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Equality, diversity and inclusion: key definitions

This chapter defines and discusses key concepts and terminology relating to health and biomedical research, equality, diversity and inclusion (EDI), disability, neurodiversity, race and ethnicity, sex and gender, and sexual orientation. These terms evolve, are debated, and can be the subject of much contestation. The chapter will acknowledge additional categories of diversity that might be impacting on researchers' careers, and the concept of intersectionality will be introduced. Concepts that are introduced will be referred to and revisited in subsequent chapters.

What is health and biomedical research?

Research work is creative, systematic effort that increases the 'stock of knowledge' (OECD, 2015). In the fields of health and biomedicine, research has great potential to benefit humanity. Such research takes place in myriad contexts and depends on the great skill and dedication of the research workforce. Health and biomedical research delivers answers that help to protect and maintain health, provides knowledge that can help to treat

illnesses, and provides information that points the way to future solutions. In recent years, advances fostered by these areas of research are numerous, including better understanding of causes of illness, development of new treatments and preventive measures, as well as knowledge that can help to support change that impacts on individual and societal health and wellbeing. Both ‘positive’ and ‘negative’ or ‘null’ results are important to knowledge advancement. Without research, there would be no treatments for tuberculosis, no vaccines for COVID-19, and no progress in understanding the complex interplay between social structures and health outcomes.

Health and biomedical research is conducted by people with many disciplinary backgrounds, including natural, social and behavioural sciences, as well as arts, humanities and engineering. The ecosystem is rich in skills, with technical, professional and clinical experts working in close collaboration and teams. Health and biomedical research may have single-discipline or interdisciplinary flavour and team approaches to research are the norm. In this book, the term ‘health and biomedical research’ is used to refer to research that seeks to understand matters relating to human health: this is necessarily broad but also focused, with disciplines varied and often working together in interdisciplinary ways.

A considerable body of health and biomedical research focuses on reducing inequalities in health, including through understanding disparate health outcomes, improving health and enhancing fairer access to healthcare. This focus is echoed by work to improve fairness in the system that creates knowledge, including in relation to career development and support.

Research takes place in a complex ecosystem, comprising public organisations as well as the third sector (such as in charities), and private sector organisations ranging from small and medium enterprises (SMEs) to large, international corporations. In the UK alone, the life sciences industry employed over a quarter of a million people in 2020 (BEIS,

2022). Higher education institutions (HEIs) are particularly visible although not the largest sector in the UK research ecosystem. In 2020–21, there were 170 HEIs in the UK (UUK, 2022): all provide education and the majority conduct research of immense variety, with quality assessed through the national Research Excellence Framework (REF) exercise. In 2021, 157 HEIs made submissions to REF, of which 129 submitted their research activity to Panel A, which consisted of Clinical Medicine; Public Health, Health Services and Primary Care; Allied Health Professions, Dentistry, Nursing and Pharmacy; Psychology, Psychiatry and Neuroscience; Biological Sciences; and Agriculture, Food and Veterinary Sciences (UKRI, 2022a). Research into health-related areas was also submitted into other panels. The UK's strength in biomedical sciences is also demonstrated and boosted through research centres, for example the Francis Crick Institute and the Medical Research Council's Laboratory of Molecular Biology, both of which receive public funding alongside other support such as from charities. Private companies, including pharmaceutical firms, also make major important contribution to UK research and science.

What is equality, diversity and inclusion?

EDI in research careers has been subject of increasing attention, especially during and in the aftermath of the COVID-19 pandemic. Career inequalities are not unique to health and biomedical research, but reflect broader issues persisting in wider academic and research and innovation settings, that have historically disadvantaged women and individuals from minority ethnic backgrounds. Seeking to redress the lack of equality, enhance diversity and inclusion will nurture science, its applicability and relevance, as well as support a dignified, respectful research environment. This has never been more vital. Focus on equalities is part of wider attention to research culture that places people at the heart of all research endeavours.

Discussions of EDI are not new, although priorities have changed over time and the lexicon relating to EDI has evolved. Across the ecosystem research, current initiatives that address EDI include activities focused on equal opportunities, anti-racism, gender equality, or employee wellbeing. The use of ‘equality, diversity and inclusion’ to encompass this variety provides a common language and frame of reference. Despite their ubiquity, the terms are not always clear and, sometimes, their meanings and use are contested. These terms will be presented in turn.

Equality and equity

‘Equality’ and ‘equity’ have related but different meanings. ‘Equality’ refers to provision of fair and same treatment to everyone. ‘Equity’ usually refers to recognition of the context of disadvantage that people may face, including in relation to individual characteristics and social structures and systems in which they live. People may need to be provided with different resources or support in accordance with individual, structural and social circumstances to nurture equal access to opportunities and equal outcomes.

Although equality and equity are often understood in these ways, organisations may use the terms in different and specific ways. For instance, UKRI explains that equality is: ‘treating *everyone* the same and giving *everyone* access to the same opportunities’, and equity is: ‘creating fair access, opportunity and advancement for people from *under-represented groups*’ (emphasis by the authors, UKRI, 2022b). In the context of gender, the European Institute for Gender Equality (EIGE) defines equality as ‘equal rights, responsibilities and opportunities of women and men and girls and boys’; and equity as ‘provision of fairness and justice in the distribution of benefits and responsibilities between women and men’ (EIGE, 2016b, np). The focus shifts to distributive fairness in the equity definition.

