will be publicly available.

Where will information be stored and how long will it be kept?

During this research your information will be stored on a password protected University of Glasgow provided One Drive. After the submission of my thesis in late 2022 the information will then be stored on the university's repository where it will be stored indefinitely.

Researcher contact details:

If you have any issues with how this research is being conducted please contact the College of Social Sciences Ethics Officer, Dr Muir Houston, email: Muir.Houston@glasgow.ac.uk . For any questions or comments contact me at the details provided below. Thank you for taking the time to read this information sheet.

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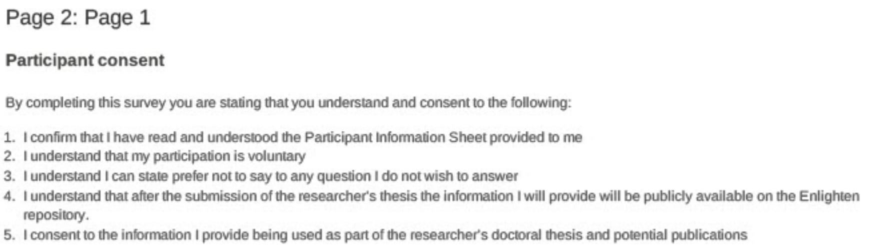

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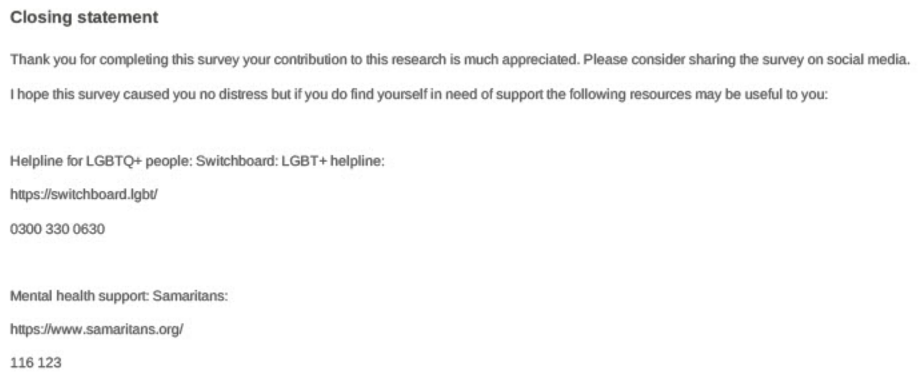
Participant consent

By completing this survey you are stating that you understand and consent to the following:

1. I confirm that I have read and understood the Participant Information Sheet provided to me
2. I understand that my participation is voluntary
3. I understand I can state prefer not to say to any question I do not wish to answer
4. I understand that after the submission of the researcher's thesis the information I will provide will be publicly available on the Enlighten repository.
5. I consent to the information I provide being used as part of the researcher's doctoral thesis and potential publications

Appendix 10: Strand 3 closing statement with signposting



Closing statement

Thank you for completing this survey your contribution to this research is much appreciated. Please consider sharing the survey on social media.

I hope this survey caused you no distress but if you do find yourself in need of support the following resources may be useful to you:

Helpline for LGBTQ+ people: Switchboard: LGBT+ helpline:
https://switchboard.lgbt/
0300 330 0630

Mental health support: Samaritans:
https://www.samaritans.org/
116 123

Appendix 11: Strand 3 sample tables and text response lists

Characteristic	Overall, N = 347[1]	LGB, N = 55[1]	Overlooked, N = 292
Age			
16-17	8 (2.4%)	0 (0%)	8 (2.7%)
18-24	99 (29%)	9 (16%)	90 (31%)
25-34	158 (46%)	21 (38%)	137 (47%)
35-44	58 (17%)	18 (33%)	40 (14%)
45-54	15 (4.3%)	4 (7.3%)	11 (3.8%)
55-64	6 (1.7%)	2 (3.6%)	4 (1.4%)
65-74	3 (0.9%)	1 (1.8%)	2 (0.7%)
Location			
England	191 (55%)	26 (48%)	165 (57%)
Northern Ireland	6 (1.7%)	3 (5.6%)	3 (1.0%)
Scotland	133 (39%)	22 (41%)	111 (38%)
Wales	15 (4.3%)	3 (5.6%)	12 (4.1%)
Unknown	2	1	1
Location type			
Rural	62 (18%)	13 (24%)	49 (17%)
Urban	278 (82%)	42 (76%)	236 (83%)
Unknown	7	0	7
Ethnicity			
Asian	7 (2.2%)	0 (0%)	7 (2.4%)
Mixed or multiple ethnic groups	11 (3.2%)	2 (3.7%)	9 (3.1%)
Not listed	4 (1.2%)	0 (0%)	4 (1.4%)
White	319 (94%)	52 (96%)	267 (93%)
Unknown	6	1	5
Religion or faith			
Buddhist	5 (1.5%)	0 (0%)	5 (1.8%)
Christian	36 (11%)	10 (19%)	26 (9.3%)
Hindu	2 (0.6%)	0 (0%)	2 (0.7%)
Jewish	7 (2.2%)	1 (1.9%)	6 (2.2%)
Muslim	2 (0.6%)	0 (0%)	2 (0.7%)
None	246 (74%)	39 (72%)	207 (74%)
Not listed	36 (11%)	4 (7.4%)	32 (11%)
Unknown	13	1	12
Identifies as disabled	123 (38%)	11 (21%)	112 (41%)

Characteristic	Overall, N = 347[1]	LGB, N = 55[1]	Overlooked, N = 292
Unknown	21	2	19
Has a health condition and/or learning differences	254 (73%)	28 (51%)	226 (77%)
Level of Education			
0	3 (0.9%)	1 (1.8%)	2 (0.7%)
1	10 (2.9%)	3 (5.5%)	7 (2.4%)
2	44 (13%)	6 (11%)	38 (13%)
3	20 (5.9%)	2 (3.6%)	18 (6.3%)
4	8 (2.4%)	0 (0%)	8 (2.8%)
5	125 (37%)	18 (33%)	107 (37%)
6	100 (29%)	15 (27%)	85 (30%)
7	31 (9.1%)	10 (18%)	21 (7.3%)
Unknown	6	0	6
Class			
Middle class	190 (58%)	30 (59%)	160 (58%)
Upper class	2 (0.6%)	0 (0%)	2 (0.7%)
Working class	136 (41%)	21 (41%)	115 (42%)
Unknown	19	4	15

[1] n (%)

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