# Whose science is it anyway? Reflections on how equality, diversity, and inclusion principles in research and policy engagement strategies can improve policy outcomes as exemplified in health research and policy.

COMMUNICATION | EDITORIAL | INVITED CONTRIBUTION | **PERSPECTIVE** | REPORT | REVIEW

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## ABSTRACT

Consideration of Equality, Diversity, and Inclusion (EDI) principles within the policy making process across the board will lead to more effective policy creation and implementation, and strengthen current research systems. By being deliberately interdisciplinary and intersectional in our approach to research and policy impact, we can aim to serve a wider scope of people in a way that matches the nuance, complexity, and variety of the lived experience. Finding effective policy engagement solutions must include consideration of EDI principles at each stage of the research-to-policy pipeline. This article offers introductory thoughts on how EDI can be practically implemented at the stages of research design and research funding to bring awareness to the need for embracing EDI principles. While we know that further information, data, and insight are needed when it comes to diversity in research, the research workforce, and funding allocation, our primary aim for this paper is to encourage reflection and critical assessment of how EDI might be considered at the very early stages of the evidence-to-policy pipeline.

## SCIENCE ⇒ POLICY

Equality, Diversity, and Inclusion values are imperative for effective policy making. But at what stage are they needed most? Are policy engagement strategies inclusive? We must reflect on our individual and collective attitudes toward the science-to-policy pipeline. This article explores how we can approach redefining objective science and

the use of evidence, and how research funding can be utilised alongside this to set a positive foundation in the early stages of the evidence-to-policy pipeline.
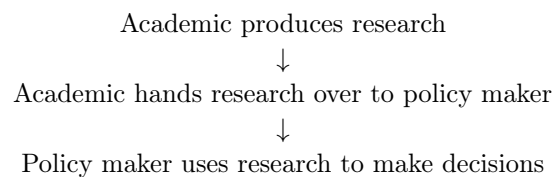
**K**eywords Equality · Diversity · Inclusion · Funding · Policy

## Introduction

As outlined in the 2020 UK Research and Development Roadmap by the UK Government, it was recognised that Equality, Diversity, and Inclusion (EDI) is a 'critical aspect of research culture' [1]. This is especially true when considering how knowledge generated through UK research informs, justifies, and contributes to policy solutions in a variety of areas, from the arts, to health, to the economy. Finding effective policy solutions in any sector and across any issue must include consideration of EDI principles at each stage of the research-to-policy pipeline if policy solutions are going to be effective. Consideration of EDI principles (e.g., inclusion, diversity, and representation) allows for a greater complexity of lived experience to be recognised and for policy solutions to respond to critical issues in a way that will improve implementation, public buy-in, and contribute to the overall public good. This article offers introductory thoughts on how EDI principles can be practically implemented at two stages: research funding and research design. When EDI principles are considered at these stages, it sets a strong foundation for stronger policy engagement, better policy solutions, and further positive impact. As researchers, we are ethically bound to be critical of the evidence being used to inform policy solutions. As such, it benefits all parties involved to consider different perspectives and knowledges to ensure that policy is truly as evidence-based as it can be. In recognising both authors' positionality within this perspective, the intention of this piece is to call on other decision-making bodies and those in positions of power to reflect on and make changes to their approaches to embed EDI principles in research, funding, and policy impact practice. The authors both work in the research and policy space that centers Equality, Diversity, and Inclusion in its practice. The authors also draw from our own lived experiences as women in academia and policy engagement from marginalised backgrounds, with the recognition of multiple layers of privilege that supports our ability to work in this space.

## Knowledge: By whom and for whom?

In considering the evidence-to-policy pipeline, it is unhelpful to reduce it to a simple linear process of:

Academic produces research
↓
Academic hands research over to policy maker
↓
Policy maker uses research to make decisions