Equality and equity have different meanings but are often used interchangeably or even combined. In the context of academia and gender, Lotte [Bailyn \(2003\)](#) argues that conflation of equity with equality stems from assumptions that the academic workplace exists in a vacuum and is entirely independent from other spheres of life. This separation disregards the distinct life experiences of men and women who have different opportunities to succeed. The academic ‘ideal’ worker norm is often reported to be more challenging for women to achieve, because they tend to hold more domestic responsibilities than men. As such, equal opportunity, even if it exists, is never equitable as people’s backgrounds, experiences and different forms of human capital vary depending on their circumstances and context, who we are, where we are, and where we come from. To address variation between people some tailored mechanisms can be provided, such as access to training, opportunities, networks, resources, mentoring and other support ([Putnam-Walkerly and Russell, 2016](#)). However, these interventions will have limited impact unless systemic and structural social injustices that occur way before and during employment and career development can be addressed. These injustices also happen even after careers have been developed or completed, for example, in the unequal pension arrangements and income received by men, women and minoritised groups.

The recent shift of focus from equality to equity is illustrated in increasing use of the terms ‘diversity, equity and inclusion’: a change in word order as well as replacement of ‘equality’ with ‘equity’, particularly in the US. However, this change has generated some challenges. For instance, the change from equality to equity may de-emphasise the attention paid to regulation and legislation. Rather than seeking to bring an end to systemic issues that contribute to inequality, equity perspectives may necessitate differentiating between people and making decisions about their presupposed needs according to certain protected characteristics. This focus on particular groups of individuals and compensatory programmes may

inhibit or block opportunities for deeper structural changes to address the root causes of inequalities in the first place (Ryan, 1971). Such perspectives are described as the ‘deficit’ approach (Valencia, 2010). An equity perspective may therefore overemphasise difference and diversity categories, which could create unintended and broader consequences by bolstering stereotypes and essentialising; for example, by emphasising that there is, ‘an innate female nature, an essence of femininity, or innate racial characteristics that can explain social relationships such as those of gender and race’ (Ramazanoglu and Holland, 2002, p. 58). Equity perspectives can also create risks of diffusion of collective interests into individual-level concerns, diluting the focus on systems of inequality.

Noting the debate and difference between the terms ‘equity’ and ‘equality’, the original and widely understood phrase term of ‘equality, diversity and inclusion’ will be used in this book, using the acronym ‘EDI’ for reading ease.

Diversity

‘Diversity’ usually refers to any one or more strands of difference. These include social or cultural groups, backgrounds and various aspects of identity. For instance, diversity is often referred to in relation to visions of workplaces, with diverse work environments characterised by wide ranges of people representing categories of difference in relation to gender, age, race, ethnicity, sexual orientation, (dis)ability, culture, nationality, religion, socio-economic background, class, education, neurodiversity, among further aspects of difference.

Some commentators suggest that ‘diversity’—a relatively new but widely used term—originated in US managerial discourse (for discussion see Ahmed, 2012), and seek to understand why this term has replaced previous descriptors of inequality. One of the suggested explanations is related to a focus on positive visions of workplaces and positive language, but at the same time displacement of the language of ‘equal opportunities’ or

'anti-racism'. Sara [Ahmed \(2012\)](#) argues that this reframing is problematic, not only because it is constructed to be more 'palatable' and acts as a corporate aesthetic of branding. On a more subliminal level, it may also act as a distraction from efforts towards a deeper institutional change, leaving organisations to concentrate efforts into numerical and thus visual diversity, which by default will not produce inclusive work environments.

Preferences for concepts and language may also relate to norms in certain research contexts in which neutrality and objectivity are key values, and this is especially valid in health and biomedicine. The recent linguistic transition to 'diversity' might indicate the existence of some discomfort with 'emotive and emancipatory' connotations of 'equal opportunities' ([Özbilgin, 2009](#), p. 5). At the same time, diversity has been increasingly employed as a vehicle to attract talent; this can be seen in staff and student recruitment approaches and accords with positive attributions of the language of diversity. Typing 'diversity' into an online search engine generates a plethora of pleasing graphics, including colourful letters, puzzles, hands, all of which signal that diversity is happy, harmonious and desirable.

Inclusion

In theory, diversity can be nurtured through inclusion, which means doing something positive 'with' or 'to' diversity. The act of inclusion can take many forms, is context-dependent, and can take place at organisational and individual levels. Often, inclusivity in workplaces is taken to mean the creation of welcoming and respectful environments in which difference is celebrated, everyone feels valued and wanted.

As well as comprising action, inclusion is a feeling conceptualised as 'the degree to which individuals feel a part of critical organizational processes such as access to information, connectedness to co-workers, and ability to participate in

and influence the decision-making process' (Mor Barak et al, 2001, p. 73). Similarly, but with emphasis on the actions of others, inclusion is also 'the degree to which an employee is accepted and treated as an insider by others in a work system' (Pelled et al, 1999, p. 1014). Feeling included can manifest as a sense of belonging.

The opposite of inclusion is exclusion, which is also an action or a feeling and has particularly strong moral overtones: seldom do people say that they like feeling excluded. But both inclusion and exclusion can be experienced as something done to a person or group, either by another individual, an environment, structure or process. The fact that inclusion matters, relates to differences in power, influence and also to access to resources. Inclusion takes place in societies and organisations, and the hierarchies within and between them.

Hierarchy and power can create dynamics in which individuals and groups who are excluded may not be in a position to make changes that enable inclusion. To achieve institutional change, allies will play a critical role in advocating for groups who are excluded (see Chapter 4 for 'allyship' and 'communities of practice'). Inclusion is not only about bringing people in, but is about 'making strangers into subjects, those who in being included are also willing to consent to the terms of inclusion' (Ahmed, 2012, p. 163). Recognising the importance of this shift runs through interventions that prioritise the group of people these acts purport to help, underpinning the adage of 'nothing about us without us' where co-production and co-evaluation of EDI interventions are considered at every stage of design, conceptualisation and delivery of any approaches that address inclusion. In the design and development of initiatives, there is a need to listen to people and groups who are generous to share their lived experience of exclusion and disadvantage, but without placing additional burdens. For instance, this may include attending to the experiences of people whose projects are not granted funding or whose career trajectories are not aligned with notions of disciplinary norms.

Defining categories of diversity

There are many areas of diversity, which can be described as categories that relate to individuals' characteristics. Categories have some internal cohesion. Defining categories can be helpful, although doing so is not intended to essentialise groups of people, nor to oversimplify the humanity of diversity, nor to underplay the importance of intersectional approaches, in which the overlap and interplay between categories are considered.

In the UK, the Equality Act 2010 protects nine specific characteristics: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, and sexual orientation. Race includes colour, nationality, citizenship, ethnic or national origins. These are important categories that provide a basis for thinking about diversity in careers. This section defines and discusses the areas of diversity that have been most thoroughly explored in literature to date: these are sex and gender, sexual orientation, race and ethnicity, disability, neurodiversity, and the overarching and amplifying impact of intersectionality. These categories are presented in alphabetical order, followed by a section addressing intersectionality.

In addition, emerging work highlights the importance of further categories that shape research careers. Therefore, this section also touches upon diversity dimensions that can guide approaches to issues of equality and inclusion.

Disability

Globally, 15 per cent of the population (around one billion people) live with disability (WHO, 2011). In the UK, around one in five people report a disability and more than 4.8 million disabled people are in work (Office for National Statistics, 2022). The employment rate of disabled people is around 54 per cent, compared with just over 80 per cent of people

without disabilities. The known percentage of all disabled academic staff in the UK (those who had declared) showed that they were underrepresented at just over 5 per cent in 2020–21 (HESA, 2022a). There are generally more students than academic staff with a known disability, and this is also the case among biomedical doctoral graduates at 9 per cent (CRAC, 2022).

The UK's Equality Act 2010 defines disability as a 'physical or mental impairment that has a "substantial" and "long-term" negative effect on your ability to do normal daily activities'.¹ Rather than focusing on specific disabilities that are legally defined, the legislation prioritises the impact that a person experiences. Scholars have discussed definitions of disability at length and often with attention to inclusion and dignity that some of the language and approaches to disability can bolster or undermine. There has been a move away from a medical approach to disability that focuses on individuals to a more holistic approach that recognises the role of social and environmental factors on disability. This shift in thinking is reflected in the WHO's International Classification of Functioning, Disability and Health (ICF), which now encompasses the influence of social and environmental factors and defines disability as: 'an umbrella term for impairments, activity limitations and participation restrictions. It denotes the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environmental and personal factors)' (WHO, 2001, p. 221).

In contrast, civil society organisations, such as the National Association of Disabled Staff Networks, endorse and support the social model of disability (NADSN, 2021). The social model suggests that it is the environment or society that create a disabling effect: a person in a wheelchair is disabled not by their inability to walk, but inadequate infrastructure to move easily, such as the absence of ramps, lifts, and accessible facilities (Oliver, 1983). Mike Oliver's definition of disability proposed that disadvantages or restrictions result from 'the

political, economic, and cultural norms of a society which takes little or no account of people who have impairments and thus excludes them from mainstream activity. (Therefore disability, like racism or sexism, is discrimination and social oppression)' (1983, p. 16). As such, in contrast to the preferred term 'people with disabilities' prevalent in the US, organisations that conceptualise disability in line with the social model (especially in the UK) prefer to use the term 'disabled people' to purposefully emphasise the disabling effects of ableist social and structural assumptions and expectations (Lawson, 2022).

The social model alone is not sufficient to understand, explain, and address the experiences of disabled people (Oliver, 2013). For example, Anna Lawson and Angharad Beckett emphasise the human rights model, which focuses on the 'inherent dignity of the human being' as complementary to the social model (2021, p. 349). This model transcends the issue of belonging as a political endeavour to 'belonging to the human race', and it emphasises disability policy (Lawson and Beckett, 2021, p. 368) that is critical to systemic change. However, it is the social model that has gained traction within the context of EDI in the workplace (Oliver, 2013). This is because EDI efforts have focused to increase fairness and equalise opportunities for career prospects, promotion and opportunities. However, as argued by Oliver, even though the social model has helped to identify many of the disabling barriers in the workplace, 'the solutions offered have usually been based on an individual model of disability' (p. 1025), rather than approaching the issues as a systemic and institutional problem to tackle.