In reality, the process is a much more complex web of twists and turns, affected by factors such as geography, networks, political and personal interests of policymakers and current ruling governments, external political, social, and economic factors (such as competitive funding environments), understanding and effectively communicating the shared language of knowledge exchange and so on. It's a hugely complex process that, at its core, can be boiled down to a number of humans, who have different roles, expertise, and knowledge, coming together to hopefully make positive change, as it is defined by their own thoughts, interests, backgrounds, perspectives, and knowledges. It is for this very reason that no science or knowledge can be truly, 100% objective. Haraway's Standpoint Theory [2, 3] asks us to be critical of the knowledge we hold and produce as it is influenced and defined by our social positioning and the power structures we navigate. To Haraway, the goal is 'better accounts of the world, that is, 'science'' by seeing through the 'standpoints of the subjugated' [2]. This asks us to recognise that no lived experience, perspective, or understanding is a homogeneous experience, even within the marginalised experience. For example, the experience of a white woman, and thus their perspective and knowledge, will be different to that of a woman of colour, and even further, the experience of a queer, disabled woman of colour. Intersectional approaches, outlined by Crenshaw [4], assert the need to look at issues through a prism that understands the interconnectedness of

internal and external experiences. This is one simple but easily acknowledged EDI principle that academia has greatly accepted: no research can be universalised. But in a public policy context, it is extremely hard to recommend and create policy solutions that do not have some element of universality, since it is accepted there will always be winners and losers. However, considering EDI principles within research, and thus in the evidence that informs policy, is not just about making inequality less prevalent, nor is the intention to take away opportunities from those who currently hold power and privilege. It is about improving equity across the board and effecting change from all places to create a foundation that does not allow power and social position to directly or indirectly influence political decision-making through biased evidence that feeds into the same system. Mainly, it is about ensuring that public policy solutions are able to adapt to changing societies, situations, and experiences in order to implement the best possible fix or contribution to a particular issue, without systemically excluding and marginalising people and knowledge. It is about working towards more epistemologies that do not exclude, erase, or poorly reflect the vastness of experiences and perspectives that are being lived precisely by those impacted most by partially informed policy. An example of the implications of not considering EDI in research and public policy can be found in the UK healthcare system. Defaulting to a standard of reference in medical research, such as basing treatment on a reference of white, male bodies universalised across genders, races and ethnicities, has led and does lead to systemically ignoring and misunderstanding marginalised groups [5, 6]. It was only in the past few years that UK Universities realised that they needed to teach medicine students how to identify conditions on skin that is not white [7]. As Iaonnidis notes of health equity, 'at a minimum...[medical] research should not aggravate already embedded gaps between the privileged and the disadvantaged' [5]. One example of this in recent practice is a project funded by the Policy Impact Fund through Southampton University's Public Policy Unit New Things Fund Programme [8]. Schnoenaker sought to 'inform meaningful language to communicate about health and well-being before pregnancy and parenthood' (A.K.A. preconception and interconception health) [8]. Dr Schoenaker organised consultation with over 50 members of the public who had diverse gender identities, cultural and ethnic backgrounds, lived experience of pregnancy loss, and chronic health conditions. This consultation informed key recommendations that highlighted the importance of using gender-neutral and non-clinical language which supported 'effective advocacy for appropriate preconception health interventions' that did not exclude wider groups of people who are also impacted by this. The 'Ready for Pregnancy' campaign in the South East is already using these recommendations to inform further communication [8, 9]. This example shows how considering EDI within the project stage and its policy recommendations can contribute to better implementation of policies surrounding parent and child health. This example also helps us to see why questioning objectivity and evidence is key to this aim. The way in which the project used subjective language as a lens and bridge to see into the experiences of marginalised people, thus expanding knowledge and viewing preconception health from multiple standpoints, allowed and will continue to allow for wider impact and further understanding. Thus, by critically assessing our own understanding and attitude toward what constitutes objective science and thus evidence, we can identify gaps in public policy and use research to make significant positive improvements that recognise the complexity of the lived experience. We need to challenge what standpoint we are coming from, so we can begin to break down notions that science and fact are infallible and only defined, used, and supported by those whose social position and power they support. This critical assessment responsibility belongs to all of us: researchers, knowledge brokers, and policy agents.

# Research and Funding: Access and inequalities

Published analysis of funding organisations' research activity which present application and funding allocation data of researchers by protected characteristics (e.g., age, gender, race/ethnicity, disability) [10–12] have shed some light on distribution of research funds, highlight-