Nevertheless, individual disclosure of disability to employers is important to underpin work that can help disabled researchers to be included and feel enabled to thrive in research and academic settings. Disclosure of disability can signal people's perception that they will not be disadvantaged in relation to their disability. This requires faith in the fairness of the system and so rates of disclosure can serve as a kind of litmus test for

inclusive culture. Open and transparent disclosure of disability brings opportunities for EDI practitioners to investigate rather than assume what barriers people face, what everyday impacts of these barriers are, and how they can be minimised or removed.

Disabled people report experiences of different forms of discrimination in the workplace. This can include limited access to development opportunities and being subjected to offensive behaviour (Foster and Scott, 2015). It has also been shown that disabled researchers are not nurtured to thrive in the highly competitive environment that can characterise some science careers. Typical activities that are undertaken by researchers, such as applying for external research funding, travel to and presentation at conferences, networking and attending events can be problematic for disabled researchers if the appropriate structures and processes are not in place. Even though disability adjustments can be requested and secured, individuals may encounter unhelpful and unnecessary barriers to modifications and institutional support (see Chapter 3 on ‘institutional ableism’). For individuals, whose condition cannot be unequivocally defined as disability, but who are chronically ill or neurodiverse, self-identification through disclosure and adjustments may be therefore even more challenging to access (Yerbury and Yerbury, 2021). Moreover, individuals who are neurodivergent may find themselves undergoing a disciplinary action or performance management as a result of managers’ lack of awareness of their condition and the extent of its impact on work (CRAC, 2020).

Neurodiversity

Neurodiversity includes Autism, Attention Deficit Hyperactivity Disorder (ADHD), Dyspraxia, Dyslexia, and a range of other variations. Although not necessarily understood as disabilities, in terms of legal definitions such diversities often sit under the protections afforded to disabilities. The term neurodiversity

was first proposed by Australian sociologist Judy Singer (1998) to challenge the view that such divergence should be seen through the lens of diagnosis and to focus instead on matters relating to equality. This is not to say that diagnosis is not helpful, and neurodiversity is not often approached with attention to inclusion. For instance, in relation to learning disability, approaches known as ‘de-differentiation’ seek to include people with learning disabilities within broader groups of disabled people, or wider society (Banks et al, 2020). Neurodiversity can be seen as an identity characteristic that makes individuals unique, equipped with distinctive skills and abilities, and ‘an equally valid part of human diversity’ (Kapp et al, 2013, p. 68). As such, neurodiversity, in the same way as diversity, necessitates efforts to promote equality and inclusion of ‘neurological minorities’ (Baumer and Frueh, 2021) to boost these individuals’ opportunities to thrive.

In terms of careers and lived experience, neurodiversity varies greatly from person to person. In the social and physical worlds of workplaces, perceived stigma, and a lack of adjustments to work type and infrastructure can create substantial barriers to neurodivergent researchers. There is also the impact of neurodivergence after work has finished. For instance, studies highlight the exhaustion and the consequences on sense of authenticity experienced by autistic people in social situations, who spent their time camouflaging to mask or compensate for their neurodivergence (Hull et al, 2017). This has very real repercussions, as autistic students are ten times more likely to drop out of university than their non-autistic peers (Gurbuz et al, 2019). Therefore, communication and mutual understanding are key to nurturing autistic researchers:

Individuals can coexist if we all—neurotypical and neurodiverse individuals—in clear minds, make a connection in a calm way with each other by communicating in a collaborative way, in the spirit of cooperation, whereby both individuals understand each

other, with the correct content in context. (Larkworthy, 2022, np; also Gurnett and Morton, 2021; Act for Autism, 2022)

Neurodivergent researchers' experiences play an important role in mainstreaming neurodiversity in research content, improving knowledge of barriers, challenges, opportunities, and strengths in relation to these conditions. Recently, a growing community of autistic scientists have come together to study neurodivergence, share opportunities, make significant contributions to knowledge about autism through publishing, and serve as editors and reviewers of autism journals (Nuwer, 2020). Still, accounts of the lived experience of autistic researchers illuminating the complexities in navigating academic terrain are rare (for a notable exception in the field of psychology, see Botha, 2021). Furthermore, underrepresentation of individuals at the intersections of race, ethnicity and social class in autism research has contributed to health and healthcare inequities (Maye et al, 2021). Nurturing the careers of autistic researchers is thus crucial for widening participation in autism research.

Race and ethnicity

Race and ethnicity, and associated terminology, are used in myriad ways according to discipline and perspective. In health and biomedical research, the term 'race' is often understood through the lens of biology. This use is particularly apparent in the long-standing concern about inadequate diversity in research and in efforts to change this. For example, genomic studies benefit from attention to diversity in their design, as this improves our understanding of disease, including detection, diagnosis, drug development and design of clinical care (Fatumo et al, 2022). However, caution must be exercised to avoid viewing racial groups as 'distinct homogenous blocks' (Lim et al, 2021, p. 131). This is because more genetic differences

can be found within each race than between races. As such, race is appropriately viewed as a social rather than fixed or solely biological concept if bias is to be eliminated in research and therefore in evidence-based healthcare (Lim et al, 2021).

Social sciences have a long history of understanding ethnicity as a sense of belonging and identity. A useful and current definition of ethnicity relates to group identity, and ethnic group as a ‘collection of people or a social group whose members identify with each other through a common heritage, consisting of a common culture that may also include a shared language or dialect [but also] common ancestry, descent, diet, religion or race’ (Darko, 2021, p. 9).

Sometimes race and ethnicity are conflated in ways that may not be helpful. Folúkẹ Adébí sí considers the use of the word ‘ethnicity’ to replace ‘race’ as problematic and obfuscating. This is because such replacement implies that only non-White people are ethnic, illuminating the power White people possess to make their race invisible (Adébí sí, 2019). However, everyone has a specific ethnicity, and this is not something unique to minorities. The hybrid term race/ethnicity is unhelpful, as ‘the concept of race is vital to understanding racism, whether historical or contemporary, and in referring to legislation and policy to reverse the effects of racism’ (Johnson et al, 2019, p. 87).

Another example of unhelpful consolidation is the use of BAME (or BME) as a widely used acronym for Black, Asian, and Minority Ethnic or Black and Minority Ethnic, respectively. At the time of writing (2022) a topic field search in the Web of Science Core Collection for the two terms suggested that in the last decade there has been a nine-fold increase in their use. However, the popularity of the acronyms has also attracted much criticism. There are several reasons for this. First, BAME and BME are not specific, and fail to capture the full diversity of people. Second, these acronyms categorise people by skin colour. Third, not many people identify with this term (Milner and Jumbe, 2020). BAME has become a

catch-all category that ‘conveniently’ subsumes identities of people that do not fit into the brackets of ‘whiteness’ and homogenises diversity.

In response to this challenge, many scholars and activists call for alternative language, for example, ‘racially minoritised’, as coined by Yasmin [Gunaratnam \(2012\)](#); or ‘non-white’, ‘visible minority’, ‘Black or Brown’, ‘Racialised Black or Brown or X’, ‘Person of Colour’, or ‘Racialised Person’ ([Adébísi, 2019](#)). This stance is echoed in the UK Government’s response strategy to the Commission on Race and Ethnic Disparities calling for disaggregation and ending use of the term BAME ‘to better focus on understanding disparities and outcomes for specific ethnic groups’ ([HM Government, 2022](#), p. 31). This recommendation comprises two actions in relation to the term BAME. The first action focuses on ensuring that language can ‘communicate more effectively on racial issues’ (p. 41) and to stop the aggregation of minoritised ethnicities by government and public sector bodies. The second action relates to improvement of data presentation and interpretation. The strategy recommends referring to ‘people from ethnic minority backgrounds’, only ‘where it is absolutely necessary to draw a binary distinction between the ethnic majority and ethnic minorities’ (p. 14).

It is important to acknowledge these debates and criticisms, and where possible to provide or refer to disaggregated data that reflects the richness of cultures and heritages. Unfortunately, many reports and statistics published still aggregate information about racially minoritised people into a single category of BAME, albeit this is slowly changing, or it is at least acknowledged as a limitation. In light of the available literature, rather than reflecting the authors’ stance, this book uses the term BAME where this accurately reports on the material referred to, while using specific terms where underlying information allows. In recognition that the term ‘ethnic minority’ may unhelpfully emphasise the ethnic status of a group, ‘minority ethnic’ is preferred in order to emphasise the minority status, and is used in the book.

Sex and gender

The UK Equality Act 2010 lists ‘sex’ as a protected characteristic, and recent focus on equalities has included sex and gender. The Act superseded the Equal Pay Act 1970, which provided men and women equal rights for terms and conditions of employment, including pay. In step with these changes in the legal landscape, much early EDI work at UK universities sought to address pervasive and visible gender or sex inequalities. A notable example is Athena Scientific Women’s Academic Network (Athena SWAN, see [Chapter 6](#) in ‘equality charters’) focusing on efforts to equalise access to opportunities and resources. This aims to lead to parity in outcomes between men and women.

Although not without debate, definitions of sex often refer to biological differences and variety and definitions of gender often refer to social or cultural norms and expectations. The European Institute for Gender Equality defines gender equality as parity between men and women. This definition refers to women’s and men’s rights, responsibilities and opportunities in relation to their social roles that are independent of sex.

It is worth recognising the long history of scholarship relating to gender, including work to highlight the existence of many, rather than two, genders. For instance, Johanna M. [Schmidt \(2017\)](#) describes how, for almost a century, the concept of a ‘third gender’ has been explored by anthropologists through examples of cultural or historical contexts where masculinity and femininity transcend Western understandings of gender. Examples include Samoan males, Fa’afafine, who behave in ‘feminine’ ways ([Schmidt, 2016](#)); or the Two Spirit people in North America, who are individuals not necessarily identifying as LGBT, but whose behaviours or beliefs may sometimes be interpreted by others as uncharacteristic of their sex (see [Jacobs et al, 1997](#)). Gender is ‘performed’ through norms, roles and relationships and is communicated to and perceived by the outside world. Philosopher and gender theorist Judith

Butler suggests that there is far more complexity in gender performance beyond the dichotomy of two genders, because there can be other variations of masculinity and femininity. For Butler, gender is also a ‘corporeal style, an “act”, as it were, which is both intentional and performative, where “performative” suggests a dramatic and contingent construction of meaning’ (1990, p. 190, original author’s emphasis). A socially constructed conformity between biological sex, gender, and sexual orientation is a norm and any deviation from this alignment may elicit stigma, discrimination or exclusion. The intersection of discrimination related to gender with discrimination based on deviation from perceived norms presents a challenge that equality initiatives should recognise.

Gender reassignment is also a protected characteristic according to the Equality Act 2010, and it is important to recognise the particular challenges and discrimination that transgender people may experience. For instance, in a qualitative study investigating the common social experiences and minority stressors related to being transgender, Heidi Levitt and Maria Ippolito (2013) emphasised the tensions between transgender people’s needs to be respected and valued for who they are and their abilities, and a need to mitigate the dangers of being visible or ‘outed’ in different contexts. Their work highlighted that the process of negotiating gender in the workplace was complex and stressful for transgender individuals, their competence could be overshadowed by their gender, seeking social support could be risky, and finding safe spaces was elusive.

Sexual orientation

In the UK, LGBTQIA+ is the acronym widely used to refer to members of lesbian, gay, bi, trans, queer, intersex, asexual, and related communities. Other acronyms and terms are understood and used, some with greater breadth. Throughout this book we use LGBTQIA+, unless quoting other authors

who use other terminology to reflect a narrower research focus (for example, LGB only).

Sexual orientation and sexuality are multi-layered. Kevin Guyan (2022) explains how sexual identity, sexual attraction and sexual behaviour all are subsumed under the umbrella term of ‘sexual orientation’, yet they have different meanings. *Sexual identity* describes ‘how a person thinks of their sexuality and the identity terms with which they identify’ (for example: straight/heterosexual; gay or lesbian; bisexual; asexual); *sexual attraction* refers to ‘sexual and/or romantic feelings’ towards one, or more than one, specific sex or gender, or a lack of attraction towards anyone (2022, p. 76). On the other hand, *sexual behaviour* concerns sexual partnering with another sex or gender, with the same sex or gender, or not engaging in sexual behaviour.

However, for the purposes of the legislation, sexual orientation is understood broadly. In data collection for monitoring purposes, questions about sexual orientation capture a respondent’s self-perceived sexual identity (Office for National Statistics, 2009). It is worth noting that using sexual identity as a proxy for sexual orientation is problematic, since studies have shown that the reported population size of minority sexual orientations varies depending on which dimension is used in surveys. Put simply, what people say they feel or what they say they do does not necessarily match what they actually do: identity, attraction and behaviour are different aspects of sexuality (Guyan, 2022). The OECD (2019) reported that measuring sexual orientation through sexual behaviour instead of sexual identity increases the reported LGB population by 70 per cent. Measurements that use sexual attraction as a criterion to define sexual orientation instead of identity result in twice as many LGB respondents. However, as sexual identity is believed to be most closely related to experiences of disadvantage and discrimination, sexual identity is most commonly used to assess difference.

Experiences of discrimination of LGBTQIA+ individuals and communities can be understood through the concept

of ‘heteronormativity’, whereby ‘institutions, structures of understanding and practical orientations [...] make heterosexuality’ the dominant and privileged ‘organised’ orientation (Berlant and Warner, 1998, p. 548). Any deviation from heteronormativity can result in social marginalisation and oppression, and still in more than 70 countries same-sex relationships are criminalised (Stonewall, 2022).

More action is needed in relation to injustices affecting individual careers, equal pay, and advancement of LGBTQIA+ individuals (Drydakis, 2015). Early, ground-breaking work in this context—research on LGBTQ-identifying workers’ experiences of paid employment through the 1980s and 1990s—suggested key lessons important for equality work today. First, studies have shown that these individuals constitute a sizeable portion (visible or not) of the workforce. Second, non-heterosexual employees are disadvantaged in relation to career outcomes as well as their personal, material and psychological spheres. Third, the cascading negative effects of individually experienced inequalities impact on employer’s organisational performance (Ozturk, 2011). The power of exclusionary heteronormativity is demonstrated in studies that focus on the impact of disclosure of sexual orientation. For example, in academic contexts, individuals who are both perceived as and identify as LGBTQ are faced with loss of self-determination, privacy and safety; whereas individuals who identify as LGBTQ but are not ‘out’ are most negatively impacted as they have to also navigate disclosures (Beagan et al, 2021). These experiences have negative cumulative effects on individual experiences of career, inclusion and belonging.

Additional categories of diversity

EDI-related work within research and higher education (HE) should be guided by mutual understanding, dialogue and

participation. As well as presenting the five aspects of diversity and current debates, it is suggested that EDI advocates and practitioners practise reflection when considering interventions to address inequalities and disadvantage. As such, in [Table 1.1](#) we offer the following questions as a starting point to a meaningful conversation and deliberation of EDI efforts.

To provide a more comprehensive picture of diversity categories that guide understanding of issues of equality and inclusion, a broader diversity framework is briefly presented here, partially inspired by the PROGRESS-Plus framework (O'Neill et al, 2014). This framework is adapted by the authors to research careers by drawing on topical debates. This is to encourage the reader to consider how additional layers of social difference may determine equality and equity in research careers and how these layers may intersect and combine to amplify bias and disadvantage.

[Table 1.2](#) captures these additional dimensions as well as those discussed earlier and suggests reflexive questions related to research careers. As well as reflecting about the questions in the table, it is important that members of the research ecosystem are alert to the potential for the emergence of new categories of diversity, difference and adversity that are not yet captured here. These could be related to new political and economic developments, such as future impacts on individuals and research from institutional reforms, immigration, war, international health emergencies and geopolitical shifts.