ing opportunities for policy change [13]. Varying application success rates observed in these reports for researchers with different protected characteristics (e.g., the proportion of women funded as principal investigators is still not at parity with that of men [14–16]) show a need to take action to address the underlying reasons for the disparities observed [17]. The findings also provide a foundation for a theory that can be used to understand some of the health inequalities observed during the COVID-19 pandemic, which links to the challenge proposed by Haraway's Standpoint Theory of scientific objectivity in research evidence [2]. In this case, research conducted primarily by groups which do not represent a diverse society may be unconsciously biased at the point of research design through to delivery (e.g., affecting recruitment of underrepresented groups) thus contributing to health inequalities, such as the disproportionate effect that the pandemic had on minority communities around the world [18–22]. By failing to ensure that those who design research are representative of a multicultural society, the evidence generated through research and used in policy decision-making will both underestimate and fail to address these disparities, and fail to effectively create and implement policy solutions that are intended to improve the public good. Action, as highlighted in a report by the Social Research Association [23], is key, and an emphasis on action that leads to effective change will lead to a true proposition of scientific objectivity to inform policy that will be relevant to multicultural societies [24, 25].

## What Action?

Diversity reports are the first important steps being taken by funding organisations to ensure that EDI principles are present at each stage of the research-to-policy pipeline. The second step is the development of EDI strategies that will address the issues identified in the makeup of the research workforce (e.g. the Wellcome Trust's 'Diversity, Equity, and Inclusion Strategy' [26]; NIHR's 'Promoting equality, diversity, and inclusion in research' [27]). Consideration of EDI principles within the evidence-to-policy process across the board can only lead to more effective policies by improving current research

systems. By being deliberately interdisciplinary and intersectional in our approach to research, evidence, and policy impact, we can aim to serve a wider scope of people in a way that matches the nuance, complexity, and variety of the lived experience. The Universities Policy Engagement Network (UPEN) published a report in December 2021 which outlined key thoughts and recommendations for EDI in academic-policy engagement [28]. They noted that at a 'research-funding level, better data is needed to break down the diversity of engagement from those who are awarded funding to engage directly in policy-impact work' in order to gain a better understanding of how funding may be being used to drive EDI, or potentially 'replicate disadvantage within the system'. Further to this, it was recognised that when identifying expertise, Higher Education Institution (HEI) brokers 'tend to play it safe', which highlights challenges around diversity and 'working beyond the usual suspects'. It also mentioned that we need to challenge what expertise means. Does it mean 'established'? Does it mean the ability to communicate effectively? Does it mean 'experience'? Is it more associated and trusted to be true with a particular set of people due to conscious or unconscious bias? UPEN noted that challenging this perspective would 'open up the ability to take a broader appreciation of who has the expertise, where the expertise lies, and what kinds of expertise the policy world needs to make effective decisions' [28]. These two recommendations call for more gaining information and knowledge as an action, but also critically thinking about said information and knowledge alongside this. Standpoint Theory and Intersectionality Theory can be two starting points for this critical reflection.

## Conclusion

It may feel quite frustrating to get to the end of this paper for us to now say that there is no straight, easy answer to what specific actions need to be done to address the issues discussed. It is easy to say that we need to collect diversity data, that we need to encourage more funding of diverse projects and create safer spaces for more diversity in researchers, that we need to change research culture and so on. However, it is not as

simple as creating a checklist to ensure diversity and inclusion are considered and ticking it off as we go along. As mentioned at the beginning, the academic-policy engagement process is not linear, and neither should this be. The areas of academic-policy engagement discussed in this paper only identify two stages (research design and funding) when there are many other stages that require equal critical consideration, with a human-centered, relational approach. With this in mind, the only action we, the authors, will call on, is to sit in reflection of the thoughts discussed here and consider how it may apply to yourself, your team, your experience, or the experiences of others. Improvement of science as a process and tool for decision-making is a responsibility that applies to all of us: policymakers, knowledge brokers, researchers, impact teams, students, policy agents, and the public. Actioning these strategies authentically constitutes the most vital step in ensuring that research evidence that will inform policy is a true representation of a diverse society and in generating evidence that addresses the needs of all.

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## About the Authors

Alejandra (she/her) joined the University of Southampton in 2009 as a Research Fellow in Computer Science, in a study developing a virtual research platform for health professionals, and later moving into studies developing patient decision aids. In 2018 Alejandra joined the NIHR Evaluation, Trials and Students Coordinating Centre, where she is currently a Senior Research Fellow with the Research on Research Insight Team. Alejandra has special interest in promoting values of Equality/Equity, Diversity and Inclusivity at the University of Southampton and Higher Education Institution Sector, working on the Health Sciences Concordat and the Race Equality Charter, and the EDI Committee in the Faculty of Medicine leading on the development of the NIHR EDI Strategy.

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**Conflict of interest** The Authors declare no conflict of interest.