Intersectionality: multiple categories of diversity

The term 'intersectionality' is generally thought to have originated from Kimberlé Crenshaw's critical analysis of anti-discrimination law in the US in the late 1980s. Crenshaw, who primarily focused on the context of law, described how the discrimination that a person might experience is exacerbated when they identify with more than one

Table 1.1: Reflexive questions to guide EDI interventions

Disability	<ul style="list-style-type: none"> • Have researchers had access to and appropriate support for disabilities on an individualised basis as well as more broadly without the need to declare disability, for example, designing inclusive environments as a default? • Have barriers or inadequate adjustments been considered in terms of long-term impact on a researchers' careers? • Has there been a meaningful conversation with disabled researchers: 'nothing about us without us'?
Neurodiversity	<ul style="list-style-type: none"> • Are research-related activities designed in ways that mean they are appropriate for neurodiverse researchers, for instance: conference attendance, presentations, talks, networking, writing, interviews? • Has preferred language been discussed, considered and respected, for instance: some prefer the term 'autistic person', others 'person with autism'?
Race and ethnicity	<ul style="list-style-type: none"> • How does the institutional, departmental or group research culture support minority ethnic researchers to ensure inclusion, for instance in collaborations, networks and spaces? • What are the potential impacts of inadequate inclusion into a research environment on minority ethnic researchers and their careers? • How can minority ethnic researchers be supported to lead research funding applications, large grants, and bids to increase success rates to address underrepresentation?
Sex and gender	<ul style="list-style-type: none"> • What specificities and inequalities exist in particular fields or disciplines—are these gendered, or horizontally or vertically segregated, and how do they shape researchers' careers? • How can the impact of gender biases and stereotypes be minimised in selection, promotion, funding decision processes, peer review, authorship and performance evaluation?
Sexual orientation	<ul style="list-style-type: none"> • How does the social context of a LGBTQIA+ researcher support or create barriers to wellbeing, research performance, networking and collaborations (both internal and external)? • What specificities, stereotypes and exclusions exist in particular fields or disciplines—hypermasculinity, heteronormativity, cisnormativity? • Is the research environment conducive to an open approach to sexual orientation?

Table 1.2: Reflexive questions encompassing additional categories of diversity to guide EDI interventions

Educational and institutional affiliation	<ul style="list-style-type: none"> • How does the professional context in which researchers work impact on career pathways, for instance, an organisation's esteem, strategy, resources and infrastructure? • Have researchers had appropriate support from their research organisations to avail of mentoring, development, training, opportunities and networking?
Professional and discipline affiliation	<ul style="list-style-type: none"> • How might the popularity or public appeal of certain research topics impact on careers? • How is disciplinarity or interdisciplinarity impacting on career trajectories? • Are disciplines 'gendered' or patterned in other ways and how may this be impacting on careers?
Socio-economic status and social capital	<ul style="list-style-type: none"> • Have researchers not had access to social and professional networks to help them access certain privileges or accelerate their career? • How might researchers' social class or economic backgrounds be impacting on whether an organisation and research community includes them?
Culture, language, religion, and country of origin	<ul style="list-style-type: none"> • To what extent might researchers' culture, language, or religion impact on whether an organisation and research community includes them, for instance for collaboration, collegiality and networking? • How might immigration status be influencing researchers' career decisions, productivity and trajectory?
Occupational classification	<ul style="list-style-type: none"> • Have fixed-term research contracts impacted on researchers' outputs, career and stability (predictability), and how? • How have researchers' teaching loads, clinical or professional practice, industry engagement, and administrative duties affected research productivity?
Parental/paternal carer status	<ul style="list-style-type: none"> • For researchers who have young children, family with disability or care needs, how is research output and aspirations impacted and what can be done to support them?

(continued)

Table 1.2: Reflexive questions encompassing additional categories of diversity to guide EDI interventions (continued)

Education	<ul style="list-style-type: none"> • Where did researchers gain education? Consider (inter)nationality, culture, prestige of educational settings as well as the 'home' discipline.
Age	<ul style="list-style-type: none"> • How is the traditional notion of 'research time' impacting how competence of researchers is viewed? • What stereotypes and assumptions about age might be impacting on researchers' access to opportunities? • How might age in intersection with sex pose challenges to research careers, for example, menopause?
Marriage and civil partnership	<ul style="list-style-type: none"> • How might marriage, civil partnership or singlehood affect researchers' ability to be geographically mobile, secure international grants or to remain in a chosen place/institution?
Pregnancy and maternity	<ul style="list-style-type: none"> • How might pregnancy and related considerations be impacting on researchers, for instance breastfeeding? • Have researchers about to take on, or returning from, maternity leave been given appropriate support for their research? • How have periods of maternity leave impacted researchers' outputs and how is this taken into account in selection, promotion, performance evaluation and funding decisions?
Any special circumstances?	<ul style="list-style-type: none"> • How have issues such as illness, family circumstances, family tragedy, effects of the COVID-19 pandemic, major life events, been accounted for in selection, promotion, performance evaluation and funding decisions?

category of social difference. In the original court cases that Crenshaw analysed, this was in relation to race intersecting with gender. Specifically, African American women claimed that their employment experiences of discrimination were the direct result of being both Black and female, not just being Black or female (Crenshaw, 1989). Although the spirit of intersectionality predated Crenshaw's work, including in Black feminism, legal frameworks at the time were unable to grasp this interconnectedness² (Rodó-Zárate, 2020). As such, Crenshaw argued that inequalities, discrimination, and the benefits or privileges that individuals experience depend on several different characteristics and cannot be explained by one identity, category or location.

Nira Yuval-Davis (2015) also introduced 'situated intersectionality' to attend to the role of context and particular social and historical configurations to examine the complexity of social inequalities. Intersectionality therefore provides a helpful lens to reflect and understand that inequality can be the result of other various compounding social factors simultaneously: gender, race, ethnicity, age, disability, sexual orientation, religion or belief, gender reassignment and socio-economic status. The concept of intersectionality has contributed to areas beyond Crenshaw's legal context, such as research, scholarship, education, health, activism and social justice practice. For example, practitioners may need to address disadvantage and related problems in their work, and Patricia Hill Collins argues (2015) that educators, social workers, policy advocates, university support staff, community organisers and researchers are often exposed to complex social inequalities. Being at the forefront of potential experiences of inequality conditions, these practitioners are able to recognise and then reflexively respond to intersectionality. For practitioners within research and academic settings, intersectionality can help them to understand how social justice work can be effectively performed through carefully considered practices, constant (re-)evaluation, assessment, and

reflection about interventions that are most likely to lead to positive social change (Collins, 2015).

Explorations of lived experiences of intersectionality show that the intersection of age, gender, ethnicity and religion amplifies the separate social dimensions. For instance, Rashida Bibi's study explored mature British Muslim South Asian women students who had to negotiate gendered, cultural and religious realms to access academic careers (Oman et al, 2015). For instance, one participant described how she perceived other people's evaluations of her: 'maybe it's just me ... but I remember walking home and people thinking she should be carrying babies not books' (Bibi, 2015, cited in Oman et al, 2015). Bibi's research indicates how multiple identities need to be managed to satisfy expectations of women's community, family and academic institutions as well as stereotypes of Muslim women.

Intersectionality is not reflected in legislation in the UK or the European Union. Even though section 14 of the UK Equality Act 2010 had been drafted to provide a possibility of combined direct discrimination based on dual characteristics, in 2022 this section was still prospective. The UK government has rejected the possibility to combine more than three characteristics as this would prove 'unduly complex and burdensome for employers and service providers' (Government Equalities Office, 2009, p. 43). This means that intersectional claims are instead dealt with on the basis of available case law (Bourne, 2020).

Diversity data collection

Data collection is the first step to analysing staff and student diversity within research and academic organisations before any action plans can be designed to address underrepresentation of specific groups. In the UK, this occurs through submission of diversity monitoring data to the Higher Education Statistics Agency (HESA) that collects and disseminates the data that

forms part of the public sector compliance enabling academic and research institutions to carry out their public functions. Some of the organisations that make use of the data include the UK Government, UK Research & Innovation, and Office for Students, among others. Diversity data collection differs internationally, and collection of information in relation to race and ethnicity information, but also other characteristics, may be very complex in certain countries (European Commission, 2021a). UKRI reviews of EDI in research and innovation offer valuable information about enhancing data and disclosure in the UK (Guyan and Douglas Oloyede, 2019) and international contexts (Moody and Aldercotte, 2019), and the guidance presented here focuses on the UK context.

HESA requires HEIs to submit diversity data in a prescribed format; however, there is a level of flexibility to allow organisations to tailor data collection by narrowing the foci of data to reflect their individual contexts. Advance HE (2022) offers guidance for diversity data collection that reflects the current legal position, and it complies with the Equality and Human Rights Commission guidance. However, Advance HE recognises that diversity data collection is ‘complex and contentious’, thus research and academic organisations may wish to adapt this guidance to reflect their own individual needs and requirements (Advance HE, 2022). Data collection is not an apolitical and unbiased practice. As Kevin Guyan argues, data collection shines light on certain identity characteristics, but not others, which is the result of decisions about who ‘should be counted’. This can lead to some individuals remaining unaccounted for and not legitimised (Guyan, 2022).

Further helpful recommendations about diversity data collection are provided by the Diversity and Inclusion Survey question guidance (DAISY) (Molyneux and Hunt, 2022). DAISY is complemented by guidance for improvement of response rates (Hunt, 2021) and was developed in collaboration between Equality, Diversity and Inclusion in Science and Health Coalition (EDIS) and the Wellcome Trust (WT), a

UK-based charity that operates globally as a major funder of health research. DAISY is an ongoing project that consults key stakeholders and expert bodies, with the overall aim of championing principles of inclusive practice in diversity data collection. For example, the approach includes embedding the principles of anti-ableism, recognising the social model of disability, additional socio-economic status questions, and more inclusive sexual orientation questions.

Summary

- 'Equality, diversity and inclusion' and its language, focus, and meaning are in a constant state of flux. This change takes place in the light of the development in empirical evidence and knowledge, and the general intellectual, moral, political and cultural climate in society and the research ecosystem.
- EDI practitioners, researchers and stakeholders need to stay up to date with recent developments and critical debates.
- Anyone working in EDI should consider how best to engage in constant dialogue with the communities affected by EDI initiatives.
- The nine protected characteristics are a starting point from which to develop awareness of multiple additional dimensions of diversity, difference and adversity.
- Application of an intersectional perspective provides a powerful way to consider how multiple categories of diversity amplify disadvantage.
- Data collection for diversity monitoring purposes is a starting point for equality interventions and action plans. Organisations that wish to collect diversity data beyond the minimum statutory requirement are encouraged to do so in keeping with inclusive data collection guidelines, such as DAISY